Expiration of this ECB is extended to 31 August 2012 under the direction of JAMES C. DALTON, P.E., Chief, Engineering and Construction, Directorate of Civil Works. The point of contact for this ECB is Timothy Gordon, CECW-CE, 202-761-4125.



of Engineers.

ENGINEERING AND CONSTRUCTION BULLETIN US Army Corps

No. 2005-20 Issuing Office: CECW-CE-D **Issued: 08 Dec 2005**

Subject: Energy Policy Act of 2005 (Public Law 109-58) and how it affects all Federal facilities

Applicability: Information

1. Developed over four years, and over 1700 pages long, the recently signed Energy Policy Act of 2005 extends previous Congressional direction with even greater goals of energy efficiency improvements in existing and new facilities. Chief among the provisions are increased use of renewable energy sources, advanced utility metering and procurement of energy efficient equipment and building systems in all applicable contracts. This legislation is brand new and changes the face of the energy business in both public and private sectors. The following table summarizes the statutory requirements for energy efficiency improvements in existing and new Federal facilities. The page numbers in the table refer to the enclosure, which contains the applicable sections of the Energy Policy Act. All acronyms appearing in the table below are defined in the applicable section of the enclosed Conference Report on H.R. 6. Energy Policy Act of 2005.

Summary of Major Energy Act Provisions Affecting Federal Facilities					
Section	Pages See	Lead	Provisions		
	Enclosure	Agency			
102. Energy management	4-5	DOE	 Annual energy incremental reduction goal of 2% from FY 2006 - FY 2015 		
goals			 Reporting baseline changed from 1985 to 2003 		
			• In 180 days, DOE issues guidelines		
			 Retention of energy and water savings by agencies 		
			 DOE reports annually on progress to the President and Congress 		
			 DOE recommends new requirements for FY 2016 – FY 2025 by 2014 		
103. Energy	5-6	DOE	• Energy/electric metering required in federal buildings by 2012		
use			 In 180 days, DOE consults and issues guidelines 		
measurement and accounting			• Agencies report to DOE 6 months after guidelines issued		
104.	6-7	DOE	• Energy Star and FEMP-recommended products procurement		
Procurement			requirement		
of Energy Efficient			• Exception when not cost-effective or meets agency functional requirements		

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Section	Pages See	Lead	Provisions
Beetion	Enclosure	Agency	
Products	Linciosure	Igency	 Energy efficient specs required in procurement bids and evaluations Requires premium efficient products: electric motors, air conditioning, and refrigeration equipment procurements In 180 days, DOE issues guidelines
104 (c) Energy efficient products in Federal catalogs	6-7	GSA, DoD	 Requires listing of Energy Star and FEMP-recommended products by GSA and Defense Logistics Agency
105. ESPCs	7	DOE	• Reauthorizes ESPCs through September 30, 2016
109. Federal Building Performance Standards	7-8	DOE	 Buildings to be designed to 30% below ASHRAE standard or International Energy Code if life-cycle cost-effective Application of sustainable design principles Agencies must identify new buildings in their budget request and identify those that meet or exceed the standard DOE must include the agency budget information above in the annual report DOE must determine cost-effectiveness of subsequent standard revisions within one year
111. Enhancing efficiency in management of Federal lands	8	DOI, DOC, and USDA	 Energy efficiency technologies in public and administrative buildings to the extent practical Energy efficient vehicles on public lands managed by the Secretaries
203. Federal purchase requirement (renewables)	8-9	DOE	 Renewable electricity consumption by the Federal government can not be less than: 3 percent in FY 2007-FY 2009 5 percent in FY 2010-FY 2012 7.5 percent in 2013 and thereafter Defines several types of renewables Double credit for renewables (1) produced on the site or on Federal lands and used at a Federal facility or (2) produced on Native American lands Biannual DOE progress reporting beginning no later than April 15, 2007
204. Use of photovoltaic energy in public buildings	9-10	GSA	 Establishes a photovoltaic energy commercialization program in Federal buildings Issues rules, develop strategies and reports annually to Congress Installs 20,000 solar energy systems in Federal buildings by 2010 Requires an evaluation 60-days after passage Authorizes funds for the program
207. Installation photoelectric system	10	GSA	• Authorizes funds for a solar wall at DOE's Forrestal Building
1802. Study of Energy	10	NAS	• Study on energy efficiency standards at the site compared to the source of energy production

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Summary of Major Energy Act Provisions Affecting Federal Facilities					
Section	Pages See Enclosure	Lead Agency	Provisions		
Efficiency Standards		ingeney			
1833. Renewable Energy on Federal Land	10	NAS	 Study on the potential of developing wind, solar, and ocean energy on Federal lands 		

2. Point of contact for this bulletin is Gary Bauer, CECW-CE-D, 202-761-0505.

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Encl.

