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Voluntary Reporting of Greenhouse Gases 2000

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Energy Information Administration
Office of Integrated Analysis and Forecasting
U.S. Department of Energy
Washington, DC 20585

This publication is on the WEB at:
www.eia.doe.gov/oiaf/1605/vrrpt/index.html.

For More Information

Individuals or members of organizations wishing to report reductions in emissions of greenhouse gases under the auspices of the Voluntary Reporting of Greenhouse Gases Program can contact the Energy Information Administration (EIA) at:

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For reporting purposes, the EIA has both a long form (EIA-1605) and a short form (EIA-1605EZ) available, as well as an electronic version of the form. They are available upon request or on EIA's web site at *www.eia.doe.gov/oiaf/1605/forms.html*.

The reports submitted to EIA are compiled into a database that can be obtained on CD-ROM by contacting the Voluntary Reporting of Greenhouse Gases Program Communications Center at 1-800-803-5182 or can be downloaded from EIA's web site at *www.eia.doe.gov/oiaf/1605/database.html*.

General or specific technical information concerning the contents of this report may also be obtained by contacting the Voluntary Reporting of Greenhouse Gases Program.

Preface

Title XVI, Section 1605(b) of the Energy Policy Act of 1992 (EPACT) directed the Energy Information Administration (EIA) to establish a mechanism for "the voluntary collection and reporting of information on . . . annual reductions of greenhouse gas emissions and carbon fixation achieved through any measures, including fuel switching, forest management practices, tree planting, use of renewable energy, manufacture or use of vehicles with reduced greenhouse gas emissions, appliance efficiency, methane recovery, cogeneration, chlorofluorocarbon capture and replacement, and power plant heat rate improvement . . . ."

The legislation further instructed EIA to create forms for the reporting of greenhouse gas emissions and reductions, and to establish a database of the information voluntarily reported under this subsection of EPACT. The reporting Forms EIA-1605 and EIA-1605EZ, "Voluntary Reporting of Greenhouse Gases," were first made available to the public in July 1995, providing a vehicle for voluntary reporting on activities that occurred before and during 1994. This publication summarizes data reported for 2000, the seventh year of data collection for the Voluntary Reporting of Greenhouse Gases Program.

The data reported to the Program are available through several media. All nonconfidential reports received by the Program are compiled into a Public Use Database, available on CD-ROM, on a set of diskettes, or by download from the Internet. The software is interactive and modular by design, allowing the user to select, view, or print the reports filed by the voluntary reporters, for each year of their participation. The user can also connect to and query the database with Microsoft Access 97 (or later versions) or other software that supports 32-bit open database connectivity (ODBC).

The Public Use Database and the current reporting software are also available at the Program's FTP (File Transfer Protocol) site on the Internet at *http://www.eia.doe.gov/oiaf/1605/database.html*. Interested parties are encouraged to visit the Program's home page at *http://www.eia.doe.gov/oiaf/1605/frntvrgg.html* for more information and background on the Program. Software, additional copies of this report, paper reporting forms, and technical support information can be downloaded from that web site or obtained from the Voluntary Reporting of Greenhouse Gases Communications Center by e-mail at *infoghg@eia.doe.gov*, toll-free at 1-800-803-5182, or locally at 202-586-0688.

This report was prepared under the guidance of Mary J. Hutzler, Director of EIA's Office of Integrated Analysis and Forecasting. Significant contributions to the Program, the current software, and the preparation of this report have been made by Paul McArdle, Harry Alverson, Stephen Calopedis, Nancy Checklick, Laura Gehlin, William LaPerch, Michael Mondshine, Dick Richards, and Charles L. Smith.

EIA would like to express special thanks to the voluntary reporters, without whom this program would not be possible.

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The Voluntary Reporting of Greenhouse Gases Program, required by Section 1605(b) of the Energy Policy Act of 1992, records the results of voluntary measures to reduce, avoid, or sequester greenhouse gas emissions. A total of 222 U.S. companies and other organizations reported to the Energy Information Administration (EIA) that, during 2000, they had undertaken 1,882 projects to reduce or sequester greenhouse gases. The reported greenhouse gas emission reductions for the projects reported included 187 million metric tons carbon dioxide equivalent of direct project-level reductions, 61 million metric tons of indirect project-level reductions, 9 million metric tons of reductions from carbon sequestration, and 12 million metric tons of unspecified project-level reductions (Table ES1). For definitional purposes, direct reductions are emission reductions from sources owned or leased by the reporting entity, indirect reductions are emission reductions from sources not owned or leased by the reporting entity but that occur as a result of the entity's activities, carbon sequestration reductions represent the removal of atmospheric carbon to a carbon sink, and unspecified reductions represent emission reductions reported on Form EIA-1605EZ for which the reporting entity did not specify whether the emission reduction was a direct or indirect reduction.

Table ES1. Reporting Indicators for the Voluntary Reporting of Greenhouse Gases Program, Data Years 1994-2000

Indicator	1994(R)	1995(R)	1996	1997	1998(R)	1999(R)	2000
Number of Entities Reporting	108	142	150	162	207	207	222
Number of Projects Reported	634	960	1,040	1,288	1,549	1,721	1,882
Number of Entity-Level (Organization-Wide) Reports Received	40	51	56	60	76	83	100
Project-Level Reductions Reported (Million Metric Tons Carbon Dioxide Equivalent)							
Direct[a]	63	88	90	95	148	155	187
Modified Reference Case[b]	59	76	75	88	127	126	153
Basic Reference Case[c]	4	13	15	7	21	29	35
Indirect[d]	5	52	53	38	43	57	61
Modified Reference Case[b]	5	52	51	36	38	51	56
Basic Reference Case[c]	0	1	3	2	5	6	5
Sequestration[e]	1	1	9	10	12	10	9
Unspecified[f]	4	6	6	9	19	13	12

[a]"Direct" emission reductions are reductions in releases of greenhouse gases "on site." For the purpose of completing Form EIA-1605, "on site" is defined as any source owned (wholly or in part) or leased by the reporting entity.

[b]In a "modified reference case," actual emissions are compared to an estimate of what emissions or sequestration would have been in the absence of the project.

[c]In a "basic reference case," actual emissions are compared with an estimate of historical emissions or sequestration in a particular base year.

[d]"Indirect" emission reductions are reductions in emissions from sources not owned or leased by the reporting entity but that occur, wholly or in part, as a result of the entity's activities (for example, an automobile manufacturer's investment in increased automotive fuel economy can result in decreased emissions from vehicles owned by individuals or managed fleets).

[e]"Sequestration" is the fixation of atmospheric carbon dioxide in a carbon sink through biological or physical processes, such as photosynthesis.

[f]"Unspecified" emission reductions represent quantities reported on the short form (Form EIA-1605EZ) for which the reporting entity did not specify whether the emission reduction was direct or indirect.

(R) = revised.

Notes: 1999 data have been revised upward to include 1999 reports that were submitted after the filing deadline. It is expected that the 2000 data will also be revised upward in next year's report with the inclusion of late 2000 reports. Totals for direct and indirect reductions may not equal sum of components due to independent rounding.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

To calculate reported emission reductions, reporters are allowed to use a "basic reference case" (what emissions were in a particular year) or a "modified reference case" (what emissions would have been in the absence of emission reduction efforts). Generally, as illustrated in Table ES1, most reductions are reported relative to a modified reference case. For example, in 2000, 153 million metric tons, or 81 percent, of the total 187 million metric tons carbon dioxide equivalent of reported direct reductions are based on modified reference cases. Similarly, for reported indirect reductions, 56 million metric tons, or 92 percent, of the total 61 million metric tons carbon dioxide equivalent of reported reductions are based on modified reference cases.

The 222 entities reporting to the Voluntary Reporting Program for the 2000 reporting cycle represent a 7-percent increase from the 207 entities reporting in 1999 (Table ES1). Since 1994, the number of entities reporting to the program has grown by 106 percent (from 108 entities reporting in 1994). The number of projects reported has grown at a more rapid rate, because reporting levels have increased and the number of projects reported by repeat reporters has increased. The total number of projects reported in 2000 (1,882) is 9 percent higher than the number reported in 1999 (1,721) and 197 percent higher than the number reported in 1994 (634). One hundred of the organizations reporting for 2000 provided estimates of emissions and/or emission reductions for the entire organization—21 percent more than in 1999, when 83 entities reported entity-level emissions. Sixty-five of the reporters for 2000 recorded commitments to take action to reduce emissions in future years, mostly during the 2000 to 2005 time frame.

Of the 100 organizations reporting at the entity level, 96 calculated their 2000 entity-wide greenhouse gas emissions. These entities reported direct greenhouse gas emissions of 1,036 million metric tons carbon dioxide equivalent, equal to about 15 percent of total U.S. greenhouse gas emissions in 2000. Also reported by these organizations were 107 million metric tons carbon dioxide equivalent of indirect emissions, equal to 2 percent of total U.S. greenhouse gas emissions in 2000. Ninety-two entity-level reporters also reported emission reductions, including 164.1 million metric tons carbon dioxide equivalent of direct emission reductions, 27.8 million metric tons carbon dioxide equivalent of indirect emission reductions, and 7.5 million metric tons carbon dioxide equivalent of emission reductions resulting from carbon sequestration projects.

The Voluntary Reporting of Greenhouse Gases Program is used as a registry by several U.S. Government-sponsored voluntary programs to limit greenhouse gas emissions.[1] In the first year of the program (data year 1994), the 95 submissions from electric power producers represented 88 percent of the 108 reports received. In recent years, two factors have combined to lower the proportion of electric utilities among the reporters. First, the program has seen an influx of new participants from outside the electric power sector. Second, ongoing restructuring of the electric power industry has produced several mergers and acquisitions involving reporters to the program. As a result, the electric power sector now represents 46 percent of all the organizations reporting to the program. Participants from outside the electric power sector, representing a diverse set of industries,[2] made up 54 percent of all the organizations reporting to the program for 2000. Each reporting cycle normally has an influx of new reporters to the program.[3]

Projects Reported

Electric power sector reporters (including independent power producers) accounted for 1,287 (68 percent) of the projects reported. Also reporting were industrial concerns (206 projects), agriculture and forestry organizations (174 projects), and alternative energy providers (203 projects). Organizations in other sectors (government, commercial, and residential) submitted reports on 12 projects.

Most of the projects reported for 2000 affected energy supply or use in some way. Some 462 of the projects were related to the generation, transmission, or distribution of electricity, almost all of which were reported by electric power sector reporters (Figure ES1). Another 424 were related to energy end use, 18 were cogeneration projects, and 72 were transportation projects. Another 260 projects reduced emissions of methane from waste disposal facilities (234 projects) and from oil and natural gas systems and coal mines (26 projects), many of which included the displacement of fossil fuels through the use of methane as a fuel. Other projects included the reuse of fly ash in concrete (46 projects) and materials recycling

[1]These programs include the U.S. Department of Energy (DOE) Climate Challenge program for electric utilities and the U.S. Environmental Protection Agency (EPA) Climate Wise program for manufacturers, Landfill Methane Outreach Program, Coalbed Methane Outreach Program, and Green Lights program, as well as the U.S. Initiative on Joint Implementation.

[2]Reporters outside the electric power industry include manufacturers such as Bethlehem Steel, General Motors, IBM, Johnson & Johnson; facilities such as Alcan's Sebree aluminum plant, Motorola's Austin, TX, integrated circuit fabrication plant, and two California Portland Cement Company plants; a number of operators and developers of landfill methane recovery projects; a trade association (Integrated Waste Services Association); and private voluntary organizations, such as American Forests.

[3]New reporters for 2000 that are outside the electric power industry include Bristol-Meyers Squibb, Cargill, Danaher Controls, L´ORÉAL USA, Lafarge, Miller Brewing, Texaco, and Unocal.

(35 projects), which reduce emissions in part by reducing energy consumption. The largest reductions were reported for projects that improved the performance of nuclear power plants. The non-energy-related projects reported fell into two major categories: sequestration of carbon, usually in forests (494 projects), and the recycling, reuse, or destruction of halogenated substances such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (44 projects).

Reported Reductions by Project Type

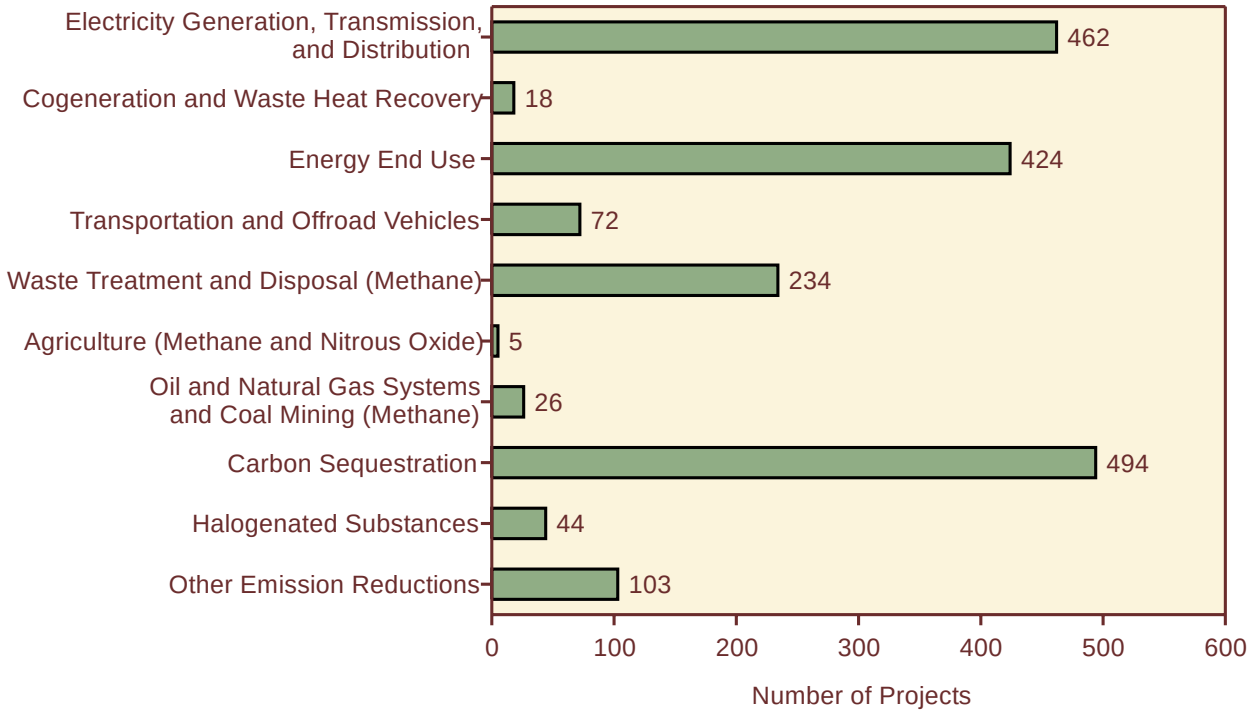
Electric Power

In 2000, total reported emission reductions from electric power projects included 132.7 million metric tons carbon dioxide equivalent from direct sources, 8.6 million metric tons from indirect sources, and 7.8 million metric tons from unspecified sources.[4] Two hundred forty-nine projects were reported in the "decreasing carbon content" category, which includes projects that reduce the carbon content of fuels used to generate electricity. Emission reductions reported for this category totaled 120.4 million metric tons carbon dioxide equivalent from direct sources, 6.9 million metric tons from indirect sources, and 6.8 from unspecified sources. Reported emission reductions for projects increasing energy efficiency in generation, transmission, and distribution included 15.6 million metric tons carbon dioxide equivalent from direct sources, 1.7 million metric tons from indirect sources, and 1.0 million metric tons from unspecified sources.

Energy End Use and Transportation

Reported reductions for energy end-use applications included 19.7 million metric tons carbon dioxide equivalent from direct sources, 8.3 million metric tons from indirect sources, and 0.4 million metric tons from unspecified sources. Nearly all (99 percent) of the reductions were reported for stationary source applications, including lighting control, appliance improvement or replacement, and heating, ventilation and air conditioning (HVAC) improvements. Much smaller reductions were reported for transportation applications, including 0.02 million metric tons carbon dioxide equivalent from direct sources, 0.1 million metric tons from indirect sources, and 0.002 million metric tons from unspecified sources.

Figure ES1. Number of Projects Reported to the Voluntary Reporting of Greenhouse Gases Program by Project Type, Data Year 2000



Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[4]Unspecified reductions represent quantities reported on Form-1605EZ, which does not distinguish between direct and indirect emission reductions.

Carbon Sequestration

Reductions of 9.0 million metric tons carbon dioxide equivalent were reported for carbon sequestration projects in 2000. Most of the reported reductions resulted from afforestation, reforestation, urban forestry, forest management, and forest preservation efforts.

Methane Emissions

In 2000, emission reductions reported for methane abatement projects included 29.5 million tons carbon dioxide equivalent from direct sources, 37.1 million metric tons from indirect sources, and 3.1 million metric tons from unspecified sources. The three key sources of methane reductions are landfill methane recapture, wastewater treatment, and waste combustion. The recapture of methane at landfills is the predominant reported source of methane emission reductions for the 2000 data year, including 27.6 million metric tons carbon dioxide equivalent in direct reductions, 14.1 million metric tons carbon dioxide equivalent in indirect reductions, and 3.1 million metric tons carbon dioxide equivalent in unspecified reductions. Waste combustion, recycling, and source reduction, through the avoidance of methane formation at landfills, is also a significant reported source of indirect reductions in methane emissions (6.3 million metric tons carbon dioxide equivalent reported for 2000).

HFCs, PFCs, and Sulfur Hexafluoride

Reductions reported for projects reducing emissions of HFCs, PFCs, and sulfur hexafluoride in 2000 included 4.6 million metric tons carbon dioxide equivalent from direct sources, 81 metric tons from indirect sources, and 0.02 million metric tons from unspecified sources. The key reported reductions were direct reductions in perfluoromethane (2.7 million metric tons carbon dioxide equivalent), sulfur hexafluoride (1.4 million metric tons carbon dioxide equivalent), and perfluoroethane (0.6 million metric tons carbon dioxide equivalent).

Climate Change Policy Developments

Recent events have again brought the issue of greenhouse gas registries as a mechanism of recording greenhouse gas reduction activities to the forefront. In November 2001, 165 nations that are party to the United Nations Framework Convention on Climate Change (UNFCCC) agreed, subject to ratification, to an international emissions trading framework in order to meet the UNFCCC's Kyoto Protocol.[5,6] President Bush, however, has indicated that he has no intention of submitting the Protocol to the Senate for ratification and that the United States would not agree to the Kyoto Protocol because "it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy."[7]

There is interest in the Administration and the Congress in seeking alternatives to the Protocol. President Bush has announced plans to develop a National Climate Change Technology Initiative that would promote innovative, long-term technologies to address the issue of climate change.[8] Many in Congress are interested in setting up methods to document corporate emissions levels and reductions for possible credit in a future regulatory regime or, should the United States at some point become involved, a program of international emissions trading. A number of bills have been introduced in Congress to address this issue, and a number of States are in the process of setting up greenhouse gas registries (see Chapter 1, pages 14-17).

By creating a database of real-world emission reduction actions and actors, the data reported to the Voluntary Reporting Program can be used to gain insight into the incentive effects and beneficiaries of various credit for early action proposals. The database also provides a mechanism for identifying some of the issues that would have to be resolved in developing an accounting system for an effective credit program.

[5]Pew Center on Global Climate Change, "Climate Talks in Marrakech—COP 7: Update, November 9, 2001—Final Analysis," web site www.pewclimate.org/cop7/update_110901.cfm.

[6]The United Nations Framework Convention on Climate Change, which "entered into force" in 1994, calls on Annex I countries, including the United States, to return their greenhouse gas emissions to 1990 levels by the year 2000. The Kyoto Protocol, adopted in December 1997, is a set of quantified greenhouse gas emissions targets for Annex I countries for the 2008 to 2012 commitment period that are collectively about 5 percent lower than the 1990 emissions of those countries. The Kyoto Protocol has not yet "entered into force," which would require 55 countries *and* Annex I signatories with carbon dioxide emissions totaling 55 percent of total Annex I emissions to ratify the Protocol. The United States, at UNFCCC negotiations in Bonn, Germany, in July 2001, indicated that it believed the Kyoto Protocol to be flawed and that it has no plans, at this time, to ratify the Protocol.

[7]Letter from President Bush to Senators Hagel, Helms, Craig, and Roberts (Office of the Press Secretary, The White House, March 13, 2001).

[8]Remarks by President Bush on Global Climate Change (Office of the Press Secretary, The White House, June 11, 2001).

1. Voluntary Reporting 2000: An Overview

Introduction

The Energy Policy Act of 1992 (EPACT) directed the U.S. Department of Energy (DOE), with the Energy Information Administration (EIA) as the implementing agency, to develop a program to document voluntary actions that reduce emissions of greenhouse gases or remove greenhouse gases from the atmosphere (see box on page 2).[1] The Voluntary Reporting of Greenhouse Gases Program was developed in cooperation with DOE's Office of Policy and the U.S. Environmental Protection Agency (EPA). In addition to providing recognition for entities that reduce greenhouse gas emissions or sequester carbon voluntarily, the program serves to identify innovative and effective ways of reducing emissions.

To date, U.S. policy initiatives aimed at reducing greenhouse gas emissions have relied on voluntary approaches. The 1997 Climate Change Action Plan[2] sought to identify and implement actions that could reduce emissions of greenhouse gases through an array of government/industry partnerships. Most of the reporters to the Voluntary Reporting Program are affiliated with one or more government-sponsored voluntary programs.

This report presents information on the seventh reporting cycle of the Voluntary Reporting Program, which accepted reports including information on emissions, emission reductions, and carbon sequestration activities through 2000. The report is divided into seven chapters. This chapter provides an overview of participation in the Voluntary Reporting Program, a perspective on the composition of activities reported, and a review of some key issues in interpreting and evaluating achievements associated with reported emission mitigation initiatives. Chapters 2 through 6 provide a more detailed review of project-level emission reduction initiatives reported to the program. Chapter 2 examines projects in the electricity sector that reduce carbon dioxide emissions through thermal efficiency improvements or switching to lower emitting fossil fuels. Chapter 3 considers improvements in end-use efficiency and fuel switching in the residential, commercial, industrial, and transportation sectors.

Activities to improve or expand carbon sinks through such activities as reforestation, afforestation, and forest preservation are the subject of Chapter 4. Emission reduction initiatives associated with methane and halogenated substances are examined in Chapters 5 and 6, respectively. Chapter 7 reviews emissions reports from participants who provided data on aggregate entity emissions. A total of 100 reporters, including most of the largest electric utilities in the United States, provided information on aggregate (entity-level) emissions or reductions. Appendixes (available on web site *http://www.eia.doe.gov/oiaf/1605/vrrpt/index.html*) provide information on the development and structure of the data collection instrument, a discussion of issues in the interpretation of the data, and tabular summaries of the participating reporters and the information they reported.

The reports submitted to EIA are compiled into a database that can be obtained on CD-ROM by contacting the Voluntary Reporting of Greenhouse Gases Program Communications Center at 1-800-803-5182 or downloaded from EIA's web site at *http://www.eia.doe.gov/oiaf/1605/database.html*.

Benefits of the Voluntary Reporting Program

The Voluntary Reporting Program is unique among the many voluntary programs initiated during the early 1990s in its diversity of project types, participation, and approaches. The Voluntary Reporting Program's database provides abundant examples of the types of concrete actions that organizations can undertake to reduce greenhouse gas emissions. Some of the most important benefits of the Voluntary Reporting Program are:[3]

[1]Title XVI of the Energy Policy Act, Public Law 102-486 (October 24, 1992), in Section 1605(a) called for an annual report on national aggregate emissions of greenhouse gases. EIA has issued the report—*Emissions of Greenhouse Gases in the United States*—every year since 1993. Section 1605(b) called for the establishment of a database of annual emissions and reductions of emissions reported on a voluntary basis.

[2]U.S. Department of State, *Climate Action Report*, Publication 10496 (Washington, DC, July 1997), web site http://www.state.gov/www/global/oes/97climate_report/index.html.

[3]Testimony of Jay Hakes, former EIA Administrator, on March 30, 2000, before the Senate Committee on Energy and Natural Resources on Senate Bills S.882 and S.1776 and their potential impacts on EIA's Programs. The full text of the testimony is available on EIA's web site at http://www.eia.doe.gov/neic/speeches/hrtest3-30-00/testimony3.htm.

- The program has served to teach staff at many of the largest corporations in the United States how to estimate greenhouse gas emissions and has educated them on a range of possible measures to limit emissions.
- The program has helped to provide concrete evidence for the evaluation of activities reported to the many government voluntary programs launched since 1993.
- Reporters have been able to learn about innovative emission reduction activities from the experiences of their peers.
- The program has created a "test" database of approaches to emission reductions that can be used to evaluate future policy instruments aimed at limiting emissions.
- The program has helped to illuminate many of the poorly appreciated emissions accounting issues that must be addressed in designing any future approaches to emission limitations.

Who Reported?

Reports for the 2000 data year were received from 222 participants in 29 different industries or services, representing a continuing increase in both the number and diversity of participants. In comparison, reports for the 1994 data year—the first year of the program—were received from 108 participants in 9 different industries or services (Table 1).

The Energy Policy Act of 1992, Sections 1605(b) and (c)

(b) Voluntary Reporting.—

(1) ISSUANCE OF GUIDELINES.—Not later than 18 months after the date of the enactment of this Act, the Secretary shall, after opportunity for public comment, issue guidelines for the voluntary collection and reporting of information on sources of greenhouse gases. Such guidelines shall establish procedures for the accurate voluntary reporting of information on—

(A) greenhouse gas emissions—

(i) for the baseline period of 1987 through 1990; and

(ii) for subsequent calendar years on an annual basis;

(B) annual reductions of greenhouse gas emissions and carbon fixation achieved through any measures, including fuel switching, forest management practices, tree planting, use of renewable energy, manufacture or use of vehicles with reduced greenhouse gas emissions, appliance efficiency, methane recovery, cogeneration, chlorofluorocarbon capture and replacement, and power plant heat rate improvement;

(C) reductions in greenhouse gas emissions achieved as a result of—

(i) voluntary reductions;

(ii) plant or facility closings; and

(iii) State or Federal requirements; and

(D) an aggregate calculation of greenhouse gas emissions by each reporting entity.

Such guidelines shall also establish procedures for taking into account the differential radiative activity and atmospheric lifetimes of each greenhouse gas.

(2) REPORTING PROCEDURES.—The Administrator of the Energy Information Administration shall develop forms for voluntary reporting under the guidelines established under paragraph (1), and shall make such forms available to entities wishing to report such information. Persons reporting under this subsection shall certify the accuracy of the information reported.

(3) CONFIDENTIALITY.—Trade secret and commercial or financial information that is privileged or confidential shall be protected as provided in section 552(b)(4) of title 5, United States Code.

(4) ESTABLISHMENT OF DATA BASE.—Not later than 18 months after the date of the enactment of this Act, the Secretary through the Administrator of the Energy Information Administration shall establish a data base comprised of information voluntarily reported under this subsection. Such information may be used by the reporting entity to demonstrate achieved reductions of greenhouse gases.

(c) Consultation.—

In carrying out this section, the Secretary shall consult, as appropriate, with the Administrator of the Environmental Protection Agency.

Table 1. Forms Filed by Standard Industrial Classification, Data Years 1994-2000
(Number of Reports)

SIC Code[a]	Description	Data Year						
		1994	1995	1996	1997	1998	1999(R)	2000
01	Agricultural Production: Crops	0	0	0	0	1	0	0
08	Forestry	1	2	1	1	3	3	1
12	Coal Mining	1	2	2	1	4	3	4
14	Nonmetallic Minerals, except fuels	0	0	0	0	1	1	0
20	Food and Kindred Products	0	0	0	0	1	2	6
22	Textile Mill Products	0	0	0	0	0	1	5
23	Apparel and Other Textile Products	0	0	0	0	0	0	1
24	Lumber and Wood Products	0	0	0	0	0	0	1
25	Furniture and Fixtures	0	0	0	0	0	0	1
26	Paper and Allied Products	0	0	0	0	0	1	1
27	Printing and Publishing	0	1	0	1	0	1	1
28	Chemical and Allied Products	1	3	2	3	8	5	10
29	Petroleum Refining and Other Related Industries	0	0	2	3	8	9	6
30	Rubber and Miscellaneous Plastic Products	0	0	0	0	0	0	2
32	Stone, Clay, Glass, and Concrete Products	0	0	1	4	12	13	7
33	Primary Metals	2	2	4	4	5	5	5
34	Fabricated Metal Products, Except Machinery and Transportation Equipment	0	2	1	1	3	1	1
35	Industrial and Commercial Equipment and Components	0	0	0	0	0	0	1
36	Electronic Equipment	1	1	2	4	4	4	7
37	Transportation Equipment	1	1	1	2	3	5	4
38	Instruments and Related Products	0	0	0	0	2	0	1
39	Miscellaneous Manufacturing Industries	0	1	1	0	2	2	1
48	Communications	0	0	0	0	0	1	0
49	Electric, Gas, and Sanitary Services	95	121	125	129	138	135	145
57	Furniture and Home Furnishings Stores	0	0	0	0	2	1	1
65	Real Estate	0	1	1	1	1	1	1
67	Holding and Other Investment Offices	0	0	1	1	1	1	1
72	Personal Services	0	0	0	0	0	0	1
80	Health Services	0	0	0	0	1	0	0
82	Educational Services	1	2	2	2	0	2	0
86	Membership Organizations	0	0	0	1	1	1	1
87	Engineering and Management Services	0	0	2	2	2	1	0
88	Private Households	2	1	1	1	1	1	1
89	Services Not Elsewhere Classified	0	0	0	1	1	3	2
91	Executive, Legislative, and General	0	0	0	0	1	2	2
Total Number of Reporters[c]		**108**	**142**	**150**	**162**	**207**	**207[b]**	**222[b]**
Number of 2-Digit SIC Codes Represented		**9**	**13**	**16**	**18**	**24**	**26[b]**	**29[b]**

(R) = Revised.

[a]The Voluntary Reporting of Greenhouse Gases database was designed in 1994-1995, when the Standard Industrial Classification (SIC) system was still in use. For the 2002 data year reporting cycle, EIA intends to modify the database to use the North American Industry Classification System (NAICS), which was introduced in 1997 by the United States, Canada, and Mexico to provide comparability in statistics about business activity across North America.

[b]Includes six late reports for the 1999 data year. The 2000 total will also be revised upward in next year's report with the inclusion of late 2000 reports. As of December 21, 2001, EIA had received 12 late 2000 reports, which are not included in this report's 2000 database.

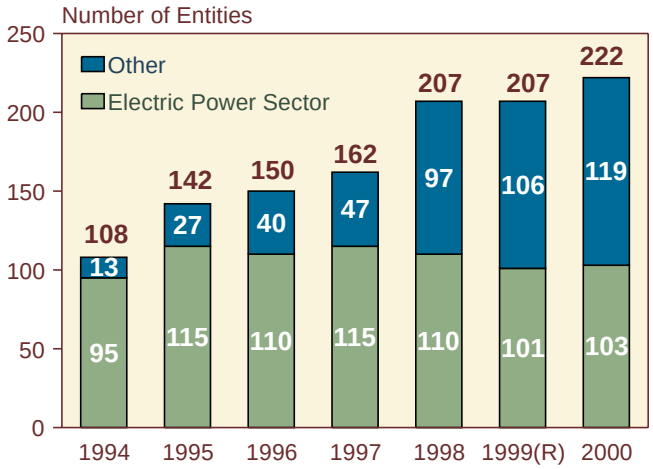
[c]Totals are greater than the sum of reporters in each SIC code, because confidential reporters are excluded from the latter.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

The diversity of the participants in the Voluntary Reporting Program continued to increase in the 2000 data year. In the early years of the program, reporting was dominated by the electric power sector. In the first reporting year (data year 1994), the 95 submissions from electric power producers represented 88 percent of the 108 reports received (Figure 1). Since then, the program has seen an influx of new participants from outside the electric power sector, representing a diverse set of other industries. In addition, the ongoing restructuring of the electric power industry has been accompanied by several mergers and acquisitions involving reporters to the program, reducing the number of reports received from electricity producers. As a result, only 46 percent of the organizations reporting to the program for data year 2000 were from the electric power sector.

Although the number of reporters from other individual industries remained relatively small, in many cases, reports were received from key companies in those other industries: for example, General Motors in the automotive products industry; Noranda and an operating division of Alcan in the metals industry; BP, Sunoco, Inc., and Texaco, Inc., in the petroleum industry; DuPont, Johnson & Johnson, and The Dow Chemical Company in the chemicals industry; Rolls Royce in the aerospace industry; Pharmacia & Upjohn Caribe, Inc., in the pharmaceuticals industry; IBM and Motorola Austin in the electronic equipment industry; and a division of L´ORÉAL USA in the consumer products industry. A complete listing of all 2000 reporters is provided in Appendix B, Table B1.[4]

Figure 1. Electric Power Sector and Other Entities Submitting Reports to the Voluntary Reporting of Greenhouse Gases Program, Data Years 1994-2000



(R) = revised.

Notes: Electric power sector includes electric utilities and independent power producers. 1999 data year includes six late reports that were not included in the totals presented in last year's annual report and database.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Most reporters indicated that their projects were affiliated with one or more government-sponsored voluntary programs. Of the 1,882 projects reported for 2000, 1,034 were affiliated with the Climate Challenge Program, 162 with the Landfill Methane Outreach Program, 122 with the Climate Wise Recognition Program, 41 with the U.S. Initiative on Joint Implementation, 31 with various Energy Star programs (including Energy Star Buildings, Energy Star Computers, and Energy Star Transformers), 19 with the Green Lights Program, 8 with the Natural Gas STAR Program, 6 with the Sulfur Hexafluoride Emissions Reduction Partnership, 4 with the Coalbed Methane Outreach Program, and 3 with WasteWise. Other voluntary programs cited included the Voluntary Aluminum Industrial Partnership, Motor Challenge, the Compressed Air Challenge, and Rebuild America. Not all participants in the various voluntary programs provided information to the Voluntary Reporting Program.

What Was Reported?

The Voluntary Reporting Program permits three distinct types of reporting:

- Project-level emissions and reductions, defined as the emission reduction consequences of a particular action
- Entity-level emissions and reductions, defined as the emissions and reductions of an entire organization, usually defined as a corporation
- Commitments to take action to reduce emissions in the future.

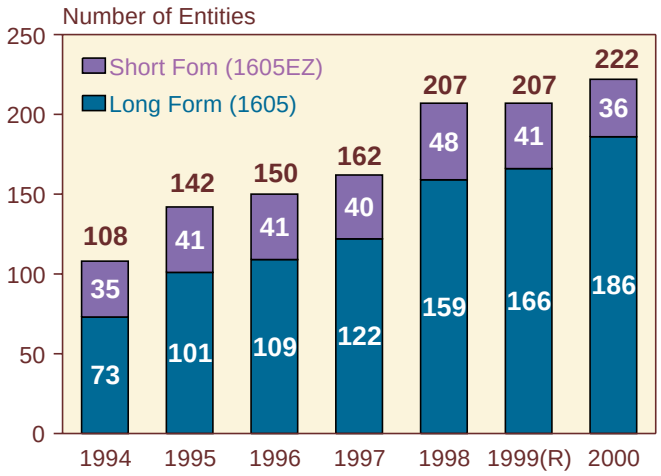
Of the 222 reports received, 186 (84 percent) were submitted on Form EIA-1605 (Figure 2). The remainder were submitted on Form EIA-1605EZ (the short form), which permits reporting on project-level reductions and sequestration only. The proportion of reporters using the short form has declined from 32 percent in the first year of the program (1994 data year) to 16 percent in the 2000 data reporting cycle. EIA believes that reporters are choosing the long form in order to document their emission reductions more thoroughly. Also, for the same reason, several voluntary programs such as Climate Wise and the Landfill Methane Outreach Program require or encourage participants to use the long form.

Most reporters (183 or 82 percent) reported project-level reductions, and 100 reported entity-level emissions and/or reductions. As these numbers imply, most (62)

[4]The appendixes to this report are available from web site http://www.eia.doe.gov/oiaf/1605/vrrpt/index.html.

of the reporters that reported entity-level emissions or reductions also reported at the project level. One hundred twenty-two organizations submitted only project-level reports, whereas 38 reported only entity-level information. Sixty-five reporters provided information on their commitments to reduce emissions or increase sequestration in the future.

Figure 2. Number of Reports Received by Form Type, Data Years 1994-2000



(R) = revised.

Note: 1999 data year includes six late reports that were not included in the totals presented in last year's annual report and database.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Sources of greenhouse gas emissions and emission reductions reported to the Voluntary Reporting of Greenhouse Gases Program are characterized as direct, indirect, or unspecified. The unspecified category includes carbon sequestration reported on the long form and all reductions and sequestration reported on the short form. Because of concern about possible double counting (see box on page 6), EIA does not aggregate reported emissions or emission reductions across the three categories.

Project Level

Reporters provided information on a total of 1,882 projects for 2000 (Table 2). The total number of projects reported increased by 160, or 9 percent, compared with the previous reporting cycle.[5] Most of the 1,882 projects reported for 2000 were also among the 1,722 projects reported for 1999, because they continued to yield emission reductions. Projects often yield emission reductions over an extended period of time; for example, an availability improvement project at a nuclear power plant typically involves the adoption of new maintenance and refueling programs that, once in place, are followed over a multi-year period. A project may even involve no new activity. The reforestation of an area in one year can result in the sequestration of carbon in many subsequent years, even if no additional trees are planted. Reporters continue to report the annual emission reductions and carbon sequestration achieved by such long-lived projects on a yearly basis.

Table 2. Distribution of Projects by Reduction Objective and Project Type, Data Year 2000

Reduction Objective and Project Type	Number of Projects	Number of Reporters
Reducing Carbon Dioxide Emissions	**976**	**125**
Electricity Generation, Transmission, and Distribution	462	93
Cogeneration and Waste Heat Recovery	18	13
Energy End Use	424	92
Transportation and Offroad Vehicles	72	41
Reducing Methane and Nitrous Oxide Emissions	**265**	**78**
Waste Treatment and Disposal (Methane)	234	59
Agriculture (Methane and Nitrous Oxide)	5	4
Oil and Natural Gas Systems and Coal Mining (Methane)	26	19
Carbon Sequestration	**494**	**66**
Halogenated Substances	**44**	**29**
Other Emission Reduction Projects	**103**	**57**
Entity-Level Reporting Only (No Projects)	**0**	**38**
Commitment Reporting Only (No Projects or Entity-Level Data)	**0**	**0**
Total	**1,882**	**222**

Note: The total number of reporters is smaller than the sum of the number of reporters for each project type, because most reporters provided information on more than one project.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[5]The number of projects reported for 1999 has increased from the 1,722 to 1,731 due to the receipt of several additional reports after, and revision of reports that had not been accepted by, the time the database used to prepare the annual report and Public Use Database for 1999 was finalized. See note to Table 3.

Double Reporting of Emission Reductions

Double reporting of emission reductions to the Voluntary Reporting of Greenhouse Gases Program can occur, because the ownership rights for such reductions may be claimed by more than one party. For example, both the manufacturers and owners of more efficient automobiles can claim emission reductions resulting from the operation of those vehicles (see page 19, "Who Owns the Reduction?"). Because the purpose of the Voluntary Reporting Program is to encourage reporting, EIA does not prohibit double reporting; however, EIA does endeavor to identify instances where double reporting may occur.

Reporters are required to distinguish between direct and indirect emissions and emission reductions on Form EIA-1605. Direct emissions are releases of greenhouse gases from sources owned (wholly or in part) or leased by the reporting entity. Indirect emissions are emissions from sources not owned or leased by the reporter that occur as a result of the reporter's activities. The most important indirect emissions are those associated with the consumption of electricity purchased from an electricity generator. Because the distinction between direct and indirect is unambiguous, direct emission reductions reported to the Program should include no double reporting; however, the application of the direct and indirect distinction is not comprehensive.

The reporting forms do not currently allow the reporter to indicate whether carbon sequestered through forestry projects is direct (occurring on land owned by the reporter) or indirect (occurring on land owned by others). Also, Form EIA-1605EZ does not distinguish between direct and indirect reductions. EIA intends to address these issues in future modifications of its reporting forms. To put this issue in perspective, of total project-level emission reductions for 2000, 69 percent (187 million metric tons carbon dioxide equivalent) are reported as direct emission reductions, 23 percent (61 million metric tons carbon dioxide equivalent) are reported as indirect emission reductions, and 8 percent (21 million metric tons carbon dioxide equivalent) are unspecified, reported as sequestration on the long form or as reductions or sequestration on the short form.

A second mechanism to identify possible double reporting is to require reporters using the long form to identify any other entity or entities that participate in a project reported to the Program. This captures situations where more than one entity is responsible for creating the emission reduction, such as landfill gas projects where the landfill owner, the owner of the power plant that uses the landfill gas, and the purchaser of the resulting power all can, and often do, report all the effects of the project. In the case of the landfill operator, for example, the methane captured at the landfill would be reported as a direct emission reduction, and the possible reduction in central-station fossil fuel power generation would be reported as an indirect emission. In contrast, the operator of the power plant could claim the emission reduction at the power plant as a direct reduction and the reduction in methane emissions at the landfill as an indirect reduction. In general, EIA believes that instances of double reporting of direct emissions are very rare if not nonexistent; however, double counting can be an issue for indirect reductions, because their ownership is not as clear cut.

Because of the concern that double reporting could result in double counting of emission reductions, EIA has discontinued reporting totals of all the reductions reported to the Program, in order to avoid giving the impression that the totals represent the cumulative effects of U.S.-sponsored projects on worldwide emissions of greenhouse gases. Emissions, emission reductions, and sequestration are disaggregated into the following categories: direct, indirect, and unspecified reductions and sequestration. Unspecified reductions and sequestration include sequestration reported on Form EIA-1605 and reductions and sequestration reported on Form EIA-1605EZ. As in the past, EIA does not combine reductions reported at the project level with those reported at the entity level, because the reported reductions represent the results of different approaches to estimating changes in greenhouse gas emissions.

EIA does not verify greenhouse gas emission reductions reported by participants, nor does it grant a property right associated with the claimed reductions. The Program requires, among other things, that the participants themselves certify that the information reported is accurate to the best of their knowledge and belief. Although EIA does review each report received for comprehensiveness, arithmetic accuracy, internal consistency, and plausibility and makes suggestions for improving the accuracy and clarity of reports, the reporter is ultimately responsible for the accuracy of any report submitted to the Voluntary Reporting Program.

Most projects involve actions within the United States; however, some are conducted in foreign countries, designed to test various concepts of joint implementation with other nations (Table 3). Sixty-six of the 97 foreign projects represent shares in two forestry programs in Belize and Malaysia sponsored by the electric utility industry.

The principal objective of the majority of projects reported for 2000 was to reduce carbon dioxide emissions (Table 2). Most of these projects reduced carbon dioxide either by reducing fossil fuel consumption or by switching to lower emitting sources of energy. Many also achieved small reductions in emissions of other gases. A total of 976 projects involved either efficiency improvements and switching to lower emitting energy sources in the electric power industry or energy end use measures affecting stationary or mobile combustion sources. Projects that also primarily reduced carbon dioxide emissions included the 103 "other" emission reduction projects, most of which involved either the reuse of fly ash as a cement substitute in concrete or the recycling of waste materials.

Projects that primarily affected carbon dioxide emissions accounted for reported direct reductions of 153 million tons carbon dioxide equivalent, representing 82 percent of the total direct reductions reported for 2000 on a carbon dioxide equivalent basis (Table 4). In addition, indirect reductions totaling 24 million metric tons carbon dioxide equivalent were also reported for the projects that reduced carbon dioxide emissions. A further 9 million metric tons carbon dioxide equivalent of unspecified reductions were reported on the short form (Form EIA-1605EZ), where the reporter is not asked to specify whether reductions or sequestration are direct or indirect.

Almost all of the 494 carbon sequestration projects reported on either the long form or the short form increased the amount of carbon stored in sinks through various forestry measures, including afforestation, reforestation, urban forestry, forest preservation, and modified forest management techniques. These activities accounted for 26 percent of the projects reported for 2000; however, 180 of the reported carbon sequestration projects represented shares in six projects conducted by the UtiliTree Carbon Company reported by 30 participating electric utilities. The sequestration reported for carbon sequestration projects for 2000 totaled 9 million tons of carbon dioxide on the long form and 5,000 metric tons of carbon dioxide on the short form. Direct emission reductions totaling 1,041 metric tons of carbon dioxide were also reported for a few projects where changes in forest management practices reduced fuel consumption.

A variety of efforts to reduce emissions of gases with high global warming potentials (GWPs) were also reported (see box on page 9). Two hundred sixty-five of the reported projects (14 percent) reduced methane and nitrous oxide emissions from waste management systems, animal husbandry operations, oil and gas systems, or coal mines. The 39 million metric tons carbon dioxide equivalent of direct methane reductions reported were offset by reported increases in carbon dioxide and nitrous oxide emissions totaling 10 million metric tons carbon dioxide equivalent. The carbon dioxide equivalent of the net reduction in direct emissions for projects that reduced methane and nitrous oxide emissions was 29 million metric tons, which represents 16 percent of the total direct reductions reported for 2000. Indirect reductions reported for projects that reduced methane and nitrous oxide emissions totaled 37 million metric tons carbon dioxide equivalent, and unspecified

Table 3. Geographic Scope of Reports Received and Location of Emission Reduction Projects, Data Years 1994-2000

	Reports Received				Projects Reported		
Year	U.S. Only	Foreign Only	Both U.S. and Foreign	Total[a]	U.S. Only	Foreign Only	Total[a]
1994	99	2	4	**108**	625	9	**645**
1995	122	2	16	**142**	924	36	**967**
1996	124	1	24	**150**	1,007	33	**1,040**
1997	130	1	31	**162**	1,216	72	**1,288**
1998	165	1	40	**207**	1,464	85	**1,557**
1999(R)	164	4	37	**207**	1,635	87	**1,731**
2000	177	1	43	**222**	1,785	97	**1,883**

[a]Totals are greater than the sum of the components because the latter exclude information from confidential reports.
(R) = revised
Note: The number of reports received for 1999 was revised to reflect the receipt of 6 reports after the finalization of the Public Use Database for last year's annual report. For 1999, additional reports were received from Atlas Paper Mills, County Sanitation Districts of Los Angeles County, Florida Transport 82, Consol Coal Group, Sherry Manufacturing, and Pine Mountain Oil and Gas, Inc. The number of projects reported for 1999 has also been revised to reflect the projects included in those reports.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

reductions and sequestration reported on the short form contributed emission reductions equal to another 3 million metric tons carbon dioxide equivalent.

Forty-four projects reduced emissions of halogenated substances, including perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6). Unlike previous years, no

Table 4. Summary of Reported Project-Level Emission Reductions and Carbon Sequestration by Reduction Objective and Gas, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Gas	Reductions by Project Objective				Total Reductions
	Reduce Carbon Dioxide Emissions	Reduce Methane and Nitrous Oxide Emissions	Increase Carbon Sequestration	Reduce Emissions of Halogenated Substances	
Direct					
Carbon Dioxide	153,025,587	-9,714,505[a]	1,041	—	143,312,123
Methane	73,686	39,196,816	—	—	39,270,502
Nitrous Oxide	117,501	-3,357[a]	—	—	114,145
HFCs	—	—	—	—	—
PFCs	3,051	—	—	3,230,562	3,233,612
SF_6	—	—	—	1,407,347	1,407,347
Total Direct	**153,219,825**	**29,478,955**	**1,041**	**4,637,909**	**187,337,729**
Indirect					
Carbon Dioxide	23,746,902	16,458,997	—	—	40,205,899
Methane	118,090	20,523,490	—	—	20,641,581
Nitrous Oxide	26,263	89,419	—	—	115,683
HFCs	—	—	—	—	—
PFCs	35,360	—	—	—	35,360
SF_6	—	—	—	81	81
Total Indirect	**23,926,616**	**37,071,907**	**0**	**81**	**60,998,603**
Sequestration					
Carbon Dioxide	—	—	9,010,021	—	9,010,021
Methane	—	—	—	—	—
Nitrous Oxide	—	—	—	—	—
HFCs	—	—	—	—	—
PFCs	—	—	—	—	—
SF_6	—	—	—	—	—
Total Sequestration	**—**	**—**	**9,010,021**	**—**	**9,010,021**
Unspecified[b]					
Carbon Dioxide	9,089,102	29,051	5,081	—	9,123,235
Methane	70,531	3,057,230	—	—	3,127,762
Nitrous Oxide	—	—	—	—	0
HFCs	—	—	—	—	0
PFCs	—	—	—	—	0
SF_6	—	—	—	20,744	20,744
Total Unspecified	**9,159,634**	**3,086,281**	**5,081**	**20,744**	**12,271,740**

[a]Negative reductions represent increases in emissions.

[b]Unspecified emission reductions represent quantities reported on the short form (Form EIA-1605EZ), which does not distinguish between direct and indirect emission reductions or sequestration.

Notes: CFCs, HCFCs, and methyl chloroform are not included in the totals because of the uncertainty associated with estimates of net global warming potential for these gases. Their direct warming effects (radiative forcing) are offset by indirect cooling effects (destruction of stratospheric ozone, another greenhouse gas). Direct, indirect, and unspecified emission reductions and sequestration have not been totaled to avoid double counting of reductions or sequestration that have been reported by more than one entity.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

offsetting increases in emissions of hydrofluorocarbons (HFCs)—which are used as substitutes for chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) being phased out under the Montreal Protocol—were reported for 2000. Direct reductions of PFC and SF_6 emissions totaled 5 million metric tons carbon dioxide equivalent, representing almost all the PFC and SF_6 emission reductions reported for 2000. Reductions of other gases, including carbon monoxide (CO), nonmethane volatile organic compounds (NMVOCs), chlorofluorocarbons (CFCs), and hydrochlorofluorocarbons (HCFCs), were reported, but these gases do not have reliable GWPs and are not included in the carbon dioxide equivalent data presented in this report (see box below).

Direct emission reductions reported for 2000 increased by 21 percent over the reductions reported for 1999, to 187 million metric tons carbon dioxide equivalent (Table 5), and have tripled since the first year of the program (data year 1994). Reported direct reductions of carbon dioxide emissions increased by 24 percent, to 143 million metric tons carbon dioxide equivalent. Large increases in direct reductions of SF_6 and nitrous oxide were also reported. Reported reductions of SF_6 and nitrous oxide increased by 136 percent and 84 percent, respectively, over the levels reported for 1999. Reported reductions of indirect emissions increased by 8 percent, to 61 million metric tons carbon dioxide equivalent. The sequestration reported peaked at 12 million metric tons for 1998 and has fallen below 10 million metric tons carbon dioxide for the two following years. This decline was caused by the decline in, or nonrecurrence of, sequestration reported for several large forest preservation initiatives. These projects avoided carbon releases associated with logging over the time period that the forests would have been harvested, which were reported as increased carbon sequestration over the same time period.

Unspecified reductions, which include reductions and sequestration reported on the short form (where reporters are not asked to specify whether reported reductions or sequestration quantities are direct or indirect), declined for the second straight year, falling to 12 million metric tons carbon dioxide equivalent in 2000. The primary reason for the large decline between 1998 and 1999 was that the PECO Energy Company, which reported reductions totaling 7.7 million metric tons on the short form in 1998, moved its report to the long form for 1999 and 2000.

Comparison of Global Warming Potentials from the Second and Third Assessment Reports of the Intergovernmental Panel on Climate Change

Global warming potentials (GWPs) are used to compare the abilities of different greenhouse gases to trap heat in the atmosphere. GWPs are based on the radiative efficiency (heat-absorbing ability) of each gas relative to that of carbon dioxide (CO_2), as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The GWP provides a construct for converting emissions of various gases into a common measure, which allows climate analysts to aggregate the radiative impacts of various greenhouse gases into a uniform measure denominated in carbon or carbon dioxide equivalents.

The generally accepted authority on GWPs is the Intergovernmental Panel on Climate Change (IPCC). In 2001, the IPCC updated its estimates of GWPs for key greenhouse gases. The table at the right compares the GWPs published in 1996 in the IPCC's Second Assessment Report[a] and those published in 2001 in the IPCC's Third Assessment Report.[b]

In summarizing the information reported to the Voluntary reporting of Greenhouse Gases Program for 2000, EIA has used the IPCC's revised GWPs to calculate carbon dioxide equivalents.

Comparison of 100-Year GWP Estimates from the IPCC's Second (1996) and Third (2001) Assessment Reports

Gas	1996 IPCC GWP	2001 IPCC GWP
Methane	21	23
Nitrous Oxide	310	296
HFC-23	11,700	12,000
HFC-125	2,800	3,400
HFC-134a	1,300	1,300
HFC-143a	3,800	4,300
HFC-152a	140	120
HFC-227ea	2,900	3,500
HFC-236fa	6,300	9,400
Perfluoromethane (CF_4)	6,500	5,700
Perfluoroethane (C_2F_6)	9,200	11,900
Sulfur Hexafluoride (SF_6)	23,900	22,200

[a]Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change* (Cambridge, UK: Cambridge University Press, 1996).

[b]Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis. Summary for Policymakers* (Cambridge, UK: Cambridge University Press, 2001).

Project-Level Reference Cases

For the first time in this report series, EIA has broken out project-level data by the reference case employed in calculating project-specific reported emission reductions. A "reference case" is an emissions or sequestration level against which actual emissions are compared to estimate emission reductions. In a "basic" reference case, actual historical emissions (or sequestration) in a specific year, or an average of a range of years, are used as the

Table 5. Summary of Reported Project-Level Emission Reductions and Carbon Sequestration by Gas, Data Years 1994-2000
(Metric Tons Carbon Dioxide Equivalent)

Year	Carbon Dioxide	Methane	Nitrous Oxide	HFCs	PFCs	Sulfur Hexafluoride	Total
Direct							
1994 . . .	58,413,709	576,808	339,485	-29	3,199,649	83,579	**62,613,201**
1995 . . .	85,419,479	194,350	-438,673	-43	2,962,416	186,382	**88,323,910**
1996 . . .	77,601,577	9,411,042	-423,599	15,193	3,345,811	-69,985	**89,880,039**
1997 . . .	82,269,887	8,705,355	86,294	-42	3,318,600	516,732	**94,896,824**
1998 . . .	112,038,605	31,720,732	109,560	-1,738	3,504,380	624,786	**147,996,326**
1999(R) . .	115,366,716	35,994,030	62,111	-1,738	3,425,480	595,379	**155,441,981**
2000 . . .	143,312,123	39,270,502	114,145	0	3,233,612	1,407,347	**187,337,729**
Indirect							
1994 . . .	2,994,405	2,360,734	2,234	—	—	—	**5,357,381**
1995 . . .	27,063,660	24,777,246	630,358	—	—	7,653	**52,478,917**
1996 . . .	26,207,709	26,612,114	616,075	—	—	—	**53,435,898**
1997 . . .	25,848,951	11,630,239	102,639	—	3,631	81	**37,585,541**
1998 . . .	27,968,865	15,152,664	105,598	—	6,068	81	**43,233,274**
1999(R) . .	37,233,635	19,027,769	270,531	—	5,856	81	**56,537,872**
2000 . . .	40,205,899	20,641,581	115,683	—	35,360	81	**60,998,603**
Sequestration							
1994 . . .	746,545	—	—	—	—	—	**746,545**
1995 . . .	1,190,754	—	—	—	—	—	**1,190,754**
1996 . . .	8,676,591	—	—	—	—	—	**8,676,591**
1997 . . .	9,849,807	—	—	—	—	—	**9,849,807**
1998 . . .	12,490,927	—	—	—	—	—	**12,490,927**
1999(R) . .	9,623,599	—	—	—	—	—	**9,623,599**
2000 . . .	9,010,021	—	—	—	—	—	**9,010,021**
Unspecified[a]							
1994 . . .	3,721,047	564,022	—	—	—	—	**4,285,069**
1995 . . .	4,959,366	1,162,752	—	—	—	—	**6,122,117**
1996 . . .	4,436,523	1,232,174	—	—	—	—	**5,668,697**
1997 . . .	6,688,175	1,825,383	—	—	123,049	—	**8,636,607**
1998 . . .	16,499,427	2,918,818	—	—	—	—	**19,418,245**
1999(R) . .	9,607,428	3,273,878	—	—	—	4,783	**12,886,089**
2000 . . .	9,123,235	3,127,762	—	—	—	20,744	**12,271,740**

(R) = revised.

[a]Unspecified emission reductions represent quantities reported on the short form (Form EIA-1605EZ), which does not distinguish between direct and indirect emission reductions or sequestration.

Notes: Negative reductions represent increases in emissions. Reductions for a project may be reported as unspecified in one year and as direct or indirect reductions in another year if the reporter switches from using the short form (Form EIA-1605EZ) to the long form (Form EIA-1605). Reductions of CFCs, HCFCs, and methyl chloroform are not included in the totals because of the uncertainty associated with estimates of their net global warming potential. Their direct warming effects (positive radiative forcing) are offset by indirect cooling effects (destruction of stratospheric ozone, another greenhouse gas). Totals may not equal sum of components due to independent rounding. Direct, indirect, and unspecified emission reductions and sequestration have not been totaled, in order to avoid double counting of reductions or sequestration that have may been reported by more than one entity.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

reference case. In a "modified" reference case, an estimate is made of what emissions or sequestration would have been in the absence of the project, and that estimate serves as the reference case.

The use of modified reference cases was reported for estimating reductions for 78 percent of the projects reported for 2000 on Form EIA-1605 (Table 6). A modified reference case is generally preferred for project-level analysis, because this approach attempts to isolate the effect of the action taken by the reporter from other factors that may have affected the reporter's emissions since the action was taken. The reported use of basic reference cases for 2000 was greatest for projects that reported carbon sequestration (40 percent) and halogenated substances (48 percent), because the techniques for evaluating reductions and sequestration for projects of those types are particularly suited to the use of basic reference cases. For forestry projects, carbon sequestration before and after the project is often assessed by sampling techniques to estimate the carbon stored in trees and soil within a defined area. For halogenated substances, emissions are determined using inventory management data, with emissions of a particular substance being equal to the amount purchased during the year to replace quantities emitted. Reductions can be calculated by subtracting the emissions in the years after emission abatement measures have been instituted from the emissions in the year before the measures were instituted.

In terms of emission reductions and sequestration reported for 2000, 153 million metric tons carbon dioxide equivalent of direct emissions (81 percent of total direct reductions), 56 million metric tons carbon dioxide equivalent of indirect emissions (92 percent of total indirect reductions), and 8 million metric tons carbon dioxide equivalent of sequestration (93 percent of total sequestration reductions) were reported as having been estimated using modified reference cases (Table 7). The project type categories where significant proportions of the reported direct reductions were estimated using basic reference cases were halogenated substances (97 percent) and transportation (76 percent).

Although modified reference cases, in terms of total projects and reported reductions, predominate, basic reference cases are still employed for a number of large projects. A basic reference case was used for estimating the 138,552 metric tons carbon dioxide equivalent indirect reduction reported by a single oil and natural gas system and coal mining project. The remaining eight projects in this category that reported reductions in indirect emissions together reported a net increase in indirect emissions. More than one-third (37 percent) of the reported indirect reductions for electricity generation transmission and distribution projects were calculated using basic reference cases. This was because several electric utilities reported nuclear-power-related projects that resulted in large reductions in power purchases and calculated the associated reductions in indirect emissions using basic reference cases.

Table 6. Number of Projects Reported on Form EIA-1605 by Reduction Objective and Project Type and Reference Case Employed, Data Year 2000
(Number of Projects)

Reduction Objective and Project Type	Modified		Basic		Total Number of Projects
	Number of Projects	Percent	Number of Projects	Percent	
Reducing Carbon Dioxide Emissions	**719**	**84**	**132**	**16**	**851**
Electricity Generation, Transmission, and Distribution	367	90	41	10	408
Cogeneration and Waste Heat Recovery	15	83	3	17	18
Energy End Use	281	77	83	23	364
Transportation and Offroad Vehicles	56	92	5	8	61
Reducing Methane and Nitrous Oxide Emissions	**212**	**96**	**9**	**4**	**221**
Waste Treatment and Disposal (Methane)	187	98	4	2	191
Agriculture (Methane and Nitrous Oxide)	5	100	0	0	5
Oil and Natural Gas Systems and Coal Mining (Methane)	20	80	5	20	25
Carbon Sequestration	**277**	**60**	**184**	**40**	**461**
Halogenated Substances	**22**	**52**	**20**	**48**	**42**
Other Emission Reduction Projects	**69**	**84**	**13**	**16**	**82**
Total	**1,299**	**78**	**358**	**22**	**1,657**

Note: Excludes projects reported on the short form (Form EIA-1605EZ), which does not collect information on the reference case employed. Excludes two projects reported on the long form (Form EIA-1605) for which no reference case was specified because reductions were not estimated.

Source: Energy Information Administration, Forms EIA-1605.

Modified references cases were used to estimate most (93 percent) of the sequestration reported for 2000, despite the fact that 40 percent of the projects reported using basic reference cases to estimate sequestration. The largest projects in terms of sequestration reported were forest preservation projects, for which basic reference cases cannot be used, because actual sequestration must be compared with a hypothetical scenario assuming that the forest has been harvested.

Entity Level

Most of the 100 reporters providing entity-level information included data on emissions as well as emission reductions or sequestration. Eight reporters provided entity-level data on emissions only, and another four reporters provided entity-level data on emission reductions or sequestration only.

Total entity-level direct emissions of carbon dioxide reported for 2000 were 1,008 million metric tons, which represents a 7-percent increase over the 946 million metric tons reported for 1999. Reported direct emissions of other gases, including methane, nitrous oxide, HFCs, PFCs, and SF_6, totaled 28.1 million metric tons carbon dioxide equivalent for 2000. Total entity-level direct emissions of these gases reported for 2000 were 27 percent lower than those reported for 1999. Total direct and indirect emissions reported at the entity level for each data year from 1994-2000 are summarized in Table 8.

Total direct emission reductions reported at the entity level have increased by 9 percent this year, from 150.0 million metric tons carbon dioxide equivalent for 1999 to 164.1 million metric tons carbon dioxide equivalent for 2000. In 2000, 122.4 million metric tons carbon dioxide equivalent (75 percent) of the reported direct reductions were estimated using modified reference cases, and 25 percent were estimated with basic reference cases.

Reported entity-level indirect emission reductions for 2000 totaled 27.8 million metric tons carbon dioxide equivalent. Reported indirect reductions of 34.6 million metric tons carbon dioxide equivalent calculated with modified reference cases were offset by -6.8 million metric tons carbon dioxide equivalent indirect reductions (i.e., net emission increase) calculated with basic reference cases. This represents a significant change from the previous reporting cycle, when indirect reductions estimated for 1999 using basic reference cases totaled 8.4 million metric tons carbon dioxide equivalent. This change was due primarily to the correction of 2000 data in two reports, which in the previous year had included indirect reductions totaling 14 million metric tons carbon dioxide equivalent that had been erroneously reported to have been estimated using basic reference cases.

Entity-level sequestration reported for 2000 decreased to 7.5 million metric tons carbon dioxide equivalent (11 percent) from the 8.4 million metric tons carbon dioxide equivalent reported for 1999.

Table 7. Reported Emission Reductions and Sequestration for Projects Reported on Form EIA-1605 by Reduction Objective, Project Type, Source, and Reference Case Employed, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reduction Objective and Project Type	Direct Reductions		Indirect Reductions		Sequestration	
	Modified	Basic	Modified	Basic	Modified	Basic
Reducing Carbon Dioxide Emissions	**122,375,491**	**29,944,159**	**14,010,056**	**2,847,281**	**0**	**0**
Electricity Generation, Transmission, and Distribution	101,191,908	29,355,807	4,667,071	2,726,011	0	0
Cogeneration and Waste Heat Recovery	2,116,344	0	1,205,170	6,138	0	0
Energy End Use	19,061,936	571,744	8,024,072	113,018	0	0
Transportation and Offroad Vehicles	5,302	16,609	113,743	2,114	0	0
Reducing Methane and Nitrous Oxide Emissions	**29,194,016**	**284,939**	**35,563,298**	**1,508,609**	**0**	**0**
Waste Treatment and Disposal (Methane)	18,437,782	269,352	35,540,811	1,370,057	0	0
Agriculture (Methane and Nitrous Oxide)	269	0	23,993	0	0	0
Oil and Natural Gas Systems and Coal Mining (Methane)	10,755,965	15,587	-1,506	138,552	0	0
Carbon Sequestration	**1,041**	**0**	**0**	**0**	**8,421,864**	**588,158**
Halogenated Substances	**125,605**	**4,512,304**	**81**	**0**	**0**	**0**
Other Emission Reduction Projects	**900,175**	**0**	**6,377,558**	**691,721**	**0**	**0**
Total	**152,596,328**	**34,741,402**	**55,950,993**	**5,047,610**	**8,421,864**	**588,158**

Note: Excludes reductions and sequestration for projects reported on the short form (Form EIA-1605EZ), which does not collect information on the reference case employed.
Source: Energy Information Administration, Form EIA-1605.

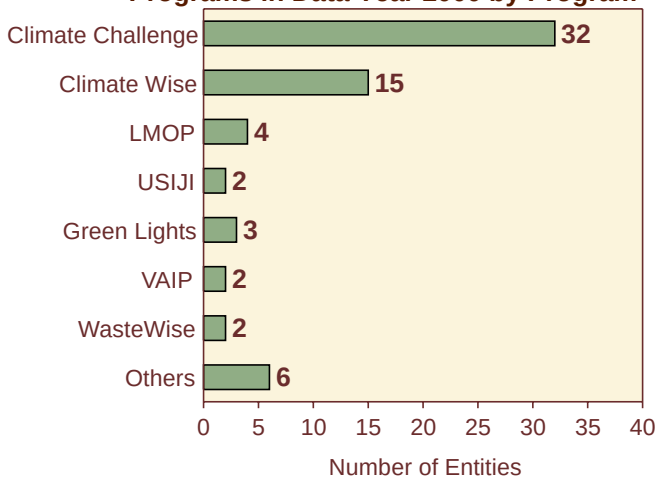
Commitments

Sixty-five entities reported formal commitments to reduce future emissions, to take action to reduce emissions in the future, or to provide financial support for activities related to greenhouse gas reductions.[6] Almost one-half (49 percent) of these entities are electricity generators participating in the Climate Challenge Program (Figure 3). Thirty-three non-Climate Challenge reporters also reported commitments. Other voluntary programs represented among the commitments reported for 2000 included Climate Wise, the Voluntary Aluminum Industrial Program, the U.S. Initiative on Joint Implementation, the Green Lights Program, the Landfill Methane Outreach Program, the Coalbed Methane Outreach Program, Cool Communities, Motor Challenge, the Sulfur Hexafluoride Emissions Reduction Partnership for Electric Power Systems, and WasteWise.

There are three forms of future commitment in the Voluntary Reporting Program: entity commitments, financial commitments, and project commitments. Entity and project commitments roughly parallel the entity and project aspects of emissions reporting: an entity commitment is a commitment to reduce the emissions of an entire organization; a project commitment is a commitment to take a particular action that will have the effect of reducing the reporter's emissions through a specific project. A financial commitment is a pledge to spend a particular sum of money on activities related to emission reductions, without a specific promise as to the emissions consequences of the expenditure.

Twenty-nine firms made 44 specific promises to reduce, avoid, or sequester future emissions at the entity level. Some of these entity-level commitments were to reduce emissions below a specific baseline, others to limit the growth of emissions per unit of output, and others to limit emissions by a specific amount relative to a baseline emissions growth trend. In their reports for 2000, companies committed to reducing future entity-level emissions by a total of 98.4 million metric tons carbon

Figure 3. Number of Entities Reporting Commitments Associated with Voluntary Programs in Data Year 2000 by Program



Notes: LMOP = Landfill Methane Outreach Program, USIJI = United States Initiative on Joint Implementation, VAIP = Voluntary Aluminum Industry Partnership. Others include Coalbed Methane Outreach Program, Cool Communities Program, Motor Challenge Program, and Sulfur Hexafluoride Emissions Reduction Partnership for Electric Power Systems. The sum of entities reporting commitments associated with each program exceeds the total number of entities reporting commitments because several entities reported commitments associated with more than one program.

Source: Energy Information Administration, Form EIA-1605.

Table 8. Number of Entities Reporting at the Entity Level and Reported Emissions, Emission Reductions by Source and Reference Case Employed, and Sequestration, Data Years 1994-2000
(Million Metric Tons Carbon Dioxide Equivalent)

Year	Number of Entities Reporting	Emissions		Emission Reductions by Type of Reference Case						Sequestration
				Direct			Indirect			
		Direct	Indirect	Modified	Basic	Total	Modified	Basic	Total	
1994	39	754.3	495.5	38.3	22.6	60.9	1.7	1.2	2.9	0.5
1995	50	878.2	501.0	56.1	39.3	95.4	46.1	2.7	48.7	0.8
1996	55	1,183.5	461.5	65.4	44.6	110.0	42.9	5.7	48.6	7.9
1997	60	1,006.6	525.8	73.7	20.3	94.0	24.8	3.4	28.2	7.1
1998	76	1,110.7	473.5	105.8	22.6	128.4	28.3	13.2	41.6	11.2
1999	83(R)	967.9	481.0	114.7	35.3	150.0	30.3	8.4	38.7	8.4
2000	100	1,036.1	107.1	122.4	41.7	164.1	34.6	-6.8	27.8	7.5

(R) = revised.

Note: 1999 data year includes one late report that was not included in the number of entities submitting 1999 data reports presented in last year's annual report and database.

Source: Energy Information Administration, Form EIA-1605.

[6]Fifty-nine companies reported formal commitments in one or more of the entity-level, project-level, or financial categories accommodated by Form EIA-1605. Six companies provided descriptions of future activities only in the Additional Information section of Schedule IV.

dioxide equivalent. More than one-third (39 percent) of entity-level emission reduction commitments were for the year 2000, with an additional 22 percent falling within the 2001 to 2005 time horizon.

Thirty-one companies reported on commitments to undertake 193 individual emission reductions projects. Some of the commitments were linked to future results from projects already underway and forming part of the reporters' submissions. Others were for projects not yet begun. Reporters indicated that the projects were expected to reduce future emissions by 160 million metric tons carbon dioxide equivalent, most of which (106 million metric tons carbon dioxide equivalent, or 66 percent) would be reductions of methane. This large increase in future project-level reductions of methane emissions is the result of a single commitment reported by Fidelity Exploration & Production Company, which expects that its gas recovery operations from yet-to-be-mined surface coal deposits in Montana and Wyoming will avoid methane emissions totaling more than 87 million metric tons carbon dioxide equivalent over the next 10 years.

Twenty-two firms made financial commitments. The total amount of funds promised was $18.6 million, of which $3.6 million was reported to have been expended in 2000.

Status of Policy Initiatives

The past year saw significant political shifts affecting climate change policy initiatives. Again in 2001, the 107th U.S. Congress did not pass any new climate change legislation relating to voluntary reporting or credit for early action, although several relevant bills were introduced (see below). In March, the Bush Administration announced that the United States would no longer support the Kyoto Protocol, arguing that it was "unfair and ineffective" because it excluded developing countries from reducing greenhouse gas emissions and would hurt the U.S. economy.[7] Nevertheless, as a result of a cabinet-level policy review and authoritative study by the National Academy of Sciences, the President announced a number of new initiatives to address climate change through international cooperation, research, and technology innovation.[8]

Although U.S. participation in the June 2001 continuation of the sixth Conference of Parties (COP-6 *bis*) in Bonn, Germany, was limited to UNFCCC negotiations, the other COP-6 parties eventually agreed on nearly all of the most contentious issues, including significant use of carbon sinks, establishing a compliance mechanism, and disallowing credit for nuclear facilities. During COP-7 in Marrakech, Morocco, Kyoto signatories agreed on operating rules for international emissions trading, the Clean Development Mechanism, and Joint Implementation; a compliance regime with penalties for failure to meet emissions targets; and a new type of emissions credit for sinks. COP-8 is scheduled for October 23 to November 1, 2002, with India as a possible location.[9] COP-8 will, among other things, review the adequacy of commitments under the Kyoto Protocol, including those of developing countries, with the intent to frame the issue for discussion at COP-9.

Legislation Relevant to Voluntary Reporting Introduced in the 107th U.S. Congress

Several bills pertaining to the 1605(b) Voluntary Reporting Program were introduced in the 107th Congress, mostly in the Senate.[10] In December 2001, Senators McCain (R-AZ) and Brownback (R-KS) introduced the Emissions Reductions Incentive Act of 2001 (S. 1781) to direct the Secretary of Commerce to establish a voluntary national registry system for greenhouse gas trading among industry, as well as other efforts supporting research and reporting on climate change issues. The functions of the registry would include designing programs to establish and report emissions baselines and reductions, maintaining a record of all verified emissions baselines and reductions, encouraging public participation in greenhouse gas emissions monitoring and reductions, and performing public outreach. Operating through an implementing panel created within the Department of Commerce, the national registry would serve as a central body to certify other Federal, State, and independent greenhouse gas registries and provide standards for participating greenhouse gas registries on the measurement, verification, and recording of greenhouse gas emissions and emission reductions. In particular, the standards would ensure that certified registries do not double count greenhouse gas emission reductions and would consider reductions from stationary sources, mobile sources, and as a result of carbon sequestration.

[7]Text of letter from Preident Bush to Senators Hagel, Helms, Craig, and Roberts (March 13, 2001), web site http://www.whitehouse.gov/releases/2001/03/20010314.html.

[8]President's Statement on Climate Change (July 13, 2001), web site http://www.whitehouse.gov/news/releases/2001/07/20010713-2.html.

[9]United Nations Framework Convention on Climate Change, "Governments Ready To Ratify Kyoto Protocol" (Press Release, November 10, 2001), web site http://unfccc.int/press/prel2001/pressrel101101.pdf.

[10]For more information about these bills, see the Library of Congress web site at http://thomas.loc.gov/.

Title XI of the Energy Policy Act of 2002 (S. 1766), introduced by Senators Daschle (D-SD) and Bingaman (D-NM) also in December 2001, calls for the establishment of a mandatory reporting system for greenhouse gas emissions through a negotiated rulemaking process under the direction of the Secretary of Commerce. The rules established under the rulemaking process would require any entity that exceeds the greenhouse gas emissions threshold of 1,000 metric tons carbon dioxide equivalent to report entity-wide emissions of greenhouse gases to the Secretary on an annual basis. The emissions data would be included in a National Greenhouse Gas Database, consisting of an inventory of greenhouse gas emissions and a registry of greenhouse gas emission reductions. Entities exceeding the emissions threshold would be required to submit comprehensive reports on their emissions, including both direct emissions (from stationary and mobile sources and any land use activities releasing significant quantities of greenhouse gases) and indirect emissions from such sources as purchased energy (e.g., electricity, steam, hot water), outsourced activities, contract manufacturing, and offsite waste management and disposal.

The rules proposed in S. 1766 would further establish reporting procedures and protocols for greenhouse gas emissions and emission reductions, provide for objective and independent verification of emissions or emission reductions, and consider how data reported under the Voluntary Reporting Program and other Federal and State registries could be reconciled with the National Greenhouse Gas Database. S. 1766 would also establish an Interagency Task Force responsible for advising the Secretary of Commerce on the design, operation, and improvement of the database. The Task Force would comprise the Secretaries of Energy, Agriculture, Interior, Commerce, and Transportation, the Administrator of the Environmental Protection Agency, the Chairman of the Council on Environmental Quality, and the Directors of the White House Offices of Science and Technology Policy and Climate Change Response.

Senators Kerry (D-MA), Stevens (R-AK), Hollings (D-SC), Inouye (D-HI), and others introduced the Global Climate Change Act of 2001 (S. 1716) in November 2001. This bill would introduce sweeping measures to address greenhouse gas measurement and reporting and climate change technology, science, and adaptation and would establish a National Office of Climate Change Action in the White House as well as an interagency Climate Change Action Task Force. The bill would authorize the National Institute of Standards and Technology to build on existing monitoring and reporting programs, such as the 1605(b) Program, to establish a national emissions measurement and verification system that would provide a standard method for establishing baselines, set uniform protocols to be used in State and international reporting systems, train third-party verifiers, and disseminate measurement and reporting techniques to the public. In conjunction with this system, the Task Force would create a Mandatory National Greenhouse Gas Reporting System under the Department of Commerce for industrial, energy-producing, and transportation entities generating significant greenhouse gas emissions. Reporting entities would be required to report direct and indirect emissions on an entity-wide and facility-by-facility basis, starting 4 years after enactment of the legislation. Failure to report would result in a daily penalty of $25,000 to a maximum of $200,000.

In August 2001, Senators Murkowski (R-AK), Craig (R-ID), Hagel (R-NE), Domenici (R-NM), and others introduced the Climate Change Risk Management Act of 2001 (S. 1294) to the Committee on Energy and Natural Resources. This bill would establish a new national policy to address climate change impacts and risks, seek to ensure long-term energy security, and strengthen provisions of other Acts addressing climate change. The bill would amend Section 1605(b) by requiring EIA to periodically review and revise the reporting guidelines, and to include an economic analysis as part of its review to ensure that any revisions are not excessively burdensome to participating reporters. Like many of the bills introduced in the Senate this year, the Murkowski bill includes provisions to promote carbon sequestration through forestry and agricultural activities. The bill would enhance the 1605(b) Program to make it more suitable for reporting forestry, agricultural, and international activities and would require DOE to create an annual recognition program for all participants in the Voluntary Reporting Program.

Senator Wyden (D-OR) sponsored two bills that address carbon sequestration. The Forest Resources for the Environment and the Economy Act (S. 820), cosponsored by Senator Craig, is designed to increase carbon sequestration in national forests and to facilitate voluntary reporting of relevant forest projects. Like S. 1294, this bill would amend the Energy Policy Act of 1992 to enhance voluntary reporting, monitoring, and verifying carbon storage activities using Voluntary Reporting Program guidelines, but under the authority of the U.S. Department of Agriculture (USDA). The bill would also establish a Carbon and Forestry Advisory Council in the USDA to oversee the reporting process and assess forest vulnerability to long-term climate impacts and would require States and participants in Federal cooperative agreements to monitor, verify, and report on carbon sequestration activities to the Secretary of Agriculture. Senator Wyden also introduced a similar bill, the Carbon Sequestration and Reporting Act (S. 1255), cosponsored by Senator Brownback, which would create a Carbon Advisory Council in DOE to provide recommendations on specific changes to Section 1605(b) of the

Energy Policy Act regarding voluntary reporting on carbon sequestration practices in the United States resulting from tree planting, forest management actions, and management of agricultural land.

Senator Brownback sponsored three other bills promoting carbon sequestration through forestry and agricultural activities. Introduced in April 2001 and cosponsored by Senators Reid (D-NV), Lugar (R-IN), and DeWine (R-OH), the International Carbon Conservation Act (S. 769) would establish a panel within the Department of Commerce to enhance international conservation, promote sequestration, and encourage voluntary efforts related to climate change. Under the bill, the Forest Service would apply experience gained under the 1605(b) Voluntary Reporting Program to develop reporting guidelines for the international carbon sequestration projects. EIA and the USDA would jointly develop reporting forms to determine carbon sequestration improvements, carbon sequestration practices, and compliance under the program.

The Carbon Conservation Incentive Act (S. 785), cosponsored with Senators Murkowski and Johnson (D-SD), would amend the Food Security Act of 1985 to require the USDA to establish a program to increase carbon sequestration by land owners and operators. The bill would similarly create an advisory panel to oversee the acceptability and evaluation of carbon sequestration activities, estimating carbon sequestration rates on the basis of information reported under Section 1605(b). Another portion of the bill would have the USDA and EIA develop forms to monitor sequestration improvements and report to EIA on the improvements and the sequestration practices carried out as a result of the program. The related Carbon Sequestration Investment Tax Act (S. 765) would create a tax credit for investments in international carbon sequestration projects initiated under S. 769.

In August 2001, Senators Craig and Hagel introduced the Climate Change Tax Amendments of 2001 (S. 1293), a bill that would amend the Internal Revenue Code of 1986 to provide incentives for the voluntary reduction, avoidance, and sequestration of greenhouse gas emissions and to advance global climate change science and technology development and deployment. Tax incentives granted under the law would be based on information reported and certified under the 1605(b) Program.

In the House, Rep. Allen (D-ME) and a number of other representatives introduced the Clean Power Plant Act of 2001 (H.R. 1335), which would seek to reduce various airborne emissions, including carbon dioxide, from fossil-fuel-fired electric power plants and establish a cap and trade system for carbon dioxide emissions. In the Senate, Senator Leahy (D-VT) introduced the related Clean Power Plant and Modernization Act of 2001 (S. 1131), which included provisions on reducing and reporting on carbon dioxide emissions in the U.S. energy sector.

State Initiatives

A growing number of U.S. States are undertaking legislative initiatives on voluntary greenhouse gas reporting. In 2001, California, New Hampshire, and Wisconsin took further steps to develop rules for voluntary reporting; Maine adopted new legislation to create a greenhouse gas registry; and two regional initiatives were announced. Maryland, New York, and Rhode Island have also taken preliminary steps to consider developing voluntary registries.

Efforts continued in California to establish the California Climate Action Registry under Senate Bill (SB) 1771,[11] adopted in September 2000, to provide for entity-wide voluntary reporting on greenhouse gas emissions. The State began staffing the Registry in the past year, and in September 2001 Governor Davis announced four of the five appointed members of the Registry's Board of Directors. Refinements to the original registry legislation were also approved through SB 527,[12] signed by the Governor on October 11, 2001. Under the legislative direction of SB 527, the newly formed Registry must identify the information it will require its participants to report, what industry-specific metrics it will require the participants to use in reporting the information, and how the reported information will be certified.

SB 527 changes SB 1771 by requiring participants to report direct and indirect emissions separately. Participants are no longer required to report emissions baselines and annual emissions results expressed as a fraction in terms of emissions efficiency rates (such as carbon dioxide per dollar of revenue, per kilowatthour of electricity generated, or per dollar of budgetary expenditure), emissions in relation to the annual business-as-usual rate of improvement in energy efficiency, or *de minimis* emissions. In addition, the Registry, in coordination with the State energy commission, may revise the scope of indirect emissions source types that participants may be required to report after a public workshop and review process. The new law upholds many of the existing provisions, including the requirement that organizations report on an entity-wide basis.

[11]The text of this bill can be found at web site http://leginfo.public.ca.gov/pub/99-00/bill/asm/ab_1751-1800/ab_1771_bill_20000923_chaptered.pdf.

[12]The text of this bill can be found at web site http://www.leginfo.ca.gov/pub/bill/sen/sb_0501-0550/sb_527_bill_20011012_chaptered.html.

On February 23, 2001, the Division of Air Resources in New Hampshire's Department of Environmental Services adopted Env-A 3800,[13] the final administrative rules implementing the State's 1999 greenhouse gas registry law.[14] Env-A 3800 provides basic guidance on registering voluntary emissions reductions (VERs) for any entity located in New Hampshire that reduces greenhouse gas emissions in or out of the State. The rules require VERs to be computed in accordance with the general guidelines for the Voluntary Reporting of Greenhouse Gases Program,[15] using the specific protocols provided for Forms EIA-1605 and EIA-1605EZ, and in reference to EPA's publication, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1997*. Alternative protocols are permitted, however, with the approval of the Department of Environmental Services. In addition, in anticipation of possible future greenhouse gas emissions trading, the rules require all participants to maintain detailed records documenting the quantification protocols used to calculate the VERs, and to transfer documents when VER ownership is turned over to another entity.

The Wisconsin Department of Natural Resources has been developing rules to implement Senate Bill 287,[16] which requires the Department to establish and operate a registry of greenhouse gas VERs as well as fine particulate matter, mercury, and other air contaminants. The draft rules establish a registration system for actions that occur wholly within the State of Wisconsin and that exceed a minimum emission reduction threshold that depends on the contaminant. Like New Hampshire, Wisconsin permits reporting on a project, facility, or system-wide basis but limits reporting to activities within the State. The Department permits the use of 10 different reporting protocols, including DOE's 1605(b) Voluntary Reporting Program, for organizations to report VERs. Reporting entities may also submit annual 1605(b) reporting forms to the Department in lieu of using the Department's forms. As in other States, VERs calculated using alternative protocols may also be submitted.

In March 2001, the Maine State Legislature adopted Legislative Document 87,[17] a law requiring the State's Department of Environmental Protection (DEP) to create a voluntary registry of greenhouse gas emissions. The registry must provide for the collection of data on the origin of carbon dioxide emissions as either fossil fuel or renewable resources and for the collection of information on production activity to allow for the tracking of future emissions trends. The DEP is developing guidelines to establish the registry and is expected to submit them to the State legislature by December 2001.

The governors of six New England States[18] and premiers of five Canadian Provinces[19] adopted an action plan on global climate change that calls for the creation of a regional greenhouse gas registry in conjunction with efforts to explore a regional trading regime. An important goal of the action plan is for the States and provinces to give industries and other entities reporting to the registry the ability to disclose their current emissions baselines in order to ensure credit for early action.[20] As part of its Greenhouse Gas Emissions Trading Demonstration Project, Northeast States for Coordinated Air Use Management (NESCAUM)[21] also recently announced its plans to develop a model, regional greenhouse gas emission reduction registry that will complement existing State efforts to create early action registries.

Accounting Issues for Voluntary Reporting and Beyond

The Voluntary Reporting of Greenhouse Gases Program was designed primarily to serve as a mechanism by which entities could report voluntary actions intended to reduce greenhouse gas emissions and sequester carbon.[22] EIA has the responsibility, among other things, for establishing and maintaining a database of reported greenhouse reductions that also serves as a national registry of reported reductions. While the information in the database may be used by the reporting entity to demonstrate achieved reductions of greenhouse gases, the program was not designed to support credit for early reductions or emissions trading programs. The program

[13] The text of these rules can be found at web site http://www.des.state.nh.us/rules/enva-3800.PDF.

[14] Voluntary Greenhouse Gas Registry (SB-159).

[15] U.S. Department of Energy, *Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992, General Guidelines*, DOE/PO-0028, Volume 1 of 3 (Washington, DC, October 1994), web site http://www.eia.doe.gov/oiaf/1605/guidelns.html.

[16] The text of this bill can be found at web site http://www.4cleanair.org/members/committee/ozone/WiscEER.PDF.

[17] The text of this legislation can be found at web site http://janus.state.me.us/legis/bills/billtexts/LD008701-1.asp.

[18] Connecticut, Maine, Massachusetts, New Hampshire, Rhode island, and Vermont.

[19] New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Quebec.

[20] Green House Network, *EPA U.S. and Canadian Leaders Adopt Climate Action Plan* (August 28, 2001), web site http://www.greenhousenet.org/news/august-2001/actionplan.html.

[21] NESCAUM is an interstate association of State air quality control divisions representing the six New England States, as well as New York and New Jersey.

[22] This discussion of accounting issues is based on testimony given by Jay Hakes, former EIA Administrator, on March 30, 2000, before the Senate Committee on Energy and Natural Resources on Senate Bills S. 882 and S. 1776 and their potential impacts on EIA's Programs. The full text of the testimony is available on EIA's web site at http://www.eia.doe.gov/neic/speeches/hrtest3-30-00/testimony3.htm.

guidelines did not attempt to resolve the issues that arise in constructing the required reporting rules that would create a set of comparable, verifiable, auditable emission and reduction reports. Such rules would also be required for the flexible mechanisms, such as the Clean Development Mechanism, Activities Implemented Jointly, and Joint Implementation, included in the United Nations Framework Convention on Climate Change and its Kyoto Protocol.

The Voluntary Reporting of Greenhouse Gases Program allows reporters considerable flexibility in the scope and content of their reports. As a result, companies can report their emissions and reductions in several different ways, and potentially more than one reporter can claim the same reduction. Some commentators on the program have characterized this aspect as a defect: a problem needing a solution. A more restrictive program, however, could limit the number of entities reporting, as well as the types of activities reported. Therefore, because it tends to increase participation in voluntary reporting, flexibility can be viewed as a useful attribute of the program for the following reasons:

- The educational and public recognition aspects of the program are enhanced by maximizing the participation and do not necessarily require a complete and fully-defined system of property rights to a reported emission reduction.
- The Voluntary Reporting Program can be viewed as a survey of emission accounting methods and theories actually in use, and a set of illustrations of the potential accounting and baseline problems that must be confronted in designing future policy instruments. A more structured approach might have been less useful for identifying and analyzing these emissions accounting issues.
- The Voluntary Reporting database illustrates the range and diversity of concrete actions that firms can undertake to limit greenhouse gas emissions, including many not imagined by the designers of the program. A more structured approach might have excluded some of the more original and innovative projects reported to the program.

These features make the Voluntary Reporting Program useful in evaluating the design and consequences of any proposed credit for early action program as well as the Kyoto Protocol's flexible mechanisms. By creating a database of real-world emission reduction actions and actors, the data reported to the Voluntary Reporting Program can be used to gain insight into the incentive effects and beneficiaries of various credit for early action and related proposals. The Voluntary Reporting of Greenhouse Gases database has provided a mechanism for identifying some of the issues that would have to be resolved in developing an accounting system for quantifying emissions, emission reductions, and sequestration. Such an accounting system will have to answer the following questions:

- Who can report?
- What is a reduction?
- Who owns the reduction?
- Would the reduction have happened anyway?
- How does one verify reports?

Who Can Report?

Section 1605(b) of the Energy Policy Act of 1992 mentioned only "entities" and "persons" as prospective reporters. Several overlapping concepts of "who can report" surfaced at the public hearings for the guidelines for the Voluntary Reporting Program, all of which were accommodated. These included:

- **A legal person: i.e., an individual, household, corporation, or trade association.** In this approach, emissions and reductions are calculated and reported at the corporate level.
- **A facility or group of facilities.** Emissions and reductions are calculated as those of a particular facility, defined as a single plant in a specified location, or perhaps even a single stack within a plant. A corporation or legal person acquires responsibility for emissions and reductions through ownership of one or more specified facilities.
- **A "project" or activity.** Reductions are defined by comparing the emissions from some set of sources deemed relevant with an estimate of what emissions would have been if a particular action or bundle of actions had not been undertaken.

What is a Reduction?

Perhaps the most intuitive definition of a reduction is one measured against an historical baseline, which represents the use of a "basic reference case." In this approach, the reduction is defined as the difference between the emissions of an entity or facility in a prior, baseline year, usually 1990, and in the current year. This approach is best suited to reporters whose activities have not appreciably changed since the baseline year. It presents particular problems for firms that have participated in mergers, acquisitions, or divestitures, or have made significant changes in the composition of their business. Startup companies or new facilities that have no history cannot use historical baselines. The historical baseline approach is also not well suited to measuring the reductions achieved by projects, because projects are often entirely new activities with no history.

Alternatively, many reporters define their reductions by comparison with what would have happened in the absence of a specified set of actions. Thus, corporate emissions may have risen, but they are less than they would have been in the absence of corporate action. This approach is called, in the Voluntary Reporting Program, a "modified reference case" or a "hypothetical baseline." It is important to point out, however, that a hypothetical baseline is a best guess of what would have happened in the absence of a project, and there is no way *per se* to prove or disprove it. Most of the projects reported to the Voluntary Reporting Program use a hypothetical baseline to calculate emission reductions or sequestration.

The "unit of production" approach is a variant of the fixed historical baseline, where the reporter normalizes baseline emissions to reflect changes in production. If emissions per unit of output have declined, by comparison either with levels in a prior year or with what they would have been in the absence of some actions, then the reporter has a reduction. This approach works reasonably well for organizations that have a well-defined product that is homogeneous across companies and over time: for example, kilowatthours generated or sold, tons of steel, or barrels of crude oil. As products increase in complexity, this approach gradually breaks down. Tons of semiconductors, for example, is a meaningless measure of output.

The alternative measures of reductions have their advantages and disadvantages. Basic reference cases are objective and relatively easily verifiable. On the other hand, absolute reductions are often the product of circumstance rather than action, while modified reference cases (which are more difficult to verify) explicitly measure the results of actions. Unit-of-production reference cases are useful only in a limited number of cases, and they can combine some of the disadvantages of both basic and modified reference cases.

Who Owns the Reduction?

Two theories of emissions ownership coexist in the Voluntary Reporting Program. The most intuitive, and commonplace, is called "direct emissions" and "direct reductions." If a reporter owns or uses (e.g., leases) the emission source, that reporter owns the emission as well as any reductions from this source. The advantage of limiting ownership to direct emissions is that it generally prevents multiple ownership of the same emission or reduction. However, this approach excludes many important emission reduction methods, including all activities that tend to reduce electricity consumption, the activities of energy service companies, and the provision of energy-efficient or emission reducing capital goods.

The alternative theory of ownership is based on causation: if an organization causes an emission or reduction, it is responsible for that emission, even if it does not own the emission source. Emissions or reductions from sources not owned by the reporter are referred to as "indirect." The most important example of indirect emissions is those produced through the consumption of electricity. If entities reduce their consumption of electricity, they cause their electric utility to reduce its emissions. This approach permits reporting of any action that has an influence on national emissions. However, the concept of "causing an emission" is inherently more ambiguous than "owning the smoke stack," and in many cases more than one firm may credibly claim to have helped cause an emission reduction.

EIA requires that reporters using Form EIA-1605 explicitly identify all emissions and reductions as either direct or indirect so that potentially double-counted reductions can be identified.

Would the Reduction Have Happened Anyway?

This issue is often discussed in other contexts under the term "additionality." It has been suggested that many emission reduction projects do not represent "real" reductions because they would have been undertaken "anyway" in the normal course of business. However, creating an operational definition of additionality is difficult, because the "normal course of business" is a hypothetical concept. For the purposes of voluntary reporting—which include publicizing the types of actions that limit national greenhouse gas emissions and providing recognition for the companies that undertake those actions voluntarily—determining the additionality of projects is unnecessary. For the purposes of a credit for early reduction program, however, additionality is an issue that needs to be considered.

How Does One Verify Reports?

The Department of Energy decided not to require verification by an independent third party after considering this issue during the development of the guidelines for the Voluntary Reporting Program. However, reporters must certify the accuracy of their 1605(b) reports. Also, filing a false statement on a U.S. Government form is illegal. EIA reviews each report received for comprehensiveness, arithmetic accuracy, internal consistency, and plausibility and makes suggestions for improving the accuracy and clarity of reports; however, the reporter is ultimately responsible for the accuracy of any report submitted to the Voluntary Reporting Program.

In general, reports submitted to EIA are factually accurate. Meaningful verification of the accuracy of 1605(b)

reporting would require putting in place common baselines and accounting standards that dictate what information should be included in 1605(b) reports and how estimates of greenhouse gas emissions and reductions and carbon sequestration should be calculated. For example, if the accounting treatment for indirect emissions from electricity purchases is undefined, then a particular set of facts about a reporter could result in two different estimates of emissions: one including electricity purchases and one excluding electricity purchases. A third-party verifier can verify the facts about the reporter but cannot determine whether or not indirect emissions from electricity purchases ought to be included and, consequently, cannot determine whether the total emissions reported are correct or not.

2. Reducing Emissions from Electric Power

Electric Power Industry

The electric power industry emitted approximately 2,352 million metric tons of carbon dioxide in 2000, 41 percent of total U.S. carbon dioxide emissions.[23] Carbon dioxide emissions result from the combustion of fossil fuels—coal, oil, and natural gas—during electricity generation. For example, coal, which accounts for 81 percent of electric power industry carbon dioxide emissions in 2000, is the primary energy source for U.S. electricity generation and has the highest rate of carbon dioxide emissions per unit of energy used among fossil fuels. When it is burned, coal emits about 70 percent more carbon dioxide per unit of energy consumed than does natural gas.

Since 1990, carbon dioxide emissions from the electric power industry have increased by 494 million metric tons or 26.5 percent, a trend that reflects U.S. economic growth and corresponding increases in energy consumption. In 2000, carbon dioxide emissions from the electric power industry increased by 4.7 percent, nearly double the decade's average annual increase of 2.4 percent. Contributing to the relatively large increase in emissions in 2000 was a 4.2-percent increase in fossil fuel use for electricity generation, including a 4.3-percent increase in coal-fired generation, a 7.1-percent increase in natural-gas-fired generation, and an 11.0-percent drop in generation from renewable fuels.

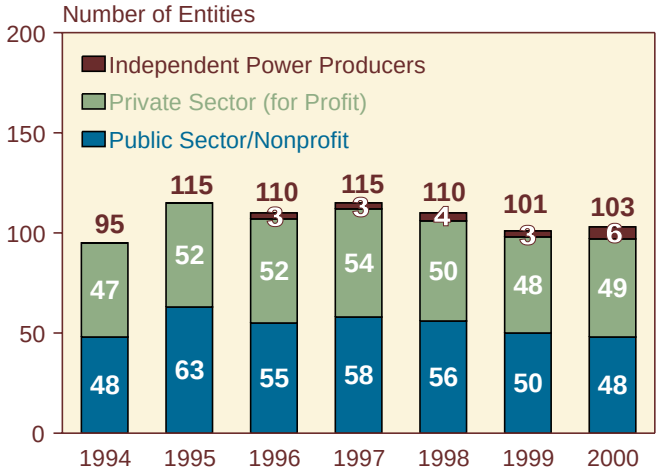
Projects Reported

For the 2000 reporting year, a total of 103 electric power providers reported to the Voluntary Reporting Program (Figure 4). This is a decrease from the peak of 115 electric power providers reporting in 1995 and 1997 but an 8-percent increase from the 95 reporters for the first reporting year, 1994. Since 1997, merger activity in the electric power industry as a result of deregulation has reduced the pool of electric utilities reporting to the Voluntary Reporting Program.

Electric power providers make up 54 percent of the total 183 project-level reporters for data year 2000. Forty-eight of the electric power industry reporters were public sector or nonprofit organizations, including electric cooperatives, municipal utilities, and other public-sector entities such as the Tennessee Valley Authority (TVA). Forty-nine entities were private-sector organizations, mostly investor-owned utilities (IOUs). The number of reporting independent power producers (IPPs) doubled from three for 1999 to six for 2000.

The 480 electric power projects reported for 2000 (Figure 5), represent a 6-percent increase from the 1999 reporting year total of 452 and a 113-percent increase from the 225 projects reported for 1994. Electric power projects were second to carbon sequestration (494 projects) as the most numerous in the Voluntary Reporting Program, accounting for 26 percent of all projects reported for 2000. Electric power projects are reported in two categories: (1) carbon content reduction; and (2) increasing energy efficiency in generation, transmission, and distribution. Carbon content reduction projects include availability improvements, fuel switching, and increases in lower emitting capacity. Increased efficiency through generation, transmission, and distribution projects include such activities as heat rate improvements, cogeneration and waste heat recovery, high-efficiency transformers, and reductions in line losses associated with electricity transmission and distribution. A total of 259 projects for increased energy efficiency in generation, transmission, and distribution were reported for

Figure 4. Number of Electric Power Reporters by Entity Type, Data Years 1994-2000

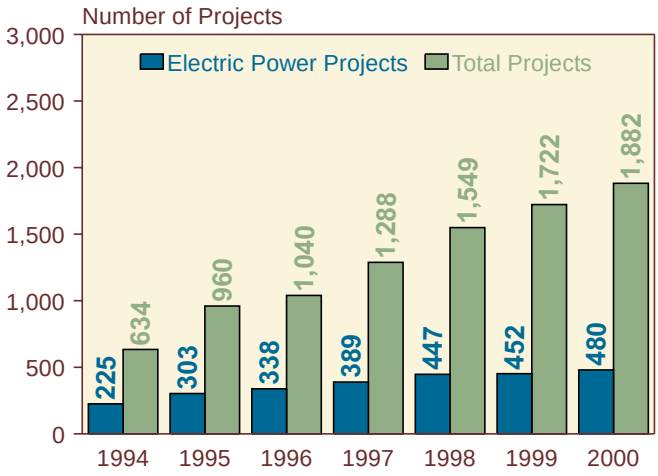


Source: Energy Information Administration, Forms EIA-1605 EIA-1605EZ.

[23]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

2000, and 249 carbon content reduction projects were reported.[24]

Figure 5. Electric Power Projects and Total Projects Reported, Data Years 1994-2000



Source: Energy Information Administration, Forms EIA-1605 EIA-1605EZ.

Reductions Reported

In 2000, total reported emission reductions from electric power projects (Table 9) included 132.7 million metric tons carbon dioxide equivalent from direct sources, 8.6 million metric tons from indirect sources, and 7.8 million metric tons from unspecified sources.[25] The 249 projects in the category "reducing carbon content" reported emission reductions of 120.4 million metric tons carbon dioxide equivalent from direct sources, 6.9 million metric tons from indirect sources, and 6.8 million metric tons from unspecified sources. The 259 projects included in the category "increasing energy efficiency in generation, transmission, and distribution" reported emission reductions of 15.6 million metric tons carbon dioxide equivalent from direct sources, 1.8 million metric tons from indirect sources, and 1.1 million metric tons from unspecified sources.

Many of the largest projects reported to the Voluntary Reporting Program are electric power projects. In 2000, 27 electric power projects reported direct reductions of 1 million metric tons carbon dioxide equivalent or more, representing 73 percent of all the projects that reported

Table 9. Number of Electric Power Projects and Emission Reductions Reported by Project and Reduction Type, Data Year 2000

Project Type	Number of Projects Reported	Emission Reductions Reported (Metric Tons Carbon Dioxide Equivalent)		
		Direct	Indirect	Unspecified[a]
Reducing Carbon Content	**249**	**120,406,794**	**6,936,723**	**6,785,090**
Availability Improvements	38	73,670,494	2,675,038	2,042,860
Fuel Switching	58	1,769,923	4,111,541	1,288,228
Increases in Lower Emitting Capacity	111	49,299,472	3,911,766	3,174,348
Other Carbon Reduction	54	24,118,541	-13,806	279,654
Increasing Energy Efficiency	**259**	**15,554,320**	**1,781,941**	**1,051,658**
Generation	***178***	***12,377,559***	***1,535,889***	***961,281***
Efficiency Improvements	160	10,261,214	324,581	961,281
Cogeneration and Waste Heat Recovery	18	2,116,344	1,211,308	--
Transmission and Distribution	***82***	***3,187,107***	***246,052***	***90,378***
High-Efficiency Transformers	39	1,587,511	197,049	16,998
Reconductoring	30	1,656,613	193,171	4,099
Distribution Voltage Upgrades	28	2,157,326	131,858	549
Other Transmission and Distribution	19	1,031,678	64,996	68,731
Total Electric Power Projects	**480**	**132,664,059**	**8,604,390**	**7,836,749**

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

Note: More than one project type may be assigned to a single project; therefore, the sums of the projects and reductions in each project type category may exceed the total numbers of projects and reductions in the totals and subtotals.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[24]More than one project type may be assigned to a single project; therefore, the sums of the projects and reductions in many project type categories exceed the total numbers of projects and reductions reported.

[25]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

direct emission reductions exceeding 1 million metric tons carbon dioxide equivalent. About three-quarters of the reported electric power projects were related to nuclear power.

Reducing the Carbon Content of Energy Sources

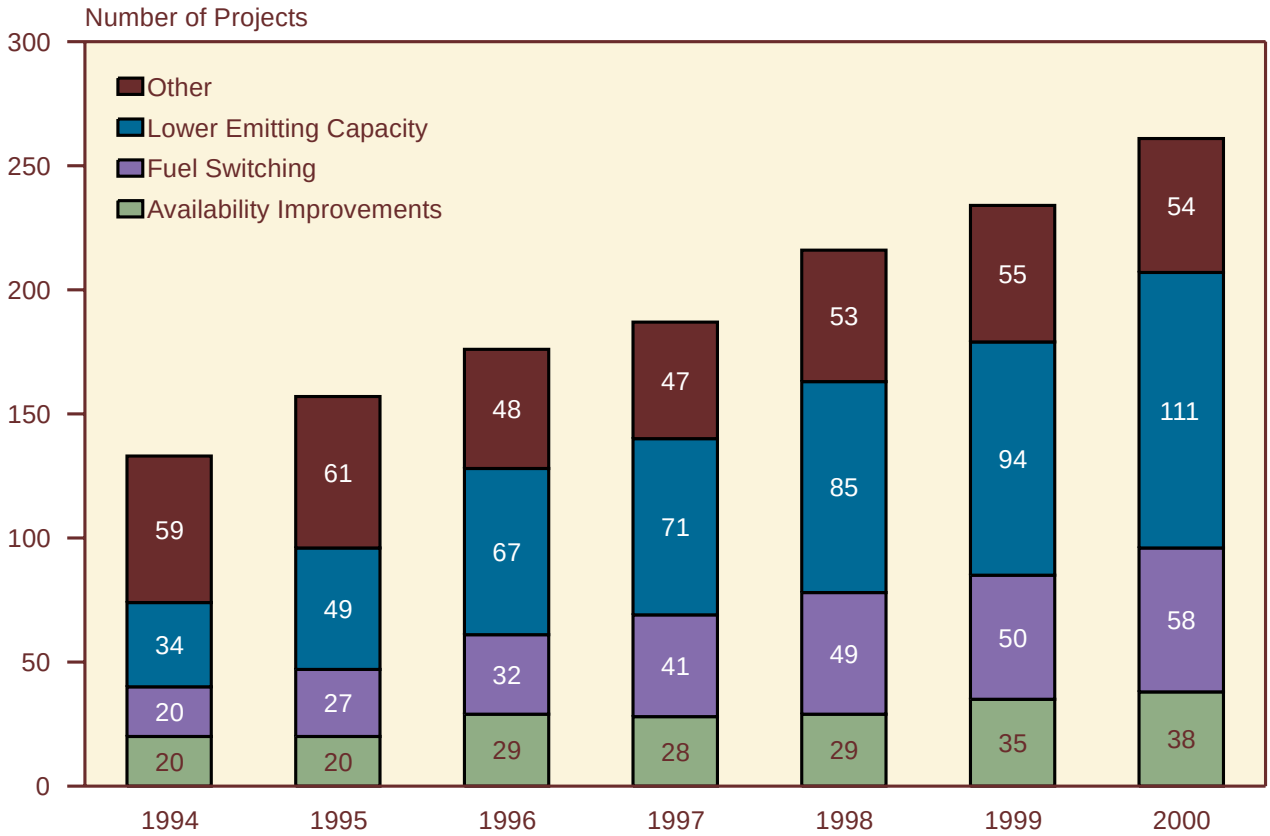
Projects involving fuel switching, power plant availability improvements, increases in low- or zero-emitting generation capacity, and other similar activities typically reduce the amount of carbon consumed to generate a unit of electricity. A total of 249 such projects were reported for 2000, including some of the largest projects reported to the Voluntary Reporting Program (Figure 6). The emission reductions reported for "carbon content reduction" electric power projects in 2000 totaled 120.4 million metric tons carbon dioxide equivalent from direct sources, 6.9 million metric tons from indirect sources, and 6.8 million metric tons from unspecified sources. Some carbon content reduction projects are in fact "hybrids," combining efficiency improvements with measures such as availability improvements or increases in low-emitting capacity (see box on page 24).

Availability Improvements

By increasing generation from lower emitting power plants, availability improvement projects provide a commensurate reduction in the amount of generation supplied by higher emitting plants. The number of availability improvement projects reported for 2000 was 38—3 more than the 35 reported for 1999. Availability improvement projects accounted for reported emission reductions in 2000 totaling 73.7 million metric tons carbon dioxide equivalent from direct sources, 2.7 million metric tons from indirect sources, and 2.0 million metric tons from unspecified sources. As for previous reporting years, availability improvement projects, especially those undertaken at nuclear facilities, produced some of the largest reductions in carbon dioxide emissions reported. Of the 38 availability improvement projects reported, almost three-quarters involved nuclear power plants. Mainly through significant advances in operating, maintenance, and refueling procedures, capacity factors at nuclear plants were increased, displacing some fossil-fuel-based power generation.

Because nuclear power plants are invariably large baseload facilities, even a fairly small improvement in

Figure 6. Electric Power Projects Reducing the Carbon Content of Energy Sources by Project Type, Data Years 1994-2000



Note: The sum of projects in many project categories exceeds the total number of projects reported, because more than one project type may be assigned to a single project.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Electricity Supply Carbon Reduction Projects: Definitions and Terminology

The combustion of fossil fuels to produce heat for electricity generation causes greenhouse gas emissions. In addition to substantial releases of carbon dioxide, fossil fuel combustion also emits small quantities of methane and nitrous oxide. Carbon content reduction projects typically reduce greenhouse gas emissions by replacing higher emitting fuels (such as coal) with lower emitting fuels (such as natural gas) or non-emitting energy sources (such as nuclear power or renewables). Projects that reduce the carbon content of electricity supply include the following.

Availability Improvements. By reducing the frequency and length of planned and unplanned power plant outages, availability improvement projects can result in increased use of the affected plant. This is particularly true if the plant is a *baseload* plant (i.e., a plant that is generally used on an around-the-clock basis except during plant outages), but it may hold true for other types of plants as well. If the resulting increase in generation from the affected plant displaces generation that otherwise would have been produced by a higher emitting plant, emission reductions will result. Power plant utilization is measured by the plant's *capacity factor*, defined as the ratio of the average load on the plant over a given period to its total capacity. For example, if a 200-megawatt plant operates (on average) at 75 percent of its rated capacity (i.e., at a load of 150 megawatts) over a period of a year, the plant's capacity factor is 75 percent for that year.

Fuel Switching. The amount of carbon contained in fossil fuels and released in the form of carbon dioxide during combustion varies, depending on the type of fuel. Thus, carbon dioxide emissions from a power plant can be reduced by switching from a higher emitting fuel (such as coal) to a lower emitting fuel (such as natural gas).

Increases in Lower Emitting Capacity. By increasing the capacity of an existing lower emitting or non-emitting plant (e.g., a hydroelectric plant), or by constructing new generating capacity (e.g., wind turbines), a utility can reduce or avoid reliance on higher emitting plants. The result will be a reduction in greenhouse gas emissions from the displaced plants.

plant availability can lead to a sizable reduction in fossil fuel consumption. For example, Carolina Power & Light Company reported that it increased the level of production at its nuclear power plants through a combination of initiatives over the 1992-2000 period, achieving 9.0 million metric tons carbon dioxide equivalent of direct emission reductions. The initiatives included adoption of improved technology, implementation of industry best practices, and plant modifications to improve reliability and increase production.

Fuel Switching

Fifty-eight fuel-switching projects were reported in 2000, 8 more than the 50 reported in 1999 and 38 more than the 20 reported in 1994. Switching from coal or oil to natural gas lowers carbon dioxide emissions because of the lower carbon content of natural gas relative to other fossil fuels. For example, switching from bituminous coal to natural gas can reduce carbon dioxide emissions per unit of energy consumed by approximately 43 percent. Although other reported actions, such as switching from oil to gas, may not lead to reductions of the same magnitude, they also reduce greenhouse gas emissions. The fuel-switching projects reported for 2000 accounted for emission reductions totaling 1.8 million metric tons carbon dioxide equivalent from direct sources, 4.1 million metric tons from indirect sources, and 1.3 million metric tons from unspecified sources.

An example of a fuel-switching project is the DTE Energy / Detroit Edison Greenwood Energy Center Fuel Switching project at the 785-megawatt Greenwood Energy Center in Michigan. Before 1991, Greenwood Energy Center burned mostly No. 6 fuel oil and some No. 2 oil. In 1991, Greenwood started to burn natural gas in place of a large amount of the No. 6 oil. In 2000, a reduction of 10,143,136 million Btu of residual fuel use, which was replaced with natural gas, was reported for this activity. DTE Energy / Detroit Edison reported direct emission reductions of 317,677 metric tons carbon dioxide.

Increases in Lower Emitting Capacity

Projects involving the construction of new, lower emitting power plants or increases in the capacity of existing lower emitting plants were among the most numerous electricity supply projects reported. A total of 111 such projects were reported for 2000, up from 94 reported for 1999 and 34 for 1994. Most involved increases in nuclear (19 projects), hydropower (19 projects), photovoltaic (19 projects), and wind capacity (30 projects) and other system efficiency improvements—increasing the output of power sources with essentially no greenhouse gas emissions. Emission reductions reported for increases in low-emitting capacity projects in 2000 totaled 49.3 million metric tons carbon dioxide equivalent from direct sources, 3.9 million metric tons from indirect sources, and 3.2 million metric tons from unspecified sources.

The Tennessee Valley Authority (TVA) reported that it began implementing a system-wide modernization program for its hydropower units, which is expected to increase the efficiency and / or capacity of many of

TVA's existing hydroelectric units. Additional units will be modernized in this program over the next several years. TVA reported that direct carbon dioxide emissions were reduced by 282,413 metric tons carbon dioxide equivalent in 2000. In calculating reported reductions, TVA used its net electricity generation (in megawatthours), net average system heat rate (in Btu per kilowatthour), and fuel emissions factor. TVA assumed that the power it sold to other utilities was generated at coal-fired facilities operating at the average heat rate for TVA's coal-fired power plants for the given year.

Another example of a project involving an increase in lower emitting capacity project is the Unocal Salak/Wayang Windu geothermal project. Geothermal energy is produced by using natural hot water contained in the Earth's crust to power turbines at electricity generation facilities. Wells drilled deep into the Earth to access water heated by the volcanic magma can produce steam that replaces the heat or steam typically produced by burning fossil fuels, thereby reducing greenhouse gas emissions from the electricity generation process. Unocal's Indonesian subsidiary, Unocal Geothermal Indonesia (UGI), currently operates two geothermal power plants in Salak and Wayang Windu (Java) and is seeking to maintain and expand those sites and to develop new geothermal generation facilities throughout Indonesia, beginning in Sarulla, North Sumatra. Electricity generation in Indonesia is primarily from subsidized fossil fuel systems. In 2000, the projects in Salak and Wayang Windu were reported to have replaced 3.6 million megawatthours of electricity generation from fossil fuels with geothermal generation, resulting in indirect carbon dioxide emission reductions totaling 3.7 million metric tons. The two facilities are estimated to have 23 and 29 years of geothermal energy resources remaining, respectively.

Other Carbon Reduction Projects

Fifty-four "other carbon reduction" projects were reported for 2000. This category of "other" projects includes projects that decrease high-emitting capacity, make dispatching changes only, or increase low- or zero-emitting capacity. In 2000, 24 projects used low- or zero-emitting power purchases to reduce emissions. This category was added to the Voluntary Reporting Program in 1999 to classify electric power producer/supplier purchases of power from low- or zero-emitting generation sources for resale, replacing generation or purchases of power from more carbon-intensive generation sources. Another 6 projects reported for 2000 involved decreases in higher emitting capacity, and 7 involved changes in the dispatching of power plants. Changes in dispatch order can reduce carbon dioxide emissions if lower emitting plants are used more frequently. For 2000, reported emission reductions from "other carbon reduction" projects totaled 24.1 million metric tons carbon dioxide equivalent from direct sources and 0.3 million metric tons from unspecified sources. An emissions increase of 13,806 metric tons carbon dioxide equivalent was reported from indirect sources.

In 2000, Southern California Edison Company (SCE) reported direct emission reductions of 607,824 metric tons carbon dioxide from three renewable energy purchase projects classified as zero- or low-emission power purchases. These projects decreased consumption of natural gas by replacing it with energy from wind, biomass, and geothermal sources. Energy purchases were converted to carbon dioxide emissions reductions using an emissions factor of 600 short tons of carbon dioxide per gigawatthour of generation. Use of this emission factor assumes that purchases of renewable energy displace generation from natural-gas-fired generating stations, the marginal generating resource in Southern California. SCE used an average heat rate of 10,500 Btu per kilowatthour for these stations and natural gas energy content of 1,050 Btu per standard cubic foot to calculate the amount of natural gas saved. For the biomass power purchase, SCE assumed that the fuel for the facility using agricultural waste was 40 percent crop residue or waste, 40 percent construction waste, and 20 percent petroleum coke. SCE also assumed that biomass generation produces no net carbon dioxide emissions.

Xcel Energy reported a landfill gas purchase project. Methane is produced in sanitary landfills as a direct result of decomposition of the solid waste. Because landfill gas is 40 to 60 percent methane, it can be recovered and used as a fuel. In this case, purchasing landfill gas allows displacement of emissions from coal combustion. Xcel categorized this project as a zero/low emission power purchase. In 2000, Xcel reported replacing 100,743 megawatthours of electricity with landfill gas, resulting in direct reductions of 0.54 metric tons of methane emissions, 72,566 metric tons of carbon dioxide emissions, and 1.2 metric tons of nitrogen oxide emissions.

Increasing Energy Efficiency in Electricity Production and Distribution

Projects involving improvements in the efficiency of electricity generation, transmission, and distribution were more numerous than the other electric power projects reported for 2000 but produced smaller emission reductions on average. Efficiency improvement tends to be an ongoing effort by electricity suppliers, yielding a continuous stream of small, incremental improvements rather than one-time dramatic increases in efficiency. For example, heat rate improvement projects often are undertaken in response to normal plant deterioration.

As power plants age, efficiency tends to erode gradually. Operators seek to maintain heat rates by replacing or refurbishing old, worn-out equipment. Similarly, new energy-efficient transformers are often installed gradually over a period of years, as old transformers fail.

A total of 259 "increasing energy efficiency" projects were reported for 2000, including some hybrid projects that combined efficiency improvements with measures such as availability improvements. The efficiency improvement projects fall into two main categories: (1) generation, involving efficiency improvements in the conversion of fossil fuels and other energy sources into electricity; and (2) transmission and distribution, involving improvements in the delivery of electricity from the power plant to the end user (see box on page 27).

Generation Projects

Efficiency Improvements. Improvements in generating efficiency were the most numerous type of efficiency project reported for 2000. A total of 160 such projects were undertaken in 2000, up by 1 project from the number reported for 1999 and nearly double the 85 projects reported for 1994. Heat rate improvements at coal-fired power plants are a commonly reported means of increasing efficiency and reducing carbon dioxide emissions. There are numerous opportunities for improving efficiency at existing power plants, but the efficiency gains, and hence reductions in fuel consumption and emissions, are limited by technology and tend to be small. Emission reductions reported for generation efficiency improvement projects in 2000 totaled 10.3 million metric tons carbon dioxide equivalent from direct sources, 0.3 million metric tons from indirect sources, and 1.0 million metric tons from unspecified sources.

Ameren Corporation reported on an efficiency improvement project initiated in 1993 to convert a wet fly ash handling system to a dry system at a coal-fired power plant. The conversion was necessitated by a switch to Powder River Basin coal as the fuel for the plant. The original wet system would have been inadequate for transporting the ash generated from the western coal due to its high calcium content. Ameren would have had to reduce load or take the unit out of service in order to perform frequent maintenance on the ash conveyor systems. The replacement vacuum dry ash handling system uses less energy than the hydraulic system, which relied on pumping large quantities of water. Ameren reported a direct emissions reduction of 18,631 metric tons carbon dioxide in 2000.

Cogeneration and Waste Heat Recovery. A total of 18 cogeneration and waste heat recovery projects were reported in 2000, as compared with 4 projects reported for 1994. Emission reductions reported for cogeneration and waste heat recovery projects in 2000 were on average greater than those reported for any of the other types of efficiency improvement projects but less than the average for carbon content reduction projects. Industrial partners in the cogeneration projects reported for 2000 include a greenhouse, steel mills, and a heating plant in the Czech Republic. Reported end uses of the thermal energy include electricity generation, process heat applications, and space heating and cooling. The emission reductions reported for cogeneration and waste heat recovery projects in 2000 totaled 2.1 million metric tons carbon dioxide equivalent from direct sources and 1.2 million metric tons from indirect sources.

In 1998, NiSource's Primary Energy subsidiary partnered with Ispat/Inland to install an energy facility named Coke Energy. The facility included 16 heat recovery steam boilers and a 94-megawatt steam turbine/generator, cooling towers, and a flue gas desulfurization system. Coke Energy recovers heat from four "non-recovery" coke batteries (67 ovens per battery) to produce steam for the turbine generator. Emission reductions were reported from the savings in coal-fired generation used for process heating replaced by coke energy heat recovery boilers and the steam turbine/generator. In 2000, NiSource reported direct emission reductions for this project totaling 509,107 metric tons of carbon dioxide.

BP reported a waste heat recovery project involving various thermal process efficiency improvements that began operation in June 1991. The project is dispersed throughout Louisiana, Texas, and locations along the Gulf of Mexico. It includes optimization and improvements in process controls to recover and reuse waste heat energy in BP's full range of operations: crude oil refining process, crude oil exploration and production, and chemical manufacturing. Specifics include heat exchanger optimization, heater efficiency control, and waste heat recovery. BP reported that total energy savings through recovering waste heat from hot flue gases for industrial process heat was 4,039 billion Btu for 2000, which reduced direct emissions of carbon dioxide by 219,592 metric tons. BP bases engineering estimates of energy savings on measured crude heat content, crude throughput, and reduced fuel gas firing rates and uses its company "Protocol for the Calculation of Carbon Dioxide Emissions" for emission calculations. BP also reports that this protocol and its internal greenhouse gas reporting have been validated by external auditing to ensure compliance by all BP facilities.

Transmission and Distribution Projects

Transmission and distribution projects, although not as numerous as generation projects, were nonetheless reported in significant numbers. In 2000, 82 transmission and distribution projects were reported, down by

Efficiency Projects: Definitions and Terminology

Generation Projects

It is neither theoretically nor practically possible to convert all the thermal or other energy produced in, or consumed by, a power plant into electrical energy. In fact, much of the energy is lost rather than converted. Typically, U.S. steam-electric generating plants operate at efficiencies of about 33 percent, meaning that two-thirds of the thermal energy produced is lost. Some more advanced power plants have higher efficiencies, but even new combined-cycle plants (in which the waste heat from a gas turbine is recovered to produce steam to drive a turbine) typically have efficiencies of only 50 to 60 percent. Generation projects seek to improve power plant efficiencies either by reducing the amount of energy lost during the conversion process or by recovering the lost energy for subsequent application.

Efficiency Improvements. By increasing the efficiency of the generation process, efficiency improvement projects at fossil-fuel-fired power plants reduce the plants' *heat rate*, defined as the amount of fossil energy (measured in Btu) needed to produce each kilowatthour of electricity. The result is a reduction in the amount of fuel that must be burned to meet generation requirements, and hence a reduction in carbon dioxide (and other greenhouse gas) emissions. Efficiency improvements at nonfossil (e.g., hydroelectric) power plants can also reduce greenhouse gas emissions. Emission reductions occur if the efficiency improvement leads to an increase in the amount of electricity generated by the affected plant, with a consequent reduction in the amount of electricity that must be generated by other (fossil fuel) plants to meet demand.

Cogeneration. Only a portion of the heat generated during the combustion of fossil fuels can be converted into electrical energy; the remainder is generally lost. Cogeneration involves the recovery of thermal energy for use in subsequent applications. Cogeneration facilities typically employ either topping or bottoming cycles. In a *topping cycle*, thermal energy is first used to produce electricity and then recovered for subsequent applications. Topping cycles are widely used in industry as well as utility power plants that sell electricity and steam to customers. In a *bottoming cycle*, the thermal energy is first used to provide process heat, from which waste heat is subsequently recovered to generate electricity. Bottoming cycle applications are less common, usually associated with high-temperature industrial processes. Because cogeneration involves the recovery and use of thermal energy that would otherwise be wasted, it reduces the amount of fossil fuel that must be burned to meet electrical and thermal energy requirements, hence reducing greenhouse gas emissions.

Transmission and Distribution Projects

The purpose of the electricity transmission and distribution system is to deliver electrical energy from the power plant to the end user. Resistance to the flow of electrical current in cables, transformers, and other components of the transmission and distribution system causes a portion of the energy (typically about 7 percent) to be lost in the form of heat. Improving the efficiency of the various system components can decrease such line losses, reducing the amount of generation required to meet end-use demand and, thus, power plant fossil fuel consumption and greenhouse gas emissions.

High-Efficiency Transformers. Transformers, used to change the voltage between different segments of the transmission and distribution system, are a major source of system losses. Transformer losses occur as a result of impedance to the flow of current in the transformer windings and because of hysteresis and eddy currents in the steel core of the transformer. When existing transformers are replaced with high-efficiency transformers (including improved silicon steel transformers and amorphous core transformers), losses are reduced.

Reconductoring. Like transformers, conductors (including feeders and transmission lines) are a major source of transmission and distribution system losses. In general, the smaller the diameter of the conductor, the greater its resistance to the flow of electric current and the greater the consequent line losses. Reconductoring involves the replacement of existing conductors with larger diameter conductors.

Distribution Voltage Upgrades. Line losses are dependent, in part, on the voltage at which the various segments of the transmission and distribution system operate. Upgrading the voltage of any segment can reduce line losses.

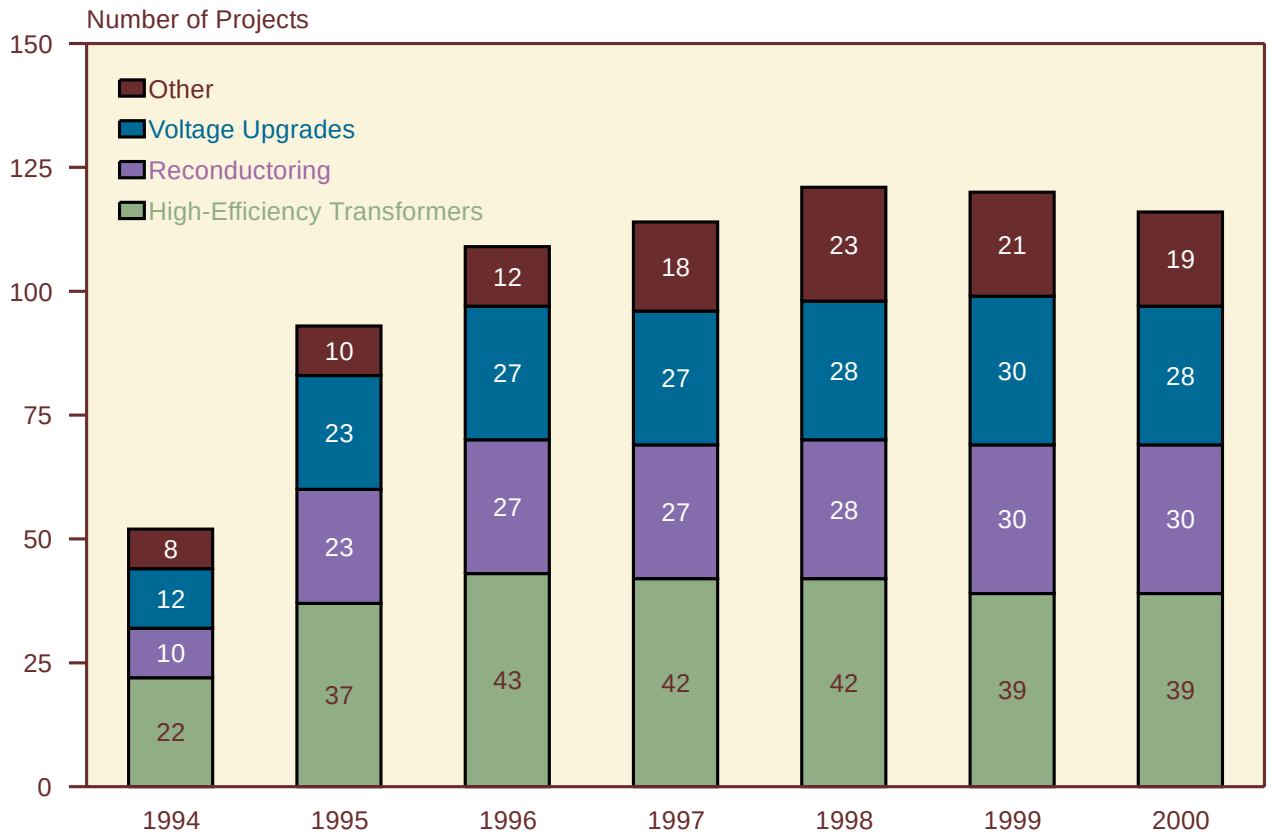
2 percent from 1999 but up by 82 percent from 1994. Unlike generation projects, which typically have discrete start and completion dates, efforts such as upgrading conductors and replacing transformers are ongoing activities by electric power producers. Consequently, most of the transmission and distribution efficiency improvements reported for 2000 were reported as continuations of long-standing projects rather than as new projects.

In terms of average emission reductions, transmission and distribution projects typically are somewhat smaller than generation projects. There are numerous opportunities for improving efficiencies in the delivery of electricity, but the magnitude of the efficiency gains that can be realized is limited.

In 2000, the most frequently reported types of transmission and distribution projects (Figure 7) were high-efficiency transformers (including improved silicon steel and amorphous core transformers); reconductoring (replacing existing conductors with large-diameter conductors to reduce line losses); and distribution voltage upgrades (increasing the voltage at which the various segments of the system operate to reduce line losses). The other transmission and distribution project category includes general transmission and distribution projects reported on the short form (Form EIA-1605EZ) that involve more than one type of activity, as well as such activities as transmission line improvements and capacitor installations. A total of 39 high-efficiency transformer projects were reported for 2000 (the same number as reported for 1999), making it the most frequently reported type of transmission and distribution project. Many of the reported projects were "hybrid" projects, combining high-efficiency transformer installation with one or more other transmission and distribution activities (e.g., reconductoring).

Another 30 projects involving reconductoring and 28 projects involving distribution voltage upgrades (again, often in combination with other activities) were reported for 2000. The reporters classified 19 projects as "general" or "other" transmission and distribution, down from 21 in 1999. Emission reductions reported for transmission and distribution projects in 2000 totaled 3.2 million metric tons carbon dioxide equivalent from direct sources, 0.2 million metric tons from indirect sources, and 90,378 metric tons from unspecified sources.

Figure 7. Reported Transmission and Distribution Projects by Type, Data Years 1994-2000



Note: The sum of projects in many project categories exceeds the total number of projects reported, because more than one project type may be assigned to a single project.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

An example of a project reported in 2000 in the other transmission and distribution project category is Allegheny Power's Energy Star Transformer Program. Allegheny Power reported that it joined the Program in September 1995. The first year that all Energy Star Transformers were reported by Allegheny Power for the entire year was 1996. Allegheny Power calculated the megawatthour savings by comparing the Energy Star Transformers with non-evaluated transformer bids submitted by transformer manufacturers. Allegheny estimated the reported direct emission reduction for 2000 (90,864 metric tons carbon dioxide) by multiplying the electricity saved by a system average emissions factor (1.02 short tons of carbon dioxide per megawatthour) and dividing by a delivery factor of 0.95164 to account for losses in the system.

3. Reducing Emissions from Energy End Use and Transportation

Reducing Energy Demand at Stationary Sources

Energy use at stationary sources in the residential, commercial, and industrial sectors accounted for 3.8 billion metric tons of carbon dioxide emissions in 2000—two-thirds of U.S. carbon dioxide emissions. Emissions from stationary-source energy use included 2.4 billion metric tons of carbon dioxide from the generation of electricity that was ultimately consumed in these three sectors. Industry was the largest of the three sectors in terms of stationary-source emissions, accounting for nearly half the total (45 percent); the residential sector accounted for about 30 percent of the total energy-related emissions from stationary sources; and the commercial sector accounted for the remaining 25 percent.[26]

Between 1990 and 2000, carbon dioxide emissions associated with industrial, residential, and commercial energy use increased by 13.8 percent. The commercial sector is the fastest-growing emissions source, registering a 27.4-percent increase in emissions between 1990 and 2000. Emissions from the residential sector increased by 21.9 percent over the same period, and industrial sector emissions rose by 2.9 percent.[27]

Projects Reported

Ninety-one entities reported energy end-use projects in 2000. Most (68) were electric power providers. The other reporters included households; industrial companies, dominated by cement plants (Arizona Portland Cement Co., Calaveras Cement Co., two plants associated with California Portland Cement, and Lehigh Portland Cement Co.); chemical products companies (Allergan, Inc., Johnson & Johnson, Mead Johnson Nutritionals/Bristol-Meyers Squibb, and Pharmacia & Upjohn); and transportation equipment companies (General Motors, Pratt & Whitney North Berwick, and Rolls-Royce Corporation). These 91 entities reported 424 energy end-use projects in 2000, involving reductions in end-use demand for energy or fuel switching. Energy end-use projects accounted for 23 percent of all projects reported to the Voluntary Reporting of Greenhouse Gases Program for 2000, ranking third behind sequestration (26 percent) and electricity supply (25 percent) in the number of projects reported.

Although the number of entities reporting energy end-use projects in 2000 was 9 fewer than the 100 that reported for the 1999 data cycle (Table 10), the number of energy end-use projects reported for 2000 was 37 more

Table 10. Number of Energy End-Use Reporters, Projects, and Emission Reductions Reported, Data Years 1994-2000

Data Year	Number of Reporters	Number of Projects Reported	Emission Reductions Reported (Metric Tons Carbon Dioxide Equivalent)		
			Direct	Indirect	Unspecified[a]
1994	75	204	9,103,753	1,318,092	1,361,188
1995	90	271	12,450,879	1,591,590	1,573,674
1996	85	267	15,288,497	1,538,196	1,910,306
1997	92	309	16,685,010	3,798,030	2,353,454
1998	107	374	18,282,751	5,026,424	2,393,956
1999	100	387	16,047,912	6,786,832	334,120
2000	91	424	19,633,680	8,137,090	358,568

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

Note: More than one project type may be assigned to a single project; therefore, the sums of the projects and reductions in each project type category may exceed the total numbers of projects and reductions in the totals and subtotals.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[26]In terms of their contribution to total energy-related carbon dioxide emissions in 2000, the industrial sector led with a 30-percent share of the total, followed by the residential sector (20 percent) and the commercial sector (17 percent). Transportation, which is considered in the next section of this chapter, accounted for the remaining 33 percent.

[27]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), pp. 19-32, web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

than the 387 reported for 1999. Corresponding to the increased number of energy end-use projects reported for 2000 were increases in the total reported direct, indirect, and unspecified emission reductions resulting from energy end-use projects (increases of 22 percent, 20 percent, and 7 percent, respectively). The large drop in unspecified emission reductions shown in Table 10 between 1998 and 1999 resulted from a change in the status of one reporter on Form EIA-1605EZ, Pacific Gas and Electric (PG&E) Company. PG&E Company is a subsidiary of PG&E Corporation, which reported on the short form for data years 1994 through 1998. In 1999, PG&E Corporation consolidated data from two subsidiary companies reporting to the Program into a single report, which was filed under its own name on Form EIA-1605. (The second subsidiary company previously filed under the name USGen New England, Inc.).

Emission reductions reported for individual energy end-use projects ranged from less than 1 metric ton to almost 3 million metric tons, primarily because of the flexibility allowed in defining the scope of a project. Projects could range from the installation of a compact fluorescent light bulb reported by a household to a system-wide demand-side management (DSM) program reported by a large electric utility. Among projects for which direct emission reductions were reported, 82 percent had emission reductions of less than 100,000 metric tons carbon dioxide equivalent (Figure 8). Similarly, reported emission reductions totaled less than 100,000 metric tons carbon dioxide equivalent for 94 percent of the projects in which indirect reductions were reported and for 98 percent of the projects reported on Form EIA-1605EZ, which does not distinguish between direct and indirect reductions. Thirty-nine end-use projects reported emission reductions between 100,000 and 1 million metric tons carbon dioxide equivalent (one less than the number for the 1999 reporting cycle), and seven end-use projects reported reductions in excess of 1 million metric tons each (two more than for 1999).

New Projects and New Reporters

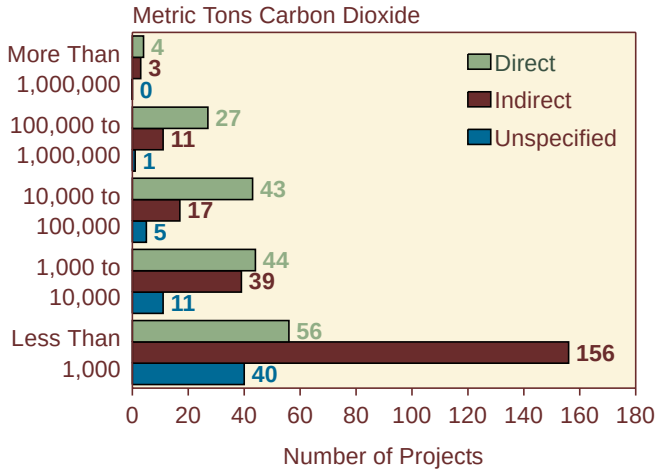
New projects reported to the Voluntary Reporting of Greenhouse Gases Program are not limited to activities initiated in 2000. A project may be considered new to the program for either of two reasons: it may have begun in the current data year ("newly operational"), or it may be an ongoing project not previously reported ("newly reported"). In all, 96 new energy end-use projects were reported by 20 separate entities for the 2000 reporting cycle. Only one of the entities had never before reported to the program.

Of all the new energy end-use project, 33 became operational in 2000 (reported by 10 entities, all of which had reported previously), as compared with 37 in 1999—an 11-percent decrease in the number of newly operational projects. Lucent Technologies accounted for the largest individual portion of newly operational projects in 2000 (55 percent), reporting 18 projects involving equipment and appliances, HVAC, lighting, and building shell improvements. Also of note was the presence of 13 newly operational chiller (air conditioning) upgrade or replacement projects, 9 of which were undertaken by Lucent Technologies. These 13 projects compose 39 percent of all newly operational energy end-use projects and 50 percent of Lucent's newly operational projects.

One of the newly operational projects was an undertaking by Platte River Power Authority and four owner cities. In 2000, the City of Longmont began a Traffic Signal LED project to replace conventional incandescent stop-light bulbs with more efficient light-emitting diodes (LEDs). Longmont plans to install LEDs in all "new-build" intersections and to retrofit three to four existing intersections each year. Standard red lamps at older intersections use 135-watt incandescent bulbs, which are being replaced with more efficient 15-watt LEDs, producing a savings of 120 watts each. With the red duty cycle averaging 49 percent of the time, each LED produces per-lamp savings of 515.1 kilowatthours per year. The higher lamp costs for LEDs are offset over time by energy savings, reduced peak-load demand, andtheneedforfewerlampreplacements.Substitutions are also being made for green and yellow lamps.

In addition to the 33 newly operational projects, 63 newly reported projects were reported by 13 entities. Forty-two of the newly reported projects were reported by 5 existing reporters, and, as mentioned before, there was one new reporter. This reporter, Mead Johnson

Figure 8. Reported Energy End-Use Projects by Size and Type of Emission Reduction, Data Year 2000



Note: Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Nutritionals/Bristol-Myers Squibb reported 2 projects. Seventeen of the newly reported projects were reported using Form EIA-1605EZ by six different entities. One newly reported project was submitted by Xcel Energy, which had never before reported to the program but is not considered a new reporting entity because it was formed in August 2000 through the merger of a previous reporter, Northern States Power Co., and Denver-based New Century Energies. All but one of the Xcel Energy end-use projects had been reported previously by Northern States Power Co.

Reported direct emission reductions resulting from all 93 new energy end-use projects totaled 95,681 metric tonscarbondioxideequivalent.Indirectemissionreduc-tions resulting from the new energy end-use projects totaled 141,766 metric tons carbon dioxide equivalent. Unspecified emission reductions resulting from the new energy end-use projects reported on Form EIA-1605EZ totaled 3,300 metric tons carbon dioxide equivalent during the 2000 data cycle.

Project Types

Of the reported energy end-use projects (Table 11), 27 percent listed involvement with two or more project types. For example, a single DSM program reported by an electric utility can incorporate multiple types of energy end-use activities, such as lighting and equipment. Several electric utilities combine all the DSM programs in their service territories into single projects, whose direct emission reductions tend to be higher than most single-type projects.[28] For this reason, project totals and emission reductions in Table 11 do not equal the sum of their components since the reductions for many projects are recorded in more than one project type category.

Overall, the most frequently reported type of energy end-use project, for the seventh year in a row, was lighting and lighting controls (181 projects), followed by equipment and appliances (162 projects) and heating, ventilation, and air conditioning (HVAC) (129 projects). For projects involving lighting and lighting controls in

Table 11. Number of Projects and Emission Reductions Reported for Energy End-Use Projects by Project Type, Data Year 2000

Project Type	Number of Projects Reported	Number of Projects Reporting Emission Reductions				Emission Reductions Reported (Million Metric Tons Carbon Dioxide Equivalent)		
		Direct	Indirect	Both Direct and Indirect	Unspecified[a]	Direct	Indirect	Unspecified[a]
Lighting/Lighting Controls	181	73	100	9	16	16.3	6.2	*
Equipment/Appliances	162	82	90	18	7	15.2	6.7	*
HVAC	129	71	60	11	9	15.8	5.9	0.1
Load Control	65	41	29	10	5	12.5	3.4	*
Building Shell	65	43	29	8	1	14.5	4.2	*
Motor/Motor Drive	61	40	29	9	1	13.2	4.8	*
Fuel Switching	25	16	10	8	6	5.0	1.2	*
General Energy Use[b]	13	—	—	—	12	—	—	0.2
Energy Effects of Urban Forestry	8	7	3	2	—	3.6	*	—
Industrial Power Systems	7	5	2	—	—	0.4	0.4	—
Other[c]	27	19	13	6	—	1.5	0.4	—
Total	**424**	**175**	**227**	**36**	**57**	**19.6**	**8.1**	**0.4**

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

[b]Includes projects reported on Form EIA-1605EZ that encompass more than one project type. Because Form EIA-1605 allows reporters to identify multiple project types encompassed by a project, the General End Use category is specific to Form EIA-1605EZ reporting.

[c]Includes all projects that cannot meaningfully be included in any of the specific project type categories.

*Less than 0.05 million metric tons.

Note: Project totals and emission reductions do not equal sum of components, because some projects are counted in more than one category.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[28]Reporters of direct reductions are predominantly electricity generators whereas reporters of indirect reductions are predominantly consumers of electricity generated by electric utilities.

2000, the total direct emission reductions reported were 16 million metric tons carbon dioxide equivalent. The other energy end-use categories that yielded total reported direct reductions in excess of 10 million metric tons carbon dioxide equivalent were equipment and appliances, HVAC, load control, building shell improvement, and motor and motor drives. The eight projects reported in the category of urban forestry reduced direct emissions by an average of 512,303 metric tons carbon dioxide equivalent, more than 4 times the average reduction for all energy end-use projects (112,192 metric tons).

Energy end-use projects can be carried out anywhere energy is consumed. For this report, energy end-use projects are categorized as occurring in the industrial, commercial, residential, and agricultural sectors. End-use projects reported for 2000 in the industrial sector (230) outnumbered those in the residential (130) and commercial (120) sectors, which, in turn, greatly outnumbered agricultural sector projects (21) (Figure 9). Fewer projects were reported in 2000 for the commercial and agricultural sectors than were reported for the 1999 data year, down by 5 projects and 1 project, respectively. In contrast, 5 more end-use projects were reported for the residential sector and 39 more were reported for the industrial sector, which showed the largest increase. It should be noted that many projects—particularly utility DSM programs—cover more than one end-use sector and are included in each applicable sector for the purposes of counting types of projects reported.

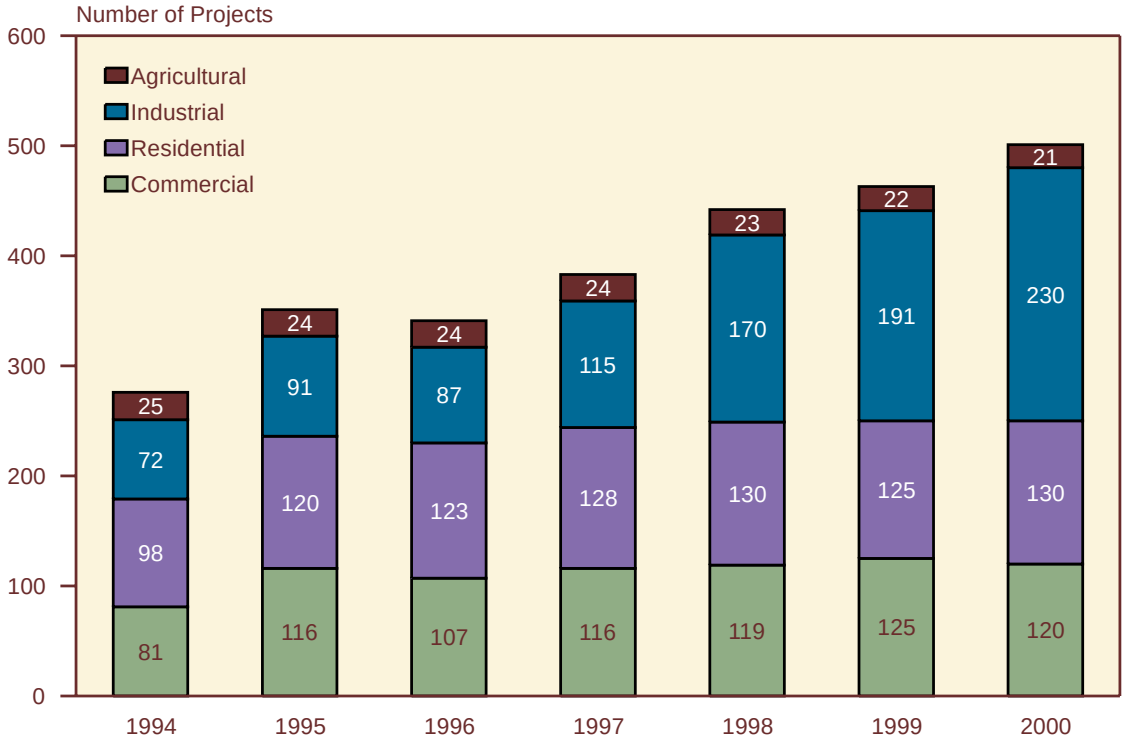
Although the most common load shape objective of reported DSM projects was increased energy efficiency (339 projects), electric utilities also attempted to balance their load profiles with various other load shape objectives (see box on page 35). Peak clipping (69 projects) was the second most common load shape objective reported, followed by load shifting (38 projects), valley filling (19 projects), and load building (13 projects) (Figure 10).

Reducing Transportation Fuel Use

Overview

The transportation sector is the largest contributing sector to the total U.S. emissions of carbon dioxide, accounting for 33 percent of emissions in 2000. These emissions result from the combustion of fossil fuels, with petroleum fuels accounting for 98 percent of these emissions. Emissions from this sector increased by 19 percent

Figure 9. Reported Energy End-Use Projects by Sector, Data Years 1994-2000

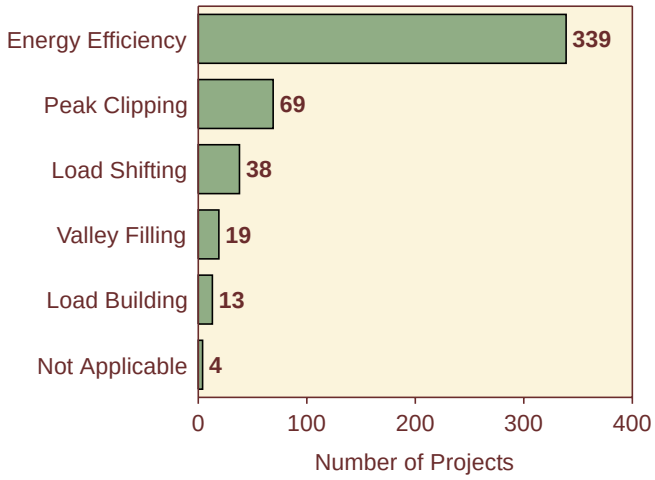


Notes: Excludes energy end-use projects reported on Form EIA-1605EZ. Some projects target more than one sector and may be counted in multiple categories.

Source: Energy Information Administration, Form EIA-1605.

between 1990 and 2000, from 1,583 million metric tons of carbon dioxide to 1,888 million metric tons of carbon dioxide.[29] This increase was caused by increases in both the average number of miles driven per vehicle and the total number of vehicles on the road. The average number of miles driven by motor vehicles increased by 9.9 percent between 1990 and 1999[30] and the number of vehicles on the road increased by 11.6 percent between 1990 and 1998.[31] Although emissions were extenuated somewhat by an increase in average U.S. vehicle fleet fuel efficiency from 16.4 miles per gallon to 16.8 miles per gallon between 1990 and 1999, this trend has been reversed since 1997 when fuel efficiency peaked at 17.0 miles per gallon.[32]

Figure 10. Reported Demand-Side Management Projects by Load Shape Objective, Data Year 2000



Notes: Excludes demand-side management projects reported on Form EIA-1605EZ. Some projects may be counted in more than one category.

Source: Energy Information Administration, Form EIA-1605.

A total of 72 transportation projects were reported for 2000 by 41 entities, all but 5 of which were electric utilities. One of the nonutilities was CLE Resources, a sub-sidiaryofanelectricutility.The4otherswereaprinting company (Quad/Graphics, Inc.), a cement producer (Arizona Portland Cement Co.), a fabricated metals company (Majestic Metals, Inc.), and a household. Detailed information was provided for 61 (85 percent) of the projects on Form EIA-1605. Summary information for the remaining 11 projects was reported on Form EIA-1605EZ. All but 3 of the 72 projects have been reported in previous years. The new projects were various travel reduction initiatives reported by Baltimore Gas and Electric Company, a car-pooling project reported by Arizona Electric Power Cooperative, and an alternative-fuel vehicle (AFV) project reported by PECO Energy Company. Forty-five (63 percent) of the projects reported for 2000 were affiliated with the Climate Challenge program.

Load Shape Effects: Definitions and Terminology

Energy Efficiency. Projects that improve the energy efficiency of specific end-use devices and systems. Such projects usually reduce overall energy consumption, often without regard for the timing of project-induced savings. Generally, energy savings are achieved through the substitution of technically more efficient measures (i.e., equipment, systems, or operating procedures) to produce the same level of end-use service (e.g., lighting or warmth) with less energy use.

Load Building. Projects that increase energy consumption, generally without regard to the timing of the increase. Promotion of residential electric space heating systems and promotion of new industrial electrotechnologies are examples of electricity load-building projects.

Load Shifting. Projects that move energy consumption from one time to another (usually during a single day). For example, water-heater timers typically turn off the units during the daytime (when an electric utility experiences peak demands) and allow the units to operate at night (during the utility's off-peak period).

Peak Clipping. Projects that reduce energy demand at certain critical times, typically when the utility experiences system peaks. These projects generally have only small effects on overall energy use but focus sharply on reducing energy use at critical times. Load-shifting and peak-clipping differ because the former shifts much of the energy use from one time to another, whereas the latter eliminates a load without shifting it to another time period.

Valley Filling. Projects that increase off-peak energy consumption (without necessarily reducing on-peak demands). Replacement of a natural-gas-fired furnace with an electric heat pump (with backup heat provided by natural gas) is an example of valley filling. Such projects can aim to fill daily or seasonal valleys.

[29]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), p. 28, web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

[30]Energy Information Administration, *Annual Energy Review 2000*, DOE/EIA-0384(2000) (Washington, DC, August 2001), p. 57.

[31]U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, BTS01-01 (Washington, DC, April 2001), Table 1-9, web site http://www.bts.gov/btsprod/nts/Ch1_web/1-9.htm.

[32]Energy Information Administration, *Annual Energy Review 2000*, DOE/EIA-0384(2000) (Washington, DC, August 2001), p. 57.

Tables 12 and 13 show transportation project trends in the first seven reporting cycles of the Voluntary Reporting Program. The projects reported for 2000 fall into three broad categories:[33]

- Alternative fuel use (32 projects or 44 percent)
- Travel reduction (34 projects or 47 percent)
- Vehicle efficiency improvements (8 projects or 11 percent).

The primary effect of the transportation projects reported was to reduce emissions of carbon dioxide, although reductions in emissions of nitrous oxide or methane were also reported for 6 projects. For 11 of the 72 projects reported, either reductions did not occur in 2000 or they were not estimated.[34]

Direct reductions totaling 21,911 metric tons carbon dioxide equivalent were reported for 32 projects in 2000 (Table 12). This represents a significant decline from the 43,499 metric tons carbon dioxide equivalent in direct reductions reported for 1999, primarily as a result of changes in two projects. The direct reductions for PG&E Corporation's natural gas vehicle project declined from 18,351 metric tons carbon dioxide in 1999 to 5,091 metric tons carbon dioxide in 2000. Commonwealth Edison Company (formerly UNICOM) did not report reductions associated with aluminum coal-carrying rail cars

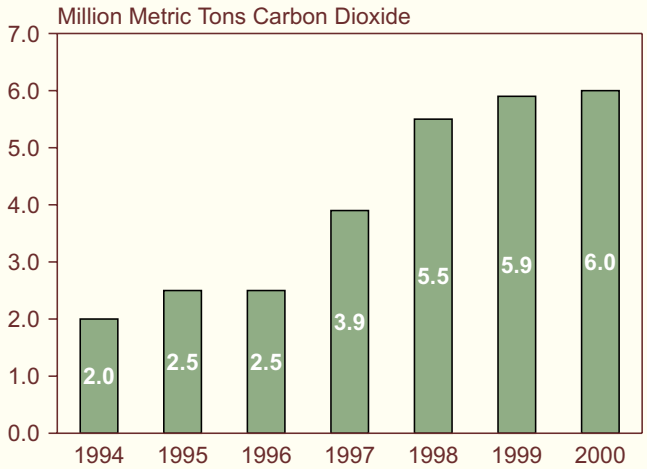
Coal Ash Reuse Projects

Coal ash, a byproduct of coal combustion, is a marketable commodity for the electric power sector, which accounts for 92 percent of coal use in the United States.[a] The most common use of coal ash is as a replacement for Portland cement in the manufacture of concrete, and reductions in carbon dioxide emissions are achieved by reducing emissions from the calcination process. Electric utilities sell coal ash produced at their facilities to avoid landfill disposal costs and to meet increasing demand for the commodity.

In 2000, the total number of entities reporting coal ash reuse projects (39) increased slightly from the 38 entities reporting such projects in 1999. There was a corresponding increase in the total number of projects reported for 2000 (45), up from 41 reported for 1999. The total carbon dioxide emission reductions reported increased by 1 percent, to 5.1 million metric tons (see figure). The combined indirect emission reductions reported for coal ash reuse projects in 2000 accounted for 13 percent of the indirect carbon dioxide emission reductions reported for all projects. Just over 7.7 million metric tons of coal ash was reported to have been reused in 2000, primarily as a substitute for Portland cement in concrete manufacturing. A small assortment of reporters indicated that fly ash was reused in materials including road base, anti-skid material, or structural fill; however, emission reductions from these applications were not quantified. The largest reductions from coal ash reuse were reported by TXU (over 600,000 metric tons), by American Electric Power (over 500,000 metric tons), and by PacifiCorp (over 500,000 metric tons).

Reporters used different emission coefficients to estimate their carbon dioxide reductions for cement substitution, ranging from 0.8 to 1.0 metric ton per ton of coal ash reused. The coefficients varied depending on the fuel used to fire the kilns, the proportion of coal ash used in cement, and the electricity used to grind raw materials used for the displaced cement. Other coefficients were derived from the ratio of the molecular weights of carbon dioxide and calcium oxide (the chemical compounds involved in the calcination of limestone) and the ratio of the specific gravities of coal ash and cement.

Reported Indirect Emission Reductions from Coal Ash Reuse Projects, Data Years 1994-2000



Source: Energy Information Administration, Form EIA-1605EZ.

[a]Energy Information Administration, *Annual Energy Review 2000*, DOE/EIA-0384(2000) (Washington, DC, August 2001), p. 202.

[33]The sum of projects in each category exceeds the total number of projects because some projects are counted in more than one category.

[34]In some cases, reductions for the project may have been reported for years prior to 2000. In other cases, the reductions were not estimated due to the lack of data or other difficulties in quantifying the effects of the project. Entities may elect to report projects without reporting reductions to make a public record of the fact that they have conducted an activity in fulfillment of a commitment made under a voluntary program such as Climate Challenge.

in 2000, because it has sold the power plants served by the rail cars. UNICOM reported direct emission reductions of 14,302 metric tons carbon dioxide in 1999.

Indirect reductions of emissions in 2000 totaling 115,857 metric tons carbon dioxide equivalent were also reported for 28 projects. The sources of the reductions included "fuel cycle" emissions associated with production, refining, transportation, and distribution of fossil fuels; customer-owned natural gas vehicles refueled by natural gas distribution companies; employee vehicles affected by reporter-sponsored travel reduction programs, such as carpooling; and railroad-owned locomotives hauling coal in lightweight aluminum rail cars owned by electric utilities. Indirect reductions from transportation projects reported in 2000 also declined significantly from those reported for 1999, primarily due to the absence of 2000 reductions for three projects for which reductions totaling 158,961 metric tons carbon dioxide were reported last year.[35]

Reductions reported on Form EIA-1605EZ, which are not specified as direct or indirect, increased from 1,873 metric tons carbon dioxide equivalent for 1999 to 2,064 metric tons carbon dioxide equivalent for 2000. Most of the increase can be attributed to increased activity in employee travel reduction programs reported by Salt River Project and to new car-pooling and mass transit

Table 12. Number of Projects and Emission Reductions Reported for Transportation Projects by Project and Reduction Type, Data Years 1994-2000

Year	Number of Projects				Emission Reductions (Metric Tons Carbon Dioxide Equivalent)		
	Vehicle Efficiency	Travel Reduction	Alternative Fuels	Total	Direct	Indirect	Unspecified[a]
1994	4(R)	6(R)	22	**31(R)**	4,203	6,346	10,398
1995	6	17(R)	26	**48(R)**	22,660	54,061	9.943
1996	7	18	34	**58**	28,813	54,043	12,144
1997	9	22	34	**64**	32,283	95,782	14,121
1998	9	30	35	**72**	25,085	89,174	16,518
1999	10(R)	32	34	**73**	43,499	282,257	1,873
2000	8	34	32	**72**	21,911	115,857	2,064

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

(R) = revised.

Note: Project and emission reduction totals may not equal sum of components because projects may be counted in more than one category.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table 13. Emission Reductions Reported for Transportation Projects by Project and Reduction Type, Data Years 1994-2000

(Metric Tons Carbon Dioxide Equivalent)

Year	Vehicle Efficiency			Travel Reduction			Alternative Fuels		
	Direct	Indirect	Unspecified[a]	Direct	Indirect	Unspecified[a]	Direct	Indirect	Unspecified[a]
1994	1,244	5,651	3	1,170	—	—	1,956	695	10,395
1995	18,148	36,137	—	2,179	16,461	1,345	2,463	1,495	8,599
1996	18,647	38,602	—	5,427	13,903	1,165	4,847	1,546	10,979
1997	20,989	48,213	—	8,753	45,227	225	2,582	2,352	13,897
1998	18,436	70,527	—	3,110	15,923	1,597	3,632	2,746	14,921
1999(R)	14,671	173,296	—	6,077	106,841	1,824	22,866	2,148	49
2000	53	47,665	—	8,549	67,404	2,038	13,322	2,306	26

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

(R) = revised.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[35]These projects were reported by three separate reporters last year. In this year's reporting cycle, one reporter did not submit a 2000 report; another did not submit its report in time to be included in the 2000 database, and a third declined to report emission reductions for a project because it lacked confidence in the data available to estimate reductions.

projects reported by Arizona Electric Power Cooperative, Inc., and Majestic Metals, Inc.

Using Alternative Fuels

Nearly half (44 percent) of the transportation projects reported for 2000 involved AFVs. These projects accounted for 61 percent of reported direct reductions but only 2 percent of reported indirect reductions. In general, the reported reductions for AFV projects were small, with reductions in excess of 1,000 metric tons carbon dioxide equivalent being reported for only three projects. All the AFV projects reported for 2000 were reported in previous years, with the exception of a compressed natural gas (CNG) vehicle project reported by PECO Energy.

AFV projects involved a variety of fuels, including natural gas, electricity, propane, and E-85 (a blend of 85 percent ethanol and 15 percent gasoline). CNG, included in 16 project reports, was the most common. Five utilities reported operating fleets of CNG or dual-fuel CNG/gasoline vehicles of more than 100 vehicles in 2000: Wisconsin Electric Power Company (874 vehicles), PG&E Corporation (501 vehicles), NiSource (600 vehicles), TXU (221 vehicles), and Baltimore Gas & Electric (163 vehicles).

Fifteen projects involved the operation of electric vehicles. Southern California Edison's electric vehicles reportedly logged over 1.9 million miles in 2000, more than 10 times the 174,000 miles reported in 1996. The Los Angeles Department of Water and Power (LADWP) reported operating 117 electric vehicles in 2000, up from 18 in 1996. Southern Company reported expansion of its electric vehicle fleet in 2000 to 484 vehicles, including cars, trucks, neighborhood electric vehicles, and buses.

Three AFV projects reported for 2000 involved fuels other than natural gas and electricity. Commonwealth Edison Company reported using E-85 and also the continued use of the 82 Dodge Neons that it converted to run on propane in 1999. Cinergy Corp. and TXU also reported the use of AFVs fueled by propane.

Reducing Vehicle Travel

Travel reduction, which includes such activities as car pooling and van pooling, mass transit, telecommuting, and service efficiency improvements, was reported for 34 projects in 2000—accounting for 39 percent of the direct reductions, 58 percent of the indirect reductions, and 99 percent of the unspecified reductions reported for transportation projects in 2000. Three new projects were reported, by Arizona Electric Power Cooperative, Inc. (car pooling); Baltimore Gas and Electric Company (compressed and flexible schedules, telecommuting, and incentives to use mass transit); and Tucson Electric Power Company (car pooling, van pooling, mass transit, walking, bicycling, telecommuting, and compressed schedules).

Of the 34 projects reported in this category, 17 involved car pooling or van pooling, 12 increased mass transit ridership, 6 reduced employee vehicle use through telecommuting, 2 increased service efficiency for freight or service vehicles, and 13 involved other actions, such as work week compression, videoconferencing, and use of bicycles for commuting and utility meter reading.[36]

The largest travel reduction project was reported by Quad/Graphics for a project that uses its delivery vehicles to pick up raw materials and supplies on return trips. Quad/Graphics estimates that the project reduced carbon dioxide emissions by 26,674 metric tons in 2000. Reductions of more than 5,000 metric tons carbon dioxide equivalent were also reported for the following travel reduction projects:

- Quad/Graphics reported moving to 12-hour work shifts at its printing plants (11,163 metric tons of indirect reductions).
- LADWP reported on its employee car pooling and van pooling program (7,086 metric tons of indirect reductions).
- TXU reported efforts to reduce fleet vehicle use (8,360 metric tons of direct reductions and 2,114 metric tons of indirect reductions).
- Public Service Enterprise Group reported on its employee car pooling, van pooling, and mass transit programs (7,023 metric tons of indirect reductions).
- CLE Resources reported its investment, through the Edison Electric Institute's EnviroTech investment fund, in McHugh Software, a company that developed software to improve routing for service vehicles (5,596 metric tons of indirect reductions).

Improving Vehicle Efficiency

Emission reductions were reported for only five of the seven vehicle efficiency projects reported for 2000. The two projects for which direct reductions were reported had modest effects on emissions, with the reported reductions totaling 53 metric tons carbon dioxide equivalent. In contrast, the indirect reductions for the two other projects reported, both of which involved the use of light-weight aluminum railroad cars to transport coal, were among the three largest reductions reported for transportation projects in 2000, totaling 46,151 metric tons carbon dioxide.

[36]The total number of travel reduction projects is less than the sum of the projects in each subcategory because some individual projects include activities in more than one subcategory.

Three Midwestern utilities reported the use of aluminum railroad cars to transport coal to their plants. Ameren Corporation and Western Resources reported indirect reductions of carbon dioxide emissions in 2000 totaling 27,947 and 18,204 metric tons, respectively. Although Commonwealth Edison Company reported on its past use of aluminum railroad cars, no reductions were reported for 2000, because the plants served by the railroad cars have been sold. CLE Resources, a subsidiary of Cleco Corporation, continued to report its investment (through the EnviroTech fund established by the Edison Electric Institute) in a company that developed and commercialized a device for monitoring and adjusting tire pressure on trucks to achieve optimal fuel efficiency. CLE Resources did not report emission reductions for this project, due to the unavailability of reliable data on the number of devices sold.

4. Carbon Sequestration

Background

Carbon sequestration plays an important role in the global carbon cycle. Green plants remove (sequester) carbon from the atmosphere through photosynthesis, extracting carbon dioxide from the air, separating the carbon atom from the oxygen atoms, returning oxygen to the atmosphere, and using the carbon to make biomass in the form of roots, stems, and foliage.

Every year in the United States and throughout the world a very large amount of carbon dioxide—on the order of 100 billion metric tons—is sequestered in biomass.[37] At the same time, carbon is released to the atmosphere from vegetative respiration, combustion of wood as fuel, degradation of manufactured wood products, consumption of biomass for food by animals, and the natural decay of expired vegetation. The net numerical difference, or flux, between carbon sequestration and release can be viewed as a measure of the relative contribution of biomass to the carbon cycle. World flux associated with Earth's living matter is difficult to measure, but biomass is thought to provide a net "sink" equivalent to about 0.7 billion metric tons carbon dioxide per year.[38]

Forests can play an important role in offsetting human-produced carbon emissions. On average, trees are approximately 25 percent carbon by weight (live trees are approximately 50 percent water by weight, and oven-dried wood is approximately 50 percent carbon by weight).[39] The amount of carbon a plant can sequester depends on a number of variables, including species and age, but can be quite large. For example, one large sugar maple tree is capable of removing more than 450 pounds of carbon dioxide from the atmosphere in a year. At that rate, preserving 29 trees per operating automobile in the United States would offset all U.S. automobile-related carbon dioxide emissions.[40]

Carbon sequestration on a national scale is substantial. The U.S. Environmental Protection Agency, relying heavily on the work of U.S. Forest Service Researchers Richard Birdsey and Linda Heath, estimates annual U.S. carbon sequestration (generally defined according to the guidelines of the Intergovernmental Panel on Climate Change) at 211 million metric tons carbon equivalent,[41] which offsets approximately 11 percent of annual U.S. anthropogenic emissions of greenhouse gases.[42]

Projects Reported

Sixty-six entities reported projects involving forestry or natural resources that sequestered carbon or reduced emissions in 2000 (Table 14). The reporters included 55 electric utilities, 3 operating subsidiaries of an independent power producer, 3 nonprofit organizations, 2 petroleum companies, a computer chip manufacturer, a real estate company, and a company providing forestry and habitat restoration services. A total of 494 carbon sequestration projects were reported, an increase of 12 percent from the 1999 data year. Forestry projects were the most commonly reported project type, accounting for 26 percent of all the projects reported for 2000 (see Table 2 in Chapter 1). The reported forestry projects were dispersed over a wide geographic area, including 48 States and 7 foreign countries. A total of 422 domestic and 72 international forestry projects were reported. Sixty-four of the foreign projects represent individual equity shares in a single forest preservation project in Belize, the Rio Bravo Carbon Sequestration Pilot Project.

The total sequestration reported on Form EIA-1605 for 2000 declined by 6 percent from the previous year, to

[37] Intergovernmental Panel on Climate Change, *Greenhouse Gas Inventory Reference Manual*, IPCC Guidelines for National Greenhouse Gas Inventories, Vol. 3 (Paris, France, 1995), p. 5.2, web site http://www.iea.org/ipcc.htm.

[38] Intergovernmental Panel on Climate Change, *Climate Change 1995: The Science of Climate Change* (Cambridge, UK: Cambridge University Press, 1996), p. 77.

[39] R.A. Birdsey, *Carbon Storage and Accumulation in United States Forest Ecosystems* (Washington, DC: USDA Forest Service, 1992), p. 12.

[40] Average mileage and fuel consumption for passenger cars from Energy Information Administration, *Annual Energy Review 1999*, DOE/EIA-0384(99) (Washington, DC, July 2000), p. 53. Carbon dioxide emissions per mile driven and gallon of motor fuel from U.S. Department of Energy, *Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases Under Section 1605(b) of the Energy Policy Act of 1992*, DOE/PO-0028 (Washington, DC, October 1994), Vol. 2, p. 4.19.

[41] U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1998*, EPA-236-R-00-001 (Washington, DC, April 2000), p. 6-2, web site http://www.epa.gov/globalwarming/publications/emissions/us2000/index.html.

[42] U.S. athropogenic greenhouse gases emissions were 1,903.6 million metric tons carbon equivalent in 2000. Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), p. vii, web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

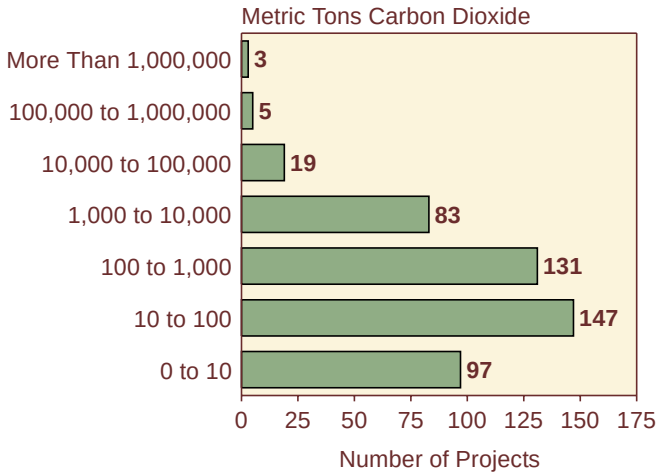
9,010,021 metric tons carbon dioxide (Table 14). Direct emission reductions associated with forest management projects reported for 2000 totaled 1,041 metric tons carbon dioxide. Reductions or sequestration reported on Form EIA-1605EZ declined from 71,048 metric tons carbon dioxide equivalent for 1999 to 5,081 metric tons carbon dioxide equivalent for 2000. The decline resulted largely from the absence of a 2000 submission from a reporter that reported sequestering or reducing emissions of 68,194 metric tons carbon dioxide for 1999 on Form EIA-1605EZ.

A significant number (11 percent) of the reported projects were urban forestry projects, involving the planting of trees in urban and suburban areas.[43] Urban forestry projects are typically much smaller than forestry projects undertaken in rural or wilderness areas. The average carbon dioxide sequestration reported per urban forestry project for 2000 was just 292 metric tons. Projects in rural or wilderness areas are sometimes large: 8 such projects sequestered more than 100,000 metric tons carbon dioxide each in 2000 (Figure 11). For the 469 projects for which data were reported, average sequestration for 2000 was 19,211 metric tons carbon dioxide equivalent per project.

Of the sequestration projects reported for 2000, most (398 or 81 percent) involved some kind of tree planting, which included afforestation, reforestation, urban forestry, and woody biomass production or agroforestry (Table 15).[44] These projects accounted for 13 percent of the sequestration (and related direct and unspecified emission reductions) reported for 2000. Although only 41 forest preservation projects were reported, they accounted for 85 percent of the sequestration reported for 2000. Ninety-two percent of the total sequestration for 2000 was reported on behalf of foreign projects, which include some very large forest preservation and agroforestry initiatives.

More than half (58 percent) of the reported forestry projects were undertaken in part to fulfill commitments made under the Climate Challenge program. Thirty of the investors in the UtiliTree Carbon Company each submitted reports on the six projects that were operational in 2000. All but two of the investors also participate in Climate Challenge. In addition, 38 (8 percent) were undertaken as part of the U.S. Initiative on Joint Implementation (USIJI). Established under the Climate

Figure 11. Carbon Sequestration Projects by Amount of Carbon Sequestered, Data Year 2000



Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table 14. Number of Projects and Sequestration and Net Reductions Reported for Sequestration Projects, Data Years 1994-2000

Data Year	Number of Reporters	Number of Projects	Sequestration (Metric Tons Carbon Dioxide)	Net Emission Reductions (Metric Tons Carbon Dioxide)		
				Direct	Indirect	Unspecified[a]
1994	40	78	746,545	189	23,127	2,470
1995	62	199	1,190,754	378	48,730	7,569
1996	67	198	8,676,591	1,291	32,215	2,519
1997	75	309	9,849,807	6,160	—	5,466
1998	73(R)	355(R)	12,490,927	716	—	4,025
1999(R)	70	442	9,623,599	3,406	—	71,048
2000	66	494	9,010,021	1,041	—	5,081

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

(R) = revised.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[43]Urban forestry projects include projects reported as general tree planting projects on Form EIA-1605EZ.

[44]Afforestation is the planting of trees in unforested areas. Reforestation is the planting of trees in forest areas that have recently been harvested. Urban forestry is the planting of trees individually or in small groups in urban or suburban settings. Agroforestry is the cultivation of trees in plantations for fuel or fiber.

Change Action Plan (CCAP),[45] the USIJI is a pilot program that seeks to encourage foreign-based emission reduction and carbon sequestration projects conducted by U.S. and non-U.S. partners. The following USIJI-approved forestry projects were reported to the Voluntary Reporting Program: the Rio Bravo Carbon Sequestration Pilot Project (Belize) and the Noel Kempf Mercado Climate Change Action Project (Bolivia).

Afforestation and Reforestation

Of the sequestration projects reported for 2000, 342 (69 percent) involved either afforestation or reforestation. The carbon sequestration and emission reductions reported for these projects totaled 627,902 metric tons carbon dioxide, representing 7 percent of the total sequestration reported for 2000. All the afforestation and reforestation projects reported for 2000 were domestic.

American Forests, a nonprofit conservation organization, and American Electric Power, Inc. (AEP), a large investor-owned utility, together accounted for more than one-half (56 percent) of the 342 afforestation and reforestation projects reported for 2000. American Forests reported a total of 164 projects under its Global ReLeaf Forests program, 30 of which were initiated in 2000. Global ReLeaf supports the restoration of U.S. forest ecosystems that have been damaged by natural events or human actions. American Forests reported that, through 2000, it has planted a total of 14.4 million trees, which sequestered 108,880 metric tons carbon dioxide in 2000—enough to offset carbon dioxide emissions from more than 100,000 automobiles.[46] All but 6 of the Global ReLeaf projects involved reforestation. AEP reported 26 afforestation projects on land owned by its operating companies, which sequestered a reported 90,204 metric tons carbon dioxide in 2000. Two of the projects were initiated in 2000.

Urban Forestry

A total of 55 urban forestry projects were reported for 2000 by 36 reporters, all but two of which were electric utilities. For the 53 urban forestry projects for which estimates were developed, a total of 15,476 metric tons carbon dioxide was sequestered in 2000—an amount that would offset less than 0.1 percent of the emissions from a 1,000-megawatt coal-fired power plant.[47]

Urban forestry projects are unique, in that under some circumstances they can reduce energy consumption as well as sequester carbon. Shade trees planted near buildings reduce summer air conditioning requirements; in addition, trees can also act as windbreaks, reducing heating needs in the winter. Although the emission reductions associated with energy effects of urban forestry can be several times the sequestration benefits on a carbon dioxide equivalent basis, they are difficult to estimate. As a result, only eight reporters submitted information on energy-related emission reductions for eight urban forestry projects (the reductions are included in the energy end-use reduction totals in Chapter 3).

Forest Preservation

Forest preservation projects sequester carbon by avoiding the harvesting of timber or clearing of land and thus

Table 15. Number of Sequestration Projects Reported by Project Type, Data Years 1994-2000

Data Year	1994	1995	1996	1997	1998	1999	2000
Afforestation	26	38	38	91	102	159	179
Reforestation	15	82	80	92	110	139	167
Urban Forestry	27	41	42	48	56(R)	57(R)	55
Modified Forest Management	12	20	10	34	42	43	43
Woody Biomass Production and Other Agroforestry	8	14	2	3	3	3	3
Forest Preservation	2	23	30	40	47	39	41
Conservation Tillage	1	1	1	2	2	2	2
Other Projects	3	4	6	11	4	11	11

(R) = revised.

Notes: Urban forestry includes general tree planting projects reported on Form EIA-1605EZ. Some projects are counted in more than one category. For example, an afforestation project reported by Alliant Energy also included modified forest management activities.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[45] President William J. Clinton, The Climate Change Action Plan (Washington, DC, October 1993), Appendix II, web site http://www.gcrio.org/USCCAP/toc.html.

[46] Average mileage and fuel consumption for passenger cars from Energy Information Administration, *Annual Energy Review 2000*, DOE/EIA-0384(2000) (Washington, DC, August 2001), p. 57. Carbon dioxide emissions per mile driven and gallon of motor fuel from U.S. Department of Energy, *Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases Under Section 1605(b) of the Energy Policy Act of 1992*, DOE/PO-0028 (Washington, DC, October 1994), Vol. 2, p. 4.19.

[47] Assuming a power plant with a heat rate of 12,000 Btu per kilowatthour operating at 85 percent availability using subbituminous coal emitting 212.7 pounds of carbon dioxide per million Btu.

preventing the release of stored carbon. A total of 41 forest preservation projects were reported for 2000 by 33 reporters. All but one of the projects were foreign. The two largest forest preservation projects were reported by AES Hawaii and AES Shady Point, subsidiaries of the AES Corporation. Together, these two projects sequestered a reported 5.68 million metric tons carbon dioxide in 2000, representing 72 percent of the total sequestration reported for forest preservation projects.

Two utilities (AEP and PacifiCorp) and a petroleum comany (BP) reported on the Noel Kempf Mercado Climate Action Project in Bolivia, which was accepted by the USIJI in November 1996. The project, which involves the preservation of 634,286 hectares of land on the southern and western boundary of the Noel Kempf Mercado National Park by incorporating it into the park, includes the following components: (1) carbon dioxide emission reductions through the cessation of logging activities and the protection of forest land from conversion to agricultural use; (2) protection, regeneration, and preservation; and (3) leakage prevention.[48] The sequestration reported by the three partners in the project totaled 1.88 million metric tons carbon dioxide for 2000.

The Rio Bravo Carbon Sequestration Pilot Project, a forest preservation project in Belize, was included in the reports submitted by 30 utilities, each of which reported its prorated share of the total sequestration for the project. Begun in 1995, the project is being undertaken through a partnership between Cinergy Corporation, DTE/Detroit Edison, PacifiCorp, Wisconsin Electric Power Co., the UtiliTree Carbon Company, the Nature Conservancy, and a Belizean nongovernmental organization (Programme for Belize). The project includes the purchase of a 14,400-acre parcel of endangered forest threatened with conversion to agriculture.

The entire Rio Bravo Carbon Sequestration Pilot Project sequestered an estimated 105,924 metric tons carbon dioxide in 2000, of which 103,468 metric tons (98 percent) was reported to the Voluntary Reporting of Greenhouse Gases Program.[49] This represents an 83-percent decline from the sequestration reported for 1999, which occurred because the preservation of the forest is nearing completion. The reported carbon sequestration for this project was estimated by defining a reference case that assumes a profile of carbon releases that would have occurred if the project had not been undertaken and the forest had been converted to agriculture. The estimated carbon sequestration equals the projected avoided carbon releases. Project completion will occur when the conversion to agriculture would have been completed under the reference case scenario.

Only one domestic forest preservation project was reported, by Alliant Energy, which reported sequestering 1,597 metric tons carbon dioxide in 2000 by maintaining forested buffer lands around its power plants.

Modified Forest Management

Of the 43 modified forest management projects reported in 2000, 31 were associated with two related reduced-impact logging initiatives in Malaysia. The first initiative was a pilot project reported by PG&E Corporation.[50] Started in 1992, this project implemented new logging techniques with the goal of reducing logging damage by 50 percent. The new techniques include pre-cutting of vines, directional felling, and planned extraction of timber on impact-reducing skid trails. Thirty utilities reported their shares in the second initiative—a full-scale project sponsored by the UtiliTree Carbon Company that introduced reduced-impact logging practices to 2,422 acres of forest beginning in 1997. Together, the two initiatives increased sequestration by a reported 36,256 metric tons carbon dioxide equivalent in 2000.

Between 1991 and 2000, AEP selectively harvested more than 5,300 acres of upland central hardwood and bottomland hardwood stands to improve growing space relationships and maximize growth rates. The efforts increased sequestration on the affected tracts by a reported 15,981 metric tons carbon dioxide in 2000. DTE Energy/Detroit Edison conducted similar thinning operations in previously unmanaged wood lots and reported increasing sequestration by 1,398 metric tons in 2000. Enhanced forest management activities were also reported by Alliant Energy as a component of its afforestation project.

Forest Plantations

Forest plantations include woody biomass production and agroforestry. Woody biomass production is the cultivation of trees in intensively managed plantations for the purpose of producing fuel or fiber. Agroforestry

[48]Leakage refers to the migration of logging and land-clearing activities that would have occurred in the preserve to areas outside the preserve, which would offset the sequestration achievements of the project.

[49]Ten UtiliTree participants did not submit reports to the Voluntary Reporting Program for data year 2000, including one Canadian utility that is ineligible to report.

[50]This project was originally sponsored by New England Power Company and reported by its parent company, New England Electric System (NEES) Company. In August 1998, USGen New England, Inc. (USGenNE) completed the acquisition of New England Electric System (NEES) Company's hydroelectric and fossil power generation business previously operated by New England Power. As part of the acquisition, the rights to the emission reductions and carbon sequestration achieved by this and other projects were transferred to USGenNE. For 2000, the activities previously reported by USGenNE were incorporated into the report submitted by its parent, PG&E Corporation.

involves mixing trees with annual crops to provide wind shelter, stabilize soil, and produce fuel wood and fruit crops.

Woody biomass production projects were reported by Minnesota Power and J.M. Gilmer and Company. Minnesota Power has negotiated contracts with land owners for the planting of hybrid poplars, which was conducted on 2,672 acres of cleared land between 1995 and 1997. The trees, which reportedly sequestered more than 22,000 metric tons carbon dioxide in 2000, will be harvested after 12 years for use by the forest products industry or as biomass for energy production. J.M. Gilmer and Company established a short-rotation cottonwood plantation on a river bottom site in Alabama. The cottonwoods will also be harvested on a 12-year rotation and used as biofuel (displacing fossil fuel) or for pulpwood. J.M. Gilmer and Company reported that this plantation sequestered 240 metric tons of carbon dioxide in 2000.

AES Thames reported an agroforestry project in Guatemala that involves establishing a plantation of fruit, pulp, and fuel wood trees. Using a revised estimation method, AES Thames reported that its project sequestered 370,000 metric tons carbon dioxide in 2000.

Conservation Tillage and Other Sequestration Projects

Not all the carbon sequestration projects reported for 2000 involved conventional forestry. Other projects reported involved conservation tillage, reuse of utility poles, and restoration of terrestrial, wetland, and marine habitats. The only new projects reported for 2000 were six marine habitat restoration projects reported by the Greater Caribbean Energy & Environment Foundation, which included planting of marshes, seagrass, coral, and coralline and calcareous algae.

Other previously reported carbon sequestration projects include the following: conservation tillage projects reported by PPL Corporation, and Alliant Energy; Commonwealth Edison's planting of Illinois prairie grasses on company properties and the reuse of utility poles; Conectiv Atlantic Generation's reclamation of 6 acres of wetland; and Entergy Services, Inc.'s wetland reclamation activities in Texas and Louisiana. Together, these projects sequestered a reported 71,005 metric tons of carbon dioxide in 2000.

5. Reducing Methane Emissions

U.S. anthropogenic (human-caused) methane emissions totaled 28.2 million metric tons in 2000, 3.5 million metric tons less than in 1990. Estimated emissions from landfills—the largest single anthropogenic source of methane in the United States—dropped from 11.2 million metric tons in 1990 to 7.8 million metric tons in 2000[51] as a result of a rapid increase in methane recovery at landfills in response to the expiring Section 29 tax credit for alternative fuels and the implementation of EPA's New Source Performance Standards and Emission Guidelines.[52] Overall, methane recovery at landfills grew from about 1.0 million metric tons in 1990 to 4.9 million metric tons in 2000.[53] Although not directly correlated, the increase in activity aimed at capturing methane from landfills is reflected in reports submitted to the Voluntary Reporting Program. For the 2000 data year, reduction activities were reported for 185 separate landfills, up slightly from 184 in 1999.[54]

Another significant component of the overall decline in U.S. methane emissions has been a drop in emissions from coal mining. Methane emissions from coal mines declined from 4.2 million metric tons in 1990 to 2.9 million metric tons in 2000.[55] To some extent, the decline is attributable to an increase in methane recovery at coal mines, from 0.3 million metric tons in 1990 to about 0.8 million metric tons in 2000. The Voluntary Reporting Program received reports on 11 emission reduction projects at coal mines for 2000, down from 17 for 1999 (5 of the 1999 reporters did not report for 2000). Six projects were reported for 2000 from the White Oak Creek and Oak Grove coalbeds in the Warrior basin, which is the Nation's gassiest coal basin. Together, these 11 projects reported direct methane emission reductions of 455,909 metric tons in 2000.

Although U.S. methane emissions from the production, transmission, and distribution of natural gas and from agricultural activities both increased between 1990 and 2000 (14.7 percent and 9.3 percent, respectively), some entities reported reductions in emissions from these sources. Reduced emissions from the natural gas system were reported for 15 projects, and reduced emissions from agricultural activities were reported for 5 projects.

Overview of Projects Reported

For the 2000 data year, 78 organizations reported a total of 265 projects to reduce methane emissions, a 15-percent increase from the 1999 data year and a 516-percent increase from the first (1994) reporting cycle (Table 16). Fifty-four of the projects were reported for the first time in the 2000 reporting cycle, as compared with 105 projects reported for the first time in 1999. Some projects reported in previous years were not reported in 2000.

Direct emission reductions from all projects reported for the 2000 data year totaled 1,707,413 metric tons of methane (Table 17). Of that total, 99.8 percent was attributable to 133 projects within the waste management, agriculture, and energy production and transport sectors that reported positive direct methane emission reductions. These 133 projects showed an average of 12,813 metric tons direct methane reductions per project. Reductions in direct methane emissions averaging 10,839 metric tons in 2000 were reported for 114 waste management and disposal projects that reported positive direct methane emission reductions. Direct reductions from the 19 natural gas system or coal mining projects that reported positive direct methane emission reductions, including several large coal mine methane recovery projects, were generally much larger, averaging 24,661 metric tons per project reported (Figure 12).

Positive indirect emission reductions were reported for 52 waste management and disposal projects averaging 17,009 metric tons per project, including two very large projects reported by DTE Energy and the Integrated Waste Services Association (IWSA). DTE energy reported 189,471 metric tons in indirect reductions from multiple landfill gas-to-energy systems reported as one

[51]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

[52]The EPA's Landfill Methane Outreach Program (LMOP) has also contributed to the increase in methane recovery from landfills, as reflected by the large percentage of landfill gas-to-energy project developers who reported participation in LMOP as part of their submissions to the Voluntary Reporting of Greenhouse Gases Program (see Table 20, page 52, in this chapter).

[53]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

[54]The estimate of landfills represented in 1999 dropped from 190 in the previous year's edition of this report due to a systematic effort to identify instances of double reporting.

[55]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

large project, and IWSA reported indirect reductions of 230,122 metric tons from the waste-to-energy facilities of its 65 members. The 41 waste management projects reporting positive reductions on Form EIA-1605EZ averaged 3,242 metric tons for the 2000 data year.[56]

Overall, reported direct and indirect reductions continued to grow in 2000, due to increased program participation. Meanwhile, unspecified reductions (those reported on Form EIA-1605EZ) varied little from those reported for 1998 and 1999. The rapid escalation in reported direct reductions since 1997 is the result of a large influx of reports from landfill gas project developers. After dropping between 1996 and 1997 due to an improvement in the estimation methods by IWSA, indirect reductions have also continued to grow.

Methane reduction projects are more prone to double reporting than are most other greenhouse gas reduction projects (with the exception of demand-side management programs), because electricity generated from methane recovery at a landfill, coal mine, or animal waste management facility is often sold to a second party, or recovered gas is piped to a second party for use in a boiler. In such cases, the party that captures the gas may report a direct reduction and the gas or electricity purchaser an indirect reduction. Where double reporting does occur, however, double counting is avoided because electricity producers report methane reductions as indirect unless they have an ownership stake in the landfill or its gas resource, whereas landfill gas developers report methane reductions as direct. Although there may be multiple reports of the same reduction from a single project, the reduction is unlikely to be double counted, because the reductions would be accounted for separately as part of either direct or indirect totals.

Additional instances of double reporting may occur if a project is reported by two or more entities with ownership interests. Again, however, because reporters are instructed to report only the portion of overall reductions equal to their ownership share, double counting should not occur. Finally, in instances where both biogas flaring and biogas recovery for energy occur at the same landfill, the projects may be reported more than once; however, the total reductions reported should not

Table 16. Projects Reported with Methane Reductions as the Principal Outcome by Project Type, Data Years 1994-2000

Project Type	1994	1995	1996	1997	1998	1999(R)	2000
Waste Management and Disposal	***27***	***39***	***65***	***81***	***129***	***195***	***234***
Landfill Gas Recovery	24	35	60	74	118	181	219
Wastewater Treatment	2	2	3	5	6	6	8
Other	1	2	2	2	5	8	7
Agriculture	***3***	***3***	***3***	***3***	***4***	***4***	***5***
Energy Production and Consumption	***13***	***16***	***22***	***19***	***30***	***32***	***26***
Coal Mining	3	4	6	7	20	17	11
Natural Gas Production, Transmission, and Distribution	10	12	16	12	10	14	15
Total	**43**	**58**	**90**	**103**	**163**	**230**	**265**

(R) = revised.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table 17. Total Reported Methane Emission Reductions, All Project Types, Data Years 1994-2000
(Metric Tons Methane)

Type of Reduction	1994	1995	1996	1997	1998	1999(R)	2000
Direct	25,079	8,450	409,176	378,494	1,379,162	1,564,958	1,707,413
Indirect	102,641	1,077,242	1,157,048	505,663	658,811	827,294	897,460
Unspecified[a]	24,522	50,554	53,373	79,364	126,905	142,343	135,990

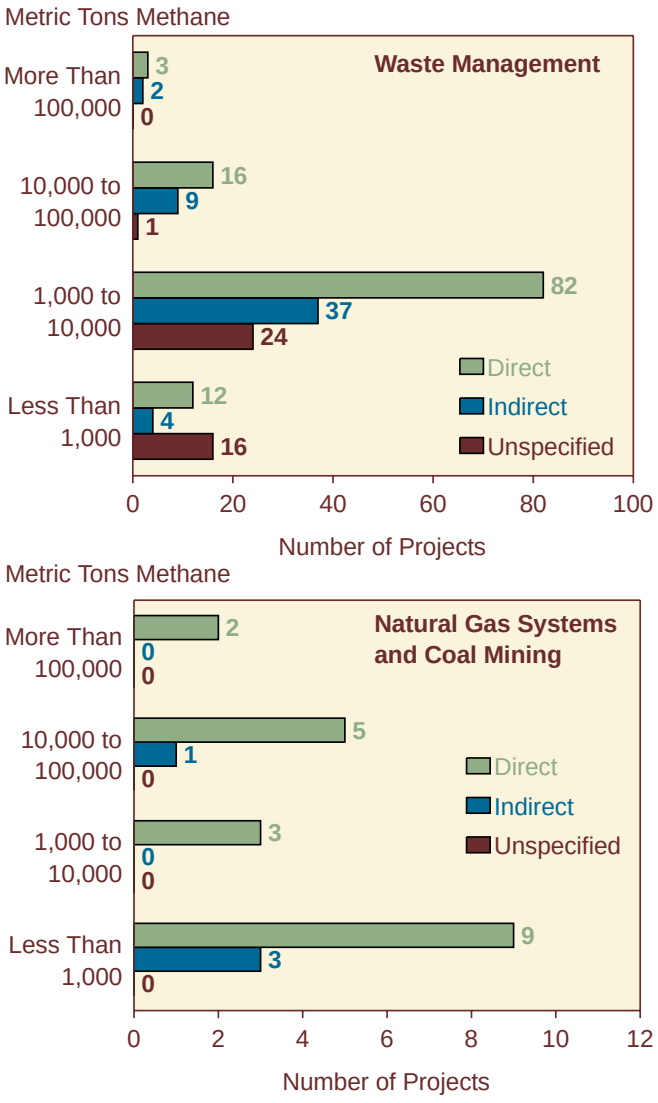
[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.
(R) = revised.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[56]The total number of direct, indirect, and unspecified emission reduction projects does not equal the 265 projects reported for the 2000 data year, because many projects show both direct and indirect reductions, and others report neither direct nor indirect reductions for the 2000 data year.

exceed the reductions actually achieved because the landfill gas developer or energy purchaser will not count flared gas or biogas in energy totals.

For the 2000 data year, EIA implemented a systematic effort to identify instances of double reporting. There were 40 landfills for which more than one entity reported emission reductions, and in several cases one reporter included multiple landfills in a single project report. Thus, there were 56 separate reporters with projects at the 40 identified landfills. In addition, both methane flaring and recovery for energy were reported separately for 18 landfill projects, typically by the same reporter.

Figure 12. Methane Emission Reduction Projects Reported by Type and Average Size of Reduction, Data Year 2000



Note: Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Reducing Methane Emissions from Waste Treatment and Disposal

Reducing emissions from waste treatment and disposal sites was by far the most frequently reported method for lowering methane emissions in 2000. The number of such projects reported for 2000 (234) was 20 percent higher than the number (195) reported for 1999 and nearly 9 times the number (27) reported for 1994. The principal reported method for reducing methane emissions from waste management and disposal was the capture of methane generated during the anaerobic decomposition of wastes in a landfill. The methane may be flared, piped to an end-use customer, or used to generate electricity, reducing the need for generation from other, more carbon-intensive fuels. Other methods of lowering emissions from waste treatment and disposal include reducing the volume of waste reaching landfills through combustion or recycling, and capturing methane generated during anaerobic decomposition of organic material in wastewater.

The 234 waste treatment and disposal projects reported for 2000 accounted for 1,235,652 metric tons of direct methane emission reductions and 884,485 metric tons of indirect reductions in 2000 (Table 18), or about 72 percent of all direct methane emission reductions and 99 percent of all indirect methane emission reductions reported. For 226 of the 234 projects reported, methane emission reductions were achieved at landfills, including 7 projects that lowered emissions through diversion of wastes that would have emitted methane during decomposition and 219 that captured methane from landfill gas generated at waste disposal sites.

Recovery of Landfill Gas

As waste decomposes in a landfill it produces a biogas that is approximately 50 percent carbon dioxide and 50 percent methane. As a result, landfill gas is a potentially valuable source of energy, with a heat content of about 500 British thermal units (Btu) per cubic foot, or about half that of commercially marketed natural gas. Because of its relatively low Btu content and the presence of several impurities, the typical method for using landfill gas is to burn it for electricity generation rather than upgrading it for sale to a pipeline. The electricity generated is then used on site or sold to the grid. The process lowers methane emissions and reduces consumption of other fuels for electricity generation. When the electricity generated displaces oil- or coal-fired generation, carbon dioxide emissions are reduced. More recently, an increasing number of projects have involved piping landfill gas for direct use in medium-Btu boilers, which also displaces fossil fuels.

For the 219 landfill gas recovery projects reported for 2000, reported direct methane emission reductions totaled 1,198,158 metric tons and indirect reductions totaled 615,208 metric tons of methane. An additional 84,273 metric tons of methane were reported on Form EIA-1605EZ and thus are not specified as direct or indirect. Of the projects reported, 112 recovered landfill methane for energy, 48 simply flared the gas, and 59 included both recovery for energy and flaring.

Waste Diversion

When waste is diverted from a landfill through recycling, source reduction, or waste combustion, methane emissions that would have resulted when the waste decomposed at a landfill are avoided. Seven such projects were submitted to the Voluntary Reporting Program for 2000 under the category of waste treatment and disposal. The preponderance of the methane emission reductions reported for waste diversion are indirect, because they typically occur at a landfill where diverted waste would have decomposed to produce methane. Total indirect reductions for the seven projects were 256,615 metric tons. The majority of the reductions were reported by IWSA, which reported reductions associated with the combustion of waste at facilities owned by its members across the United States. Because the project covered 65 waste-to-energy facilities, IWSA reported a very large reduction of 230,122 metric tons of methane in 2000. There were also many recycling projects reported under project types other than waste treatment and disposal that showed reductions in methane emissions (see box on page 51).

Reducing Methane Emissions from Wastewater Treatment Plants

When wastewater is treated under anaerobic conditions, the decomposition of its organic portion yields methane. Like methane generated from waste at landfills, the methane generated from wastewater treatment may be captured and either flared or used as an energy resource. Because captured methane has value as an energy resource, operators may use an anaerobic digester to treat the wastewater and maximize methane generation. Eight projects to capture methane generated from wastewater treatment were reported for 2000, with total reported direct reductions of 37,532 metric tons and indirect reductions of 12,662 metric tons methane. Direct reductions were dominated by a Los Angeles County Sanitation District project that captured 37,131 metric tons of methane, and indirect reductions were dominated by a GPU Inc. effort that lowered emissions by 12,393 metric tons methane.

Reducing Emissions from Energy Production and Consumption

Reducing Emissions from Coal Mines

As coal is formed from organic material by natural chemical and physical processes, methane is also created. The methane is stored in the pores (open spaces) of the coal itself and in cracks and fractures in the coalbed.

Table 18. Reported Methane Emission Reductions for Waste Treatment and Disposal Projects, Data Years 1994-2000
(Metric Tons Methane)

Reduction and Project Type	1994	1995	1996	1997	1998	1999(R)	2000
Direct Reductions	*****	**619**	**128,449**	**135,639**	**484,673**	**966,785**	**1,235,652**
Landfill Gas Recovery	*	619	128,449	135,340	451,445	934,073	1,198,158
Wastewater Treatment	—	—	—	298	33,267	32,754	37,532
Waste Combustion	—	—	—	—	-39	-42	-38
Indirect Reductions	**99,431**	**1,061,691**	**1,142,877**	**449,595**	**644,739**	**815,344**	**884,485**
Landfill Gas Recovery	99,431	111,293	250,480	298,335	470,880	474,618	615,208
Wastewater Treatment	—	1	*	—	4,714	10,352	12,662
Waste Combustion	0	950,397	892,397	151,259	169,145	330,374	256,615
Unspecified[a]	**24,388**	**50,324**	**53,006**	**78,624**	**123,958**	**138,334**	**132,923**
Landfill Gas Recovery	24,388	50,324	53,006	58,434	78,447	95,003	84,273
Wastewater Treatment	—	—	—	—	—	—	—
Waste Combustion	—	—	*	20,190	45,511	43,331	48,650

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.
*Less than 0.5 metric ton.
(R) = revised.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

As coal is mined, the pressure surrounding the stored methane decreases, allowing much of it to be released into the operating coal mine. Because methane in concentrations of 5 to 15 percent is explosive, mine operators use large fans to provide a steady airflow across the mine face and ventilate the mine shaft. Some very gassy mines must also employ degasification wells to remove methane before or after mining so that it does not enter the mine. Because methane is a valuable energy source, most of the mines with degasification systems now inject the methane into gas pipelines or use it to generate electricity or heat.

For 2000, 11 projects to reduce methane emissions from coal mines were reported, with total direct emission reductions of 455,909 metric tons and indirect reductions of 747 metric tons of methane (Table 19). El Paso Production Company reported direct reductions of 140,306 metric tons from its project in White Oak Creek coalbed in Alabama, and U.S. Steel Mining Company reported direct methane reductions of 87,166 metric tons of methane from its two projects.

Reducing Emissions from Natural Gas Production, Transmission, and Distribution

Methane is the principal constituent of natural gas (about 95 percent of the mixture). Methane emissions from natural gas production, processing, transmission, and distribution are generally process related, with normal operations, routine maintenance, and system upsets being the primary contributors. Emissions vary greatly from facility to facility and are largely a function of operation and maintenance procedures and equipment conditions. Thus, methane emissions can be reduced by replacing leaky system components, improving operations and maintenance, and limiting routine venting procedures. Fifteen such projects were reported for 2000, most with small reductions. Western Resources reported indirect reductions 6,024 metric tons of methane emissions, out of the total 6,038 metric tons of indirect methane reductions reported for natural gas projects on Form EIA-1605. Three projects accounted for most of the reported direct reductions in emissions from

Recycling and Source Reduction Projects

The Voluntary Reporting Program has received reports on three types of waste management projects: waste diversion, recycling, and source reduction. Of the 38 recycling and source reduction projects reported for 2000, only 2 involved a combination of recycling and source reduction. Recycling and source reduction projects reported to the Voluntary Reporting Program for 2000 were estimated to have resulted in the avoidance of a total 600,258 metric tons of waste that would otherwise have been placed in landfills, a decline from the 710,012 metric tons reported for the 1999 data year. For 2000, 542,165 metric tons of paper were recycled, with 503,638 metric tons attributable to the Minnesota Resource Recovery Association.

Most emission reductions associated with recycling and source reduction are indirect, because emissions associated with the use of virgin materials in production or management of waste that is instead recycled are likely to occur outside the reporting entity, at a landfill or manufacturing facility. For 2000, indirect reductions of 370,420 metric tons carbon dioxide equivalent were reported, and direct reductions of 24,757 metric tons carbon equivalent were reported. An additional 75,699 metric tons carbon dioxide equivalent of unspecified reductions were reported on Form EIA-1605EZ. It is likely that most of the unspecified reductions were indirect. Of the reductions classified as indirect, 39,587 metric tons carbon dioxide equivalent consisted of reductions in emissions of perfluorocarbons (PFCs) associated with reduced aluminum production. In addition, indirect reductions of methane emissions were reported, totaling 66,680 metric tons carbon dioxide equivalent, principally as a result of reduced landfilling of paper; and indirect reductions of 264,153 metric tons carbon dioxide were reported in association with lower energy requirements for product manufacturing.

Reported Emission Reductions from Recycling and Source Reduction Projects by Reduction Type and Greenhouse Gas, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Type of Reduction	Carbon Dioxide	Methane	Perfluorocarbons	Total
Direct	14,233	7,473	3,051	**24,757**
Indirect	264,153	66,680	39,587	**370,420**
Unspecified[a]	5,167	70,531	0	**75,699**

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

the natural gas system; CMS Energy's Natural Gas STAR project reduced direct emissions by a reported 4,123 metric tons methane, Consolidated Edison's Natural Gas STAR project lowered direct emissions by a reported 3,529 metric tons methane, and NiSource/NIPSCO reported reducing direct emissions through its Natural Gas STAR project by 2,948 metric tons methane.

Reducing Emissions from Agriculture

Five projects reported for 2000 focused on reducing methane emissions from agricultural activities. In three cases, methane was recovered from the decomposition of animal waste in anaerobic digesters and used to generate electricity. As the purchaser of the electricity from two projects, GPU, Inc. reported indirect methane reductions of 110 metric tons. PP&L reported indirect reductions of 76 metric tons from a biogas project at Rocky Knolls/Keener Farm. AES reported an indirect reduction of 870 metric tons methane from improving feed supplements for cattle in India and reducing emissions from enteric fermentation. The remaining project was a study on reducing emissions from rice cultivation, financed by Reliant Energy (formerly Houston Lighting and Power Company), for which reductions were not estimated.

Federal Voluntary Programs To Reduce Methane Emissions

The U.S. Government sponsors a number of voluntary programs specifically targeted to reduce methane emissions. Most frequently cited by reporters to the Voluntary Reporting Program are the Landfill Methane Outreach Program (LMOP), the Coalbed Methane Outreach Program (CMOP), and the Natural Gas STAR Program. In addition, reducing methane is an effective method for meeting the reduction targets utilities have adopted under the Climate Challenge voluntary program. The number of reported methane reduction projects associated with Federal voluntary programs has increased more than sixfold since 1994, with a particularly large increase in the number of projects associated with the LMOP. Of the 234 waste treatment and disposal projects reported to the Voluntary Reporting Program for 2000, 151 were associated with the LMOP (Table 20).

Table 19. Reported Methane Emission Reductions from Natural Gas Systems and Coal Mining, Data Years 1994-2000
(Metric Tons Methane)

Reduction and Project Type	1994	1995	1996	1997	1998	1999(R)	2000
Direct Reductions	**19,687**	**7,714**	**279,766**	**242,040**	**893,927**	**595,311**	**468,557**
Coal Mining	13,767	4,191	271,549	232,131	885,807	581,307	455,909
Natural Gas Systems	5,920	3,522	8,217	9,909	8,121	14,004	12,648
Indirect Reductions	**—**	**3,543**	**4,039**	**5,439**	**7,603**	**6,565**	**6,785**
Coal Mining	—	278	893	2,285	1,568	528	747
Natural Gas Systems	—	3,265	3,146	3,150	6,035	6,036	6,038
Unspecified Reductions[a]	**135**	**230**	**567**	**741**	**2,393**	**25,910**	**—**
Coal Mining	—	—	22	188	2,393	25,910	—
Natural Gas Systems	135	230	544	553	—	—	—

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.
(R) = revised.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table 20. Number of Methane Reduction Projects Reported to Voluntary Reporting of Greenhouse Gas Program Associated with Other Federal Voluntary Programs, Data Years 1994-2000

Voluntary Program	1994	1995	1996	1997	1998	1999(R)	2000
Climate Challenge	22	27	32	36	34	39	42
Landfill Methane Outreach Program	6	8	29	32	90	116	151
Coalbed Methane Outreach Program	1	1	2	2	10	11	3
Natural Gas STAR	7	9	11	6	5	7	7
Other	0	6	2	2	1	3	4
Total	**30**	**42**	**70**	**67**	**133**	**166**	**198**

(R) = revised.
Note: Totals may not equal sum of components, because some projects are associated with more than one voluntary program.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

6. HFCs, PFCs, and Sulfur Hexafluoride

U.S. Emissions of HFCs, PFCs, and Sulfur Hexafluoride

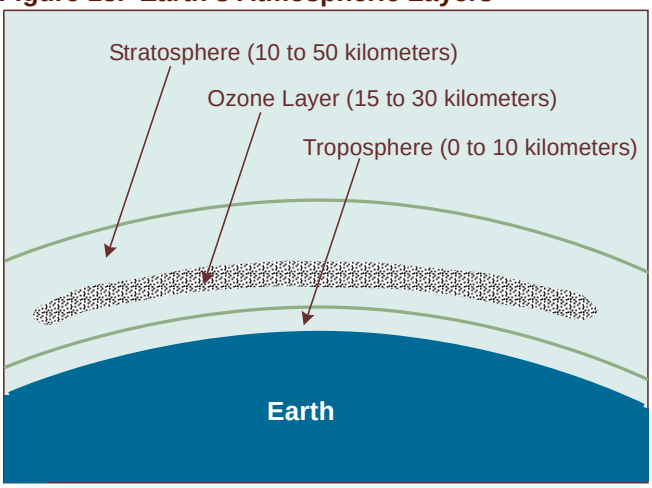
Halogenated substances are chemicals that have been engineered for a variety of industrial uses. Some are greenhouse gases with high global warming potentials (GWPs) as compared with carbon dioxide and, therefore, may have an effect on global climate disproportionate to the relatively small volumes emitted.[57] Emissions of halogenated substances can be classified into two groups according to the accuracy with which their GWPs can be determined.

The first group consists of chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and other chlorine-containing gases. These compounds absorb infrared radiation at wavelengths that would not otherwise be absorbed, making them potent greenhouse gases with direct radiative forcing effects hundreds or thousands of times greater than that of carbon dioxide. Because they contain chlorine, however, these substances also tend to destroy the ozone layer, located in the middle to upper stratosphere (Figure 13), which absorbs damaging ultraviolet radiation from the sun. Because ozone is a greenhouse gas, the reaction tends to offset the net warming effects of the chlorine-containing halogens to varying degrees. As a result, their effective GWPs are difficult to determine.

CFC production ceased in January 1996 in accordance with the Copenhagen Amendments to the Montreal Protocol (except for production of CFCs used in metered dose inhalers for asthma patients). In addition, all HCFC production is required to be phased out by 2030. The United Nations Framework Convention on Climate Change (UNFCCC) excludes from its provisions gases covered by the Montreal Protocol and, therefore, does not address CFCs and HCFCs.

The halogenated substances in the second group, which are the focus of this chapter, include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These compounds also absorb infrared radiation that would not otherwise be absorbed in the troposphere, and they have relatively high radiative forcing impacts. In contrast to the chlorine-containing halogenated substances, these compounds do not destroy ozone. Thus, their estimated GWPs, expressed in metric tons carbon dioxide equivalent, can be more accurately evaluated. The Kyoto Protocol to the UNFCCC explicitly lists HFCs, PFCs, and SF_6 as greenhouse gases affected by its provisions.

Figure 13. Earth's Atmospheric Layers



Source: U.S. Environmental Protection Agency.

In 2000, U.S. emissions of HFCs, PFCs, and SF_6 were estimated to be 171.6 million metric tons carbon dioxide equivalent, a 58-percent increase over 1990 levels, primarily due to increases in HFC emissions.[58] Emissions of HFCs, which are used as replacements for CFCs as blowing agents, refrigerants, solvents, and in automobile air conditioners, overall have been growing during the 1990s (Figure 14). In turn, emissions of CFCs are decreasing, according to recent estimates published by the Energy Information Administration.[59] PFCs are emitted as a byproduct of aluminum smelting and are used in semiconductor manufacturing as etchants and cleaning agents. In contrast, emissions of PFCs and SF_6 have remained relatively stable since 1990.

[57] Global warming potentials from Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis* (Cambridge, UK: Cambridge University Press, 2001), Table 6.7, pp. 388-389.

[58] Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

[59] Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html. Estimates of CFC, HFC, PFC, and SF_6 emissions are based on data obtained from the U.S. Environmental Protection Agency.

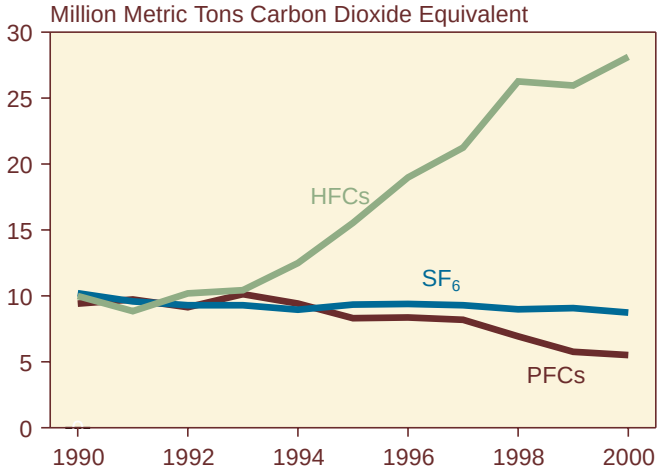
Projects Reported

For the 2000 data year, 29 entities reported on 44 projects that reduced emissions of halogenated substances, a 7-percent increase in the number of entities reporting and a 22-percent increase in the number of projects reported, as compared with the 1999 data year. For 2000, American Electric Power, Inc., reported a project in this category for the first time, as did Consolidated Edison of New York, Inc., a new reporter to the program. Both reported SF_6 reduction projects. Twenty of the 29 entities reporting in this category reported on 19 projects that included reductions in emissions, and 13 of the 20 project reports included direct reductions in SF_6 emissions. Another entity also reported direct reductions in SF_6 emissions but provided no data for 2000. Two entities reported on projects that included direct reductions of PFC emissions.

Other projects for 2000 included objectives to reduce HFC emissions. One entity reported a project with zero direct reductions in HFC-134a emissions, and a second entity reported on a project to reduce HFC-134a emissions but provided no data on reductions for 2000. A third entity reported on a project to reduce HFC-152a emissions but also provided no data on reductions for 2000. One entity reported on a project that included indirect reductions in SF_6 emissions, and one report unspecified reductions in SF_6 emissions on Form EIA-1605EZ.

Twenty-one of the 29 entities reporting for 2000 were electric utilities; two were aluminum smelters (Alcan Ingot's Sebree Aluminum Plant and Noranda Aluminum, Inc.); three were from the chemical and allied products industry (Allergan, Inc., the Dow Chemical Company, and Pharmacia & Upjohn Caribe, Inc.); one was from the transportation equipment industry (Pratt & Whitney North Berwick); one was a local government in New York State (Madison County Department of Solid Waste & Sanitation); and one was from the holdings and other investment office industry (CLE Resources).

Figure 14. Estimated U.S. Emissions of HFCs, PFCs, and Sulfur Hexafluoride, 1990-2000



Source: Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), Table 30, p. 67.

Nineteen of the 21 electric utilities that reported projects in this category were participants in the Climate Challenge Program sponsored by the U.S. Department of Energy (DOE). Other voluntary programs with which the projects reported in this category were affiliated include the Climate Wise Recognition Program, the Voluntary Aluminum Industrial Partnership, and the Sulfur Hexafluoride Emissions Reduction Partnership for Electric Power Systems. