

Report to Congress on the Progress of the Federal Government in Meeting the Renewable Energy Goals of the Energy Policy Act of 2005



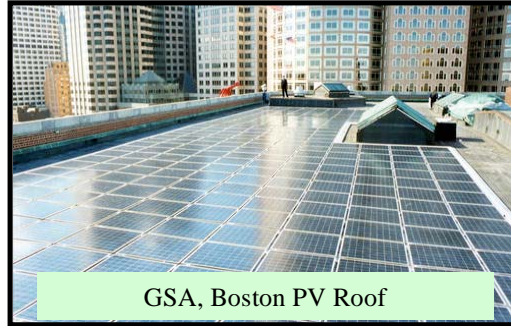
USAF, Ascension Island Wind



Interior, Dangling Rope Marina PV



USDOE, RE Purchase Announcement



GSA, Boston PV Roof

Prepared by:
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Federal Energy Management Program
1000 Independence Ave, SW
Washington, DC 20585

May 1 2007

Contents

1.0 Summary of Authority 1

2.0 Fiscal Year 2006 Federal Renewable Energy
Consumption Compared to Goal 1

3.0 Agency Methods to Meet Renewable Energy Goals 2

4.0 DOE Support to Agencies 2

 4.1 Technical Assistance and Outreach 2

 4.2 Partnerships to Acquire Renewable Energy 3

5.0 Conclusion 3

Appendix A: Section 203 of the Energy Policy Act of 2005 A-1

Appendix B: FY 2006 Renewable Energy Consumption
by Federal AgenciesB-1

1.0 Summary of Authority

This report was prepared under authority of Section 203 of the Energy Policy Act of 2005 (EPACT), PL 109-58. This report is due April 15, 2007 and every two years thereafter (42 U.S.C. 15852(d)).

Section 203 of EPACT (42 U.S.C. 15852 (a)) requires the Secretary of Energy to seek to ensure that, to the extent economically feasible and technically practicable, of the total amount of electric energy the Federal Government consumes, the following amounts are renewable energy as defined in section 203 of the Act:

- (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.

Section 203 also provides a bonus to Federal agencies by allowing them to double count renewable energy if it is produced on-site and used at a Federal facility, produced on Federal lands and used at a Federal facility, or produced on Indian land and used at a Federal facility (42 U.S.C. 15852 (c)).¹

Section 203 states that 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.

2.0 Fiscal Year 2006 Federal Renewable Energy Consumption Compared to Goal

The Federal renewable energy goals in EPACT begin in fiscal year 2007. Based on preliminary 2006 data reported to the Department of Energy’s (DOE) Federal Energy Management Program (FEMP), renewable energy use in the Federal government is expected to exceed the 3% goal in 2007, as shown in Figure 1 on the next page. Electric energy from renewable energy certificate purchases, direct purchases and on-site generation account for 4.35% of Federal electricity use.

A share of the on-site renewable energy could qualify for the bonus in section 203. Including the renewable bonus in the percentage calculations could increase the percentage of Federal electricity use that is renewable energy to as much as 4.97 percent if agencies sustain their current level of renewable energy purchases. Agencies have not

¹ In January 2007, President Bush signed Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. This order challenges agencies to meet the EPACT renewable energy goals using 50% "new" renewable energy (i.e., placed in service after January 1, 1999). This requirement should further spur demand and market development for renewable energy. EO 13423 instructions require the Department of Energy to issue further guidance to agencies on use of renewable energy credits.

been required to report hydropower use, but will in the future as the new goal is implemented, which may also add to current renewable energy use.

3.0 Agency Methods to Meet Renewable Energy Goals

Agencies relied on renewable energy purchases, on-site projects, and the purchase of renewable energy certificates (RECs) to acquire renewable energy in 2006. Figure 1 shows the relative contribution from each of these methods.