DONALD L. BASHAM, P.E. Chief, Engineering and Construction Directorate of Civil Works

CONFERENCE REPORT ON H.R. 6, ENERGY POLICY ACT OF 2005 – (House of Representatives - July 27, 2005)

SEC. 102. ENERGY MANAGEMENT REQUIREMENTS.

(a) Energy Reduction Goals .--

(1) AMENDMENT.--Section 543(a)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a)(1)) is amended by striking ``its Federal buildings so that" and all that follows through the end and inserting ``the Federal buildings of the agency (including each industrial or laboratory facility) so that the energy consumption per gross square foot of the Federal buildings of the agency in fiscal years 2006 through 2015 is reduced, as compared with the energy consumption per gross square foot of the Federal buildings of the agency in fiscal year 2003, by the percentage specified in the following table:

``Fiscal Year

l Year	Percentage reduction
2006	2
2007	
2008	
2009	
2010	
2011	
2012	
2013	
2014	
2015	

(2) **REPORTING BASELINE.--**The energy reduction goals and baseline established in paragraph (1) of section 543(a) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a)(1)), as amended by this subsection, supersede all previous goals and baselines under such paragraph, and related reporting requirements.

(b) *Review and Revision of Energy Performance Requirement.*--Section 543(a) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a)) is further amended by adding at the end the following:

``(3) Not later than December 31, 2014, the Secretary shall review the results of the implementation of the energy performance requirement established under paragraph (1) and submit to Congress recommendations concerning energy performance requirements for fiscal years 2016 through 2025.".

(c) *Exclusions.*--Section 543(c)(1) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)(1)) is amended by striking ``An agency may exclude" and all that follows through the end and inserting ``(A) An agency may exclude, from the energy performance requirement for a fiscal year established under subsection (a) and the energy management requirement established under subsection (b), any Federal building or collection of Federal buildings, if the head of the agency finds that--

``(i) compliance with those requirements would be impracticable;

``(ii) the agency has completed and submitted all federally required energy management reports;

``(iii) the agency has achieved compliance with the energy efficiency requirements of this Act, the Energy Policy Act of 1992, Executive orders, and other Federal law; and

``(iv) the agency has implemented all practicable, life cycle cost-effective projects with respect to the Federal building or collection of Federal buildings to be excluded.

(B) A finding of impracticability under subparagraph (A)(i) shall be based on--

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``(i) the energy intensiveness of activities carried out in the Federal building or collection of Federal buildings; or

``(ii) the fact that the Federal building or collection of Federal buildings is used in the performance of a national security function.".

(d) *Review by Secretary.*--Section 543(c)(2) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)(2)) is amended--

(1) by striking ``impracticability standards" and inserting ``standards for exclusion";

(2) by striking ``a finding of impracticability" and inserting ``the exclusion"; and

(3) by striking ``energy consumption requirements" and inserting ``requirements of subsections (a) and (b)(1)".

(e) *Criteria.*--Section 543(c) of the National Energy Conservation Policy Act (42 U.S.C. 8253(c)) is further amended by adding at the end the following:

"(3) Not later than 180 days after the date of enactment of this paragraph, the Secretary shall issue guidelines that establish criteria for exclusions under paragraph (1).".

(f) *Retention of Energy and Water Savings.*--Section 546 of the National Energy Conservation Policy Act (42 U.S.C. 8256) is amended by adding at the end the following new subsection:

``(e) *Retention of Energy and Water Savings.--*An agency may retain any funds appropriated to that agency for energy expenditures, water expenditures, or wastewater treatment expenditures, at buildings subject to the requirements of section 543(a) and (b), that are not made because of energy savings or water savings. Except as otherwise provided by law, such funds may be used only for energy efficiency, water conservation, or unconventional and renewable energy resources projects. Such projects shall be subject to the requirements of section 3307 of title 40, United States Code.".

