



Energy Policy Act of 2005 - Title II - Renewable Energy

An Online Continuing Education Course for Engineers

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This course reviews the requirements for renewables as defined in the Energy Policy Act of 2005. In the intervening years since enactment, some portions of the Act may have been modified by Executive Orders or Congressional actions. For instance, the Act mandated that the maximum expenditure per dwelling unit for renewable system in the Energy Conservation and Production Act must not exceed \$3,000. However, this value is periodically adjusted by Congressional action. To get the most up to date information on a specific program you should look at the defining Act for that program.

Introduction

On August 8, 2005 the Energy Policy Act of 2005 was signed into law. The purpose of the Act is to establish a comprehensive energy policy for the United States. The Act is a wide ranging piece of legislation consisting of over 1,700 pages covering a broad spectrum of energy saving and energy production techniques. The insert on the right shows the major chapters of the Act.

The Energy Policy Act of 2005 or EAct'05 has eighteen chapters or titles. Included in the Act are such diverse items from tax incentives for nuclear power plant development to changes in daylight savings time schedules. The Act promotes renewable fuel sources including wind, solar, and tidal power. Alternative fuels such as biofuels are included the Act as well as other improvements in automobile fuels.

Traditional energy production sources such as oil, gas, coal, and nuclear are considered in the Act. For instance, the Act includes \$200 million annually for clean coal initiatives.

There are tax breaks in the Act for almost all segments of the energy markets from tax breaks for oil companies to tax credits for consumers to purchase hybrid vehicles.

Energy Policy Act of 2005

Title	Description
I	Energy Efficiency
II	Renewable Energy
III	Oil & Gas
IV	Coal
V	Indian Energy
VI	Nuclear Energy
VII	Vehicles & Fuel
VIII	Hydrogen Fuel
IX	Research & Development
X	Dept. of Energy Management
XI	Personnel & Training
XII	Electricity
XIII	Energy Policy Tax Incentive
XIV	Miscellaneous
XV	Ethanol & Motor Fuel
XVI	Climate Change
XVII	Innovative Technologies
XVIII	Studies

In this course we will look at the second title in the Energy Policy Act. Title II concerns renewable energy and has four sections. The sections are: General provisions, geothermal energy, hydroelectric energy, and insular energy.

Title II modifies and expands many existing Federal programs such as the Energy Conservation and Production Act, Energy Policy Act of 1992, The Geothermal Steam Act of 1970, and the Federal Power Act, to name a few.

This is essentially a recapitulation of the Act with some of the 'legal' language removed to make the Act slightly more understandable. Some sections have been condensed for clarity and technical corrections to other programs have been removed.

Subtitle A - General Provisions

This part of Title II addresses several general provisions concerning renewables and specifically addresses the use of renewables at Federal facilities. Special emphasis is given to the Federal use of photovoltaics and bio-fuels.



Photo courtesy: DOE

The photograph on the right shows photovoltaic arrays at the National Renewable Energy Laboratory that are being tested to find ways to improve the design and efficiency of large PV systems.

201. Assessment of Renewable Energy Resources

Within six months after the date of enactment of this Act, and each year thereafter, the Department of Energy (DOE) will review the available assessments of renewable energy resources within the United States, including solar, wind, biomass, ocean (including tidal, wave, current, and thermal), geothermal, and hydroelectric energy resources, and undertake new assessments as necessary, taking into account changes in market conditions, available technologies, and other relevant factors.

Within one year after the date of enactment of this Act, and each year thereafter, the DOE will publish a report on the status of renewable energy resources. The report will contain, a detailed inventory describing the available amount and characteristics of the renewable energy resources and such other information as the DOE believes would be useful in developing such renewable energy resources. The report is to include descriptions of surrounding terrain, population and load centers, nearby energy infrastructure, location of energy and water resources, and available estimates of the costs needed to develop each resource, together with an identification of any barriers to providing adequate transmission for remote sources of renewable energy resources to

current and emerging markets, recommendations for removing or addressing such barriers, and ways to provide access to the grid that do not unfairly disadvantage renewable or other energy producers.

Congress has authorized to be appropriated \$10 million for the Department of Energy for each of fiscal years 2006 through 2010 to carry out these provisions.

202. Renewable Energy Production Incentive

Section 202 amends the Energy Policy Act of 1992 (42 U.S.C. 13317(a)) concerning incentive payments for renewable energy production.

If there are insufficient appropriations to make full incentive payments for electric production from all qualified renewable energy facilities for a fiscal year, the DOE will assign, 60 percent of appropriated funds for the fiscal year to facilities that use solar, wind, ocean (including tidal, wave, current, and thermal), geothermal, or closed-loop (dedicated energy crops) biomass technologies to generate electricity. The remaining 40 percent of appropriated funds for the fiscal year will be used for other projects. The DOE may alter the percentage requirements by submitting a request to Congress with an explanation of the reasons for the alteration.

A qualified renewable energy facility includes facilities of not for-profit electric cooperatives', public utilities, State's, Commonwealth's, territories, Federal facilities, and Indian tribal governments.

The eligibility for the incentive payments ends on October 1, 2016. The Act authorizes appropriations as are necessary for each of fiscal years 2006 through 2026, to remain available until expended.

203. Federal Purchase Requirement

The President, acting through the DOE, will 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 will be renewable energy,

1. Not less than three percent in fiscal years 2007 through 2009.
2. Not less than five percent in fiscal years 2010 through 2012.
3. Not less than seven and one-half percent in fiscal year 2013 and each fiscal year thereafter.
- 4.

The term *biomass* means any lignin waste material that is segregated from other waste materials and is determined to be non-hazardous by the Environmental Protection Agency (EPA) and any solid, non-hazardous, cellulose-type material that is derived from any of the following forest-related resources: mill residues, pre-commercial thinnings, slash, and brush, or non-merchantable

material; 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; agriculture wastes, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues, and livestock waste nutrients; or a plant that is grown exclusively as a fuel for the production of electricity.

The term *renewable energy* means electric energy generated from solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project.

The amount of renewable energy will 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.
3. The renewable energy is produced on Indian land and used at a Federal facility.

Not later than April 15, 2007, and every two years thereafter, the DOE will provide a report to Congress on the progress of the Federal Government in meeting these goals.

204. Use of Photovoltaic Energy in Public Buildings

The General Services Administration (GSA) 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.

The five purposes of the program are,

1. 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.
2. To reduce the fossil fuel consumption and costs of the Federal Government.
3. 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.
4. To stimulate the general use within the Federal Government of life-cycle costing and innovative procurement methods.
5. To develop program performance data to support policy decisions on future incentive programs with respect to energy.

The program will provide for the acquisition of photovoltaic solar electric systems and associated storage capability for use in public buildings.