On-site projects provide renewable energy as long as the projects operate, usually 20 years or more. Purchasing renewable energy from local energy suppliers is an attractive option when on-site projects are not technically feasible or economical. These purchases typically span 1-3 years. Renewable energy certificates are another form of renewable energy purchases. They represent the environmental attributes of renewable energy. They allow Federal facilities to acquire renewable energy attributes from anywhere in the country, and usually span 1-3 years.

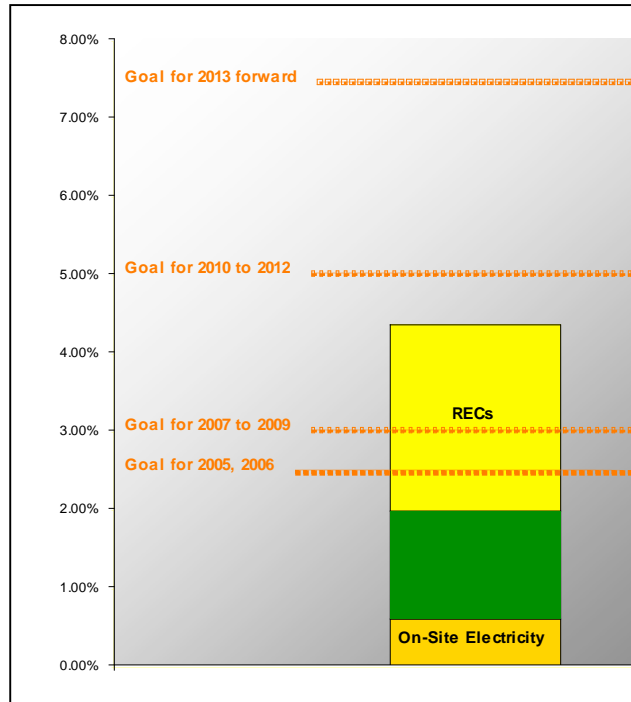


Figure 0: Federal Renewable Energy Use and Goals

4.0 DOE Support to Agencies

The Department of Energy (DOE)'s Federal Energy Management Program (FEMP) provided technical and acquisition assistance to help agencies expand all three methods for renewable energy acquisition in 2006.

4.1 Technical Assistance and Outreach

FEMP offers technical advice, expert analysis, and analysis tools to Federal energy managers. Technical assistance includes surveys of facilities, detailed help with designs for on-site projects, resource and economic analyses, and other services.

FEMP documents success stories and offers case studies to demonstrate how to successfully develop projects and make purchases. Through its awards programs, FEMP recognizes Federal energy managers who develop innovative renewable energy projects as an incentive for individual energy managers to lead their agencies and further publicizes renewable energy success. One half of the twenty-six Presidential and Federal energy award winners in 2006 included renewable energy projects in their nominations, including renewable power purchases, photovoltaics, and wind energy.

4.2 Partnerships to Acquire Renewable Energy

FEMP, the Defense Energy Support Center (DESC), the General Services Administration (GSA), and the Environmental Protection Agency (EPA) have identified and removed many obstacles to renewable energy purchasing. As early renewable energy purchasing markets developed, FEMP and its partners created a framework for agencies to specify and buy renewable energy and renewable energy certificates that complies with the Federal Acquisition Regulation. After precedents were established, Federal renewable energy consumption expanded significantly.

FEMP has developed or helped to develop essential acquisition tools for implementing renewable energy and energy efficiency technologies including energy savings performance contracts (ESPC) and utility energy services contracts (UESC). FEMP also helps Federal facilities make the most of agency direct appropriations and state incentives.

State and utility company incentives for renewable energy are often difficult for agencies to use because they take the form of tax credits, or explicitly exclude government agencies. However, FEMP and its partners have worked with Federal facilities to develop contracting methods that can leverage state incentives in some areas. For example, the Naval Air Station (NAS) Coronado in California installed a 750 kiloWatt Photovoltaic system with its energy services company, NORESKO. Working with NORESKO allowed the NAS to reduce the capital costs of the system by 47 percent because NORESKO was able to take advantage of an incentive payment from the San Diego Regional Energy Office on behalf of the NAS. The combination of incentive payments and cost savings from other energy efficiency measures made the on-site project economically attractive.

5.0 Conclusion

The Federal government is in a good position to meet the EPACT renewable energy goals. There is a strong foundation of experience achieved from existing renewable energy projects and purchases to build upon.

Appendix A: Section 203 of the Energy Policy Act of 2005

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 non-hazardous by the Administrator of the Environmental Protection Agency and any solid, non-hazardous, cellulosic material that is derived from—

- (A) any of the following forest-related resources: mill residues, pre-commercial thinnings, slash, and brush, or non-merchantable 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), 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.

(42 U.S.C. 15852)

Appendix B: FY 2006 Renewable Energy Consumption by Federal Agencies

Agency	On-Site Renewable Electricity	Direct Purchases of Renewable Electricity	Renewable Energy Certificate Purchases	Total Renewable Electricity Use	Total Facility Electricity Use	Renewable Electricity vs. Facility Electricity Use
	MWH	MWH	MWH	MWH	MWH	Percentage
DOD	321,108.1	603,290.4	610,491.6	1,534,890.1	29,792,526.4	5.15%
DOC	57.0	2,011.2	100,000.0	102,068.2	312,221.6	32.69%
DOE	116.2	57,903.7	66,670.0	124,689.9	4,899,267.3	2.55%
DHS	229.0	60.0	24,900.0	25,189.0	681,506.4	3.70%
HHS	0.5	428.3	16,175.0	16,603.8	856,066.8	1.94%
DOI	4,060.2	12,487.7	75,000.0	91,547.9	663,921.5	13.79%
GSA	543.7	69,244.8	60,330.2	130,118.7	2,900,058.6	4.49%
EPA	115.8	384.0	161,946.7	162,446.5	134,437.3	120.83%
TVA	3,630.0	1,170.0	0.0	4,800.0	555,363.4	0.86%
USDA	1,546.6	610.0	25,300.0	27,456.6	580,011.7	4.73%
USPS	1,168.9	0.0	0.0	1,168.9	4,917,907.4	0.02%
DOJ	115.5	1,994.5	0.0	2,110.0	1,796,043.4	0.12%
ST	0.0	0.0	0.0	0.0	112,602.6	0.00%
DOT	408.6	0.0	2,093.0	2,501.6	788,218.1	0.32%
SSA	109.0	1,353.3	0.0	1,462.3	200,468.9	0.73%
NASA	295.6	0.0	44,075.6	44,371.2	1,620,671.2	2.74%
DOL	2.6	7,771.6	0.0	7,774.2	262,925.0	2.96%
RRB	0.0	0.0	45.6	45.6	4,572.1	1.00%
TRSY	0.0	2,792.0	10,376.5	13,168.5	387,954.3	3.39%
VA	0.0	806.6	90,000.0	90,806.6	3,042,702.2	2.98%
Other	0.0	0.0	0.0	0.0	255,082.1	0.00%
TOTAL	333,507.3	762,308.1	1,287,404.2	2,383,219.6	54,764,528.1	4.35%

NOTE: Based on preliminary 2006 data submissions from all agencies, except 2005 data for NASA, and Other (FCC) because they have not submitted 2006 data as of April 2007 (highlighted rows).

NOTE: EPA's purchase of Renewable Energy Certificates and other renewable energy consumption exceeds their facility electricity use because EPA made a commitment to offset all of its electricity consumption with clean energy sources and part of its non-electric energy consumption as part of their environmental mission.

OTHER category in 2005 included the Federal Communications Commission, National Archives and Records Administration, Department of Housing and Urban Development, and the Broadcasting Board of Governors for the International Broadcasting Bureau.

MWH = MegaWatt-Hours