(g) Reports.--Section 548(b) of the National Energy Conservation Policy Act (42 U.S.C. 8258(b)) is amended--

(1) in the subsection heading, by inserting ``the President and" before ``Congress"; and

(2) by inserting ``President and" before ``Congress".

(h) *Conforming Amendment.--*Section 550(d) of the National Energy Conservation Policy Act (42 U.S.C. 8258b(d)) is amended in the second sentence by striking ``the 20 percent reduction goal established under section 543(a) of the National Energy Conservation Policy Act (42 U.S.C. 8253(a))." and inserting ``each of the energy reduction goals established under section 543(a)."

SEC. 103. ENERGY USE MEASUREMENT AND ACCOUNTABILITY.

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

``(e) Metering of Energy Use.--

``(1) DEADLINE.--By October 1, 2012, in accordance with guidelines established by the Secretary under paragraph (2), all Federal buildings shall, for the purposes of efficient use of energy and reduction in the cost of electricity used in such buildings, be metered. Each agency shall use, to the maximum extent practicable, advanced meters or advanced metering devices that provide data at least daily and that measure at least hourly consumption of electricity in the Federal buildings of the agency. Such data shall be incorporated into existing Federal energy tracking systems and made available to Federal facility managers.

``(2) GUIDELINES.--

``(A) IN GENERAL.--Not later than 180 days after the date of enactment of this subsection, the Secretary, in consultation with the Department of Defense, the General Services Administration, representatives from the metering industry, utility industry, energy services industry, energy efficiency industry, energy efficiency advocacy organizations, national laboratories, universities, and Federal facility managers, shall establish guidelines for agencies to carry out paragraph (1).

``(B) REQUIREMENTS FOR GUIDELINES.--The guidelines shall-- ``(i) take into consideration--

``(I) the cost of metering and the reduced cost of operation and maintenance expected to result from metering;

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``(II) the extent to which metering is expected to result in increased potential for energy management, increased potential for energy savings and energy efficiency improvement, and cost and energy savings due to utility contract aggregation; and

``(III) the measurement and verification protocols of the Department of Energy; ``(ii) include recommendations concerning the amount of funds and the number of trained personnel necessary to gather and use the metering information to track and reduce energy use;

(iii) establish priorities for types and locations of buildings to be metered based on costeffectiveness and a schedule of 1 or more dates, not later than 1 year after the date of issuance of the guidelines, on which the requirements specified in paragraph (1) shall take effect; and

``(iv) establish exclusions from the requirements specified in paragraph (1) based on the de minimis quantity of energy use of a Federal building, industrial process, or structure.

``(3) PLAN.--Not later than 6 months after the date 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 how the agency will implement the requirements of paragraph (1), including (A) how the agency will designate personnel primarily responsible for achieving the requirements and (B) demonstration by the agency, complete with documentation, of any finding that advanced meters or advanced metering devices, as defined in paragraph (1), are not practicable.".

SEC. 104. PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.

(a) *Requirements.--*Part 3 of title V of the National Energy Conservation Policy Act (42 U.S.C. 8251 et seq.), as amended by section 101, is amended by adding at the end the following:

``SEC. 553. FEDERAL PROCUREMENT OF ENERGY EFFICIENT PRODUCTS.

``(a) *Definitions*.--In this section:

``(1) AGENCY.--The term `agency' has the meaning given that term in section 7902(a) of title 5, United States Code.

``(2) ENERGY STAR PRODUCT.--The term `Energy Star product' means a product that is rated for energy efficiency under an Energy Star program.

``(3) ENERGY STAR PROGRAM.--The term `Energy Star program' means the program established by section 324A of the Energy Policy and Conservation Act.

``(4) FEMP DESIGNATED PRODUCT.--The term `FEMP designated product' means a product that is designated under the Federal Energy Management Program of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency.

``(5) PRODUCT.--The term `product' does not include any energy consuming product or system designed or procured for combat or combat-related missions.

``(b) Procurement of Energy Efficient Products.--

``(1) **REQUIREMENT**.--To meet the requirements of an agency for an energy consuming product, the head of the agency shall, except as provided in paragraph (2), procure--

``(A) an Energy Star product; or

``(B) a FEMP designated product.

``(2) EXCEPTIONS.--The head of an agency is not required to procure an Energy Star product or FEMP designated product under paragraph (1) if the head of the agency finds in writing that--

``(A) an Energy Star product or FEMP designated product is not cost-effective over the life of the product taking energy cost savings into account; or

``(B) no Energy Star product or FEMP designated product is reasonably available that meets the functional requirements of the agency.

``(3) PROCUREMENT PLANNING.--The head of an agency shall incorporate into the specifications for all procurements involving energy consuming products and systems, including guide specifications, project specifications, and construction, renovation, and services contracts that include provision of energy consuming products and systems, and into the factors for the evaluation of offers received for the procurement, criteria for energy efficiency that are consistent with the criteria used for rating Energy Star products and for rating FEMP designated products.

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``(c) *Listing of Energy Efficient Products in Federal Catalogs.*--Energy Star products and FEMP designated products shall be clearly identified and prominently displayed in any inventory or listing of products by the General Services Administration or the Defense Logistics Agency. The General Services Administration or the Defense Logistics Agency shall supply only Energy Star products or FEMP designated products for all product categories covered by the Energy Star program or the Federal Energy Management Program, except in cases where the agency ordering a product specifies in writing that no Energy Star product or FEMP designated product is available to meet the buyer's functional requirements, or that no Energy Star product or FEMP designated product is cost-effective for the intended application over the life of the product, taking energy cost savings into account.

``(d) *Specific Products.--*(1) In the case of electric motors of 1 to 500 horsepower, agencies shall select only premium efficient motors that meet a standard designated by the Secretary. The Secretary shall designate such a standard not later than 120 days after the date of the enactment of this section, after considering the recommendations of associated electric motor manufacturers and energy efficiency groups.

``(2) All Federal agencies are encouraged to take actions to maximize the efficiency of air conditioning and refrigeration equipment, including appropriate cleaning and maintenance, including the use of any system treatment or additive that will reduce the electricity consumed by air conditioning and refrigeration equipment. Any such treatment or additive must be--

``(A) determined by the Secretary to be effective in increasing the efficiency of air conditioning and refrigeration equipment without having an adverse impact on air conditioning performance (including cooling capacity) or equipment useful life;

``(B) determined by the Administrator of the Environmental Protection Agency to be environmentally safe; and

``(C) shown to increase seasonal energy efficiency ratio (SEER) or energy efficiency ratio (EER) when tested by the National Institute of Standards and Technology according to Department of Energy test procedures without causing any adverse impact on the system, system components, the refrigerant or lubricant, or other materials in the system.

Results of testing described in subparagraph (C) shall be published in the Federal Register for public review and comment. For purposes of this section, a hardware device or primary refrigerant shall not be considered an additive.

``(e) *Regulations.--*Not later than 180 days after the date of the enactment of this section, the Secretary shall issue guidelines to carry out this section.".

(b) *Conforming Amendment.*--The table of contents of the National Energy Conservation Policy Act is further amended by inserting after the item relating to section 552 the following new item: ``Sec..553..Federal procurement of energy efficient products.".

SEC. 105. ENERGY SAVINGS PERFORMANCE CONTRACTS.

(a) *Extension*.--Section 801(c) of the National Energy Conservation Policy Act (42 U.S.C. 8287(c)) is amended by striking ``2006" and inserting ``2016".

(b) *Extension of Authority*.--Any energy savings performance contract entered into under section 801 of the National Energy Conservation Policy Act (42 U.S.C. 8287) after October 1, 2003, and before the date of enactment of this Act, shall be considered to have been entered into under that section.

SEC. 109. FEDERAL BUILDING PERFORMANCE STANDARDS.

Section 305(a) of the Energy Conservation and Production Act (42 U.S.C. 6834(a)) is amended--(1) in paragraph (2)(A) by striking ``CABO Model Energy Code, 1992 (in the case of resider

(1) in paragraph (2)(A), by striking ``CABO Model Energy Code, 1992 (in the case of residential buildings) or ASHRAE Standard 90.1-1989" and inserting ``the 2004 International Energy Conservation Code (in the case of residential buildings) or ASHRAE Standard 90.1-2004"; and

(2) by adding at the end the following:

``(3)(A) Not later than 1 year after the date of enactment of this paragraph, the Secretary shall establish, by rule, revised Federal building energy efficiency performance standards that require that--

`(i) if life-cycle cost-effective for new Federal buildings--

``(I) the buildings be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the version of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, that is in effect as of the date of enactment of this paragraph; and

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``(II) sustainable design principles are applied to the siting, design, and construction of all new and replacement buildings; and

``(ii) if water is used to achieve energy efficiency, water conservation technologies shall be applied to the extent that the technologies are life-cycle cost-effective.

``(iii) Not later than 1 year after the date of approval of each subsequent revision of the ASHRAE Standard or the International Energy Conservation Code, as appropriate, the Secretary shall determine, based on the cost-effectiveness of the requirements under the amendment, whether the revised standards established under this paragraph should be updated to reflect the amendment.

``(iv) In the budget request of the Federal agency for each fiscal year and each report submitted by the Federal agency under section 548(a) of the National Energy Conservation Policy Act (42 U.S.C. 8258(a)), the head of each Federal agency shall include--

``(v) a list of all new Federal buildings owned, operated, or controlled by the Federal agency; and

(v) a list of an new redefail buildings of near operated, is the revised standards (vi) a statement specifying whether the Federal buildings meet or exceed the revised standards established under this paragraph.".

SEC. 111. ENHANCING ENERGY EFFICIENCY IN MANAGEMENT OF FEDERAL LANDS.

(a) *Sense of the Congress.*--It is the sense of the Congress that Federal agencies should enhance the use of energy efficient technologies in the management of natural resources.

(b) *Energy Efficient Buildings.--*To the extent practicable, the Secretary of the Interior, the Secretary of Commerce, and the Secretary of Agriculture shall seek to incorporate energy efficient technologies in public and administrative buildings associated with management of the National Park System, National Wildlife Refuge System, National Forest System, National Marine Sanctuaries System, and other public lands and resources managed by the Secretaries.

(c) *Energy Efficient Vehicles.--*To the extent practicable, the Secretary of the Interior, the Secretary of Commerce, and the Secretary of Agriculture shall seek to use energy efficient motor vehicles, including vehicles equipped with biodiesel or hybrid engine technologies, in the management of the National Park System, National Wildlife Refuge System, National Forest System, National Marine Sanctuaries System, and other public lands and resources managed by the Secretaries.

SEC. 203. FEDERAL PURCHASE REQUIREMENT.

(a) *Requirement.*--The President, acting through the Secretary, shall seek to ensure that, to the extent economically feasible and technically practicable, of the total amount of electric energy the Federal Government consumes during any fiscal year, the following amounts shall be renewable energy:

(1) Not less than 3 percent in fiscal years 2007 through 2009.

(2) Not less than 5 percent in fiscal years 2010 through 2012.

(3) Not less than 7.5 percent in fiscal year 2013 and each fiscal year thereafter.

(b) *Definitions*.--In this section:

(1) **BIOMASS**.--The term ``biomass" means any lignin waste material that is segregated from other waste materials and is determined to be nonhazardous by the Administrator of the Environmental Protection Agency and any solid, nonhazardous, cellulosic material that is derived from--

(A) any of the following forest-related resources: mill residues, precommercial thinnings, slash, and brush, or nonmerchantable material;

(B) solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically-treated, or painted wood wastes), and landscape or right-of-way tree trimmings, but not including municipal solid waste (garbage), gas derived from the biodegradation of solid waste, or paper that is commonly recycled;

(C) agriculture wastes, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues, and livestock waste nutrients; or

(D) a plant that is grown exclusively as a fuel for the production of electricity.

(2) RENEWABLE ENERGY.--The term ``renewable energy" means electric energy generated from solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal),

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geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project.

(c) *Calculation.*--For purposes of determining compliance with the requirement of this section, the amount of renewable energy shall be doubled if--

(1) the renewable energy is produced and used on-site at a Federal facility;

(2) the renewable energy is produced on Federal lands and used at a Federal facility; or

(3) the renewable energy is produced on Indian land as defined in title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 et seq.) and used at a Federal facility.

(d) *Report.--*Not later than April 15, 2007, and every 2 years thereafter, the Secretary shall provide a report to Congress on the progress of the Federal Government in meeting the goals established by this section.

SEC. 204. USE OF PHOTOVOLTAIC ENERGY IN PUBLIC BUILDINGS.

(a) *In General.--*Subchapter VI of chapter 31 of title 40, United States Code, is amended by adding at the end the following:

``§3177. Use of photovoltaic energy in public buildings

``(a) Photovoltaic Energy Commercialization Program.--

``(1) IN GENERAL.--The Administrator of General Services may establish a photovoltaic energy commercialization program for the procurement and installation of photovoltaic solar electric systems for electric production in new and existing public buildings.

(2) **PURPOSES**.--The purposes of the program shall be to accomplish the following:

``(A) To accelerate the growth of a commercially viable photovoltaic industry to make this energy system available to the general public as an option which can reduce the national consumption of fossil fuel.

(B) To reduce the fossil fuel consumption and costs of the Federal Government.

``(C) To attain the goal of installing solar energy systems in 20,000 Federal buildings by 2010, as contained in the Federal Government's Million Solar Roof Initiative of 1997.

``(D) To stimulate the general use within the Federal Government of life-cycle costing and innovative procurement methods.

``(E) To develop program performance data to support policy decisions on future incentive programs with respect to energy.

(3) ACQUISITION OF PHOTOVOLTAIC SOLAR ELECTRIC SYSTEMS.--

``(A) IN GENERAL.--The program shall provide for the acquisition of photovoltaic solar electric systems and associated storage capability for use in public buildings.

``(B) ACQUISITION LEVELS.--The acquisition of photovoltaic electric systems shall be at a level substantial enough to allow use of low-cost production techniques with at least 150 megawatts (peak) cumulative acquired during the 5 years of the program.

``(4) ADMINISTRATION.--The Administrator shall administer the program and shall--

``(A) issue such rules and regulations as may be appropriate to monitor and assess the performance and operation of photovoltaic solar electric systems installed pursuant to this subsection;

``(B) develop innovative procurement strategies for the acquisition of such systems; and ``(C) transmit to Congress an annual report on the results of the program.

``(b) Photovoltaic Systems Evaluation Program.--

``(1) IN GENERAL.--Not later than 60 days after the date of enactment of this section, the Administrator shall establish a photovoltaic solar energy systems evaluation program to evaluate such photovoltaic solar energy systems as are required in public buildings.

``(2) PROGRAM REQUIREMENT.--In evaluating photovoltaic solar energy systems under the program, the Administrator shall ensure that such systems reflect the most advanced technology. ``(c) Authorization of Appropriations.--

``(1) PHOTOVOLTAIC ENERGY COMMERCIALIZATION PROGRAM.--There are authorized to be appropriated to carry out subsection (a) \$50,000,000 for each of fiscal years 2006 through 2010. Such sums shall remain available until expended.

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(2) PHOTOVOLTAIC SYSTEMS EVALUATION PROGRAM.--There are

authorized to be appropriated to carry out subsection (b) \$10,000,000 for each of fiscal years 2006 through 2010. Such sums shall remain available until expended.".

(b) *Conforming Amendment*.--The table of sections for the National Energy Conservation Policy Act is amended by inserting after the item relating to section 569 the following: ``Sec..570..Use of photovoltaic energy in public buildings''.

SEC. 207. INSTALLATION OF PHOTOVOLTAIC SYSTEM.

There is authorized to be appropriated to the General Services Administration to install a photovoltaic system, as set forth in the Sun Wall Design Project, for the headquarters building of the Department of Energy located at 1000 Independence Avenue Southwest in the District of Columbia, commonly know as the Forrestal Building, \$20,000,000 for fiscal year 2006. Such sums shall remain available until expended.

SEC. 1802. STUDY OF ENERGY EFFICIENCY STANDARDS.

The Secretary shall contract with the National Academy of Sciences for a study, to be completed within 1 year after the date of enactment of this Act, to examine whether the goals of energy efficiency standards are best served by measurement of energy consumed, and efficiency improvements, at the actual site of energy consumption, or through the full fuel cycle, beginning at the source of energy production. The Secretary shall submit the report to Congress.

SEC. 1833. RENEWABLE ENERGY ON FEDERAL LAND.

(a) *National Academy of Sciences Study.*--Not later than 90 days after the date of enactment of this Act, the Secretary of the Interior shall enter into a contract with the National Academy of Sciences under which the National Academy of Sciences shall--

(1) study the potential of developing wind, solar, and ocean energy resources (including tidal, wave, and thermal energy) on Federal land available for those uses under current law and the outer Continental Shelf;

(2) assess any Federal law (including regulations) relating to the development of those resources that is in existence on the date of enactment of this Act; and

(3) recommend statutory and regulatory mechanisms for developing those resources.(b) *Submission to Congress.*--Not later than 2 years after the date of enactment of this Act, the Secretary of the Interior shall submit to Congress the results of the study under subsection (a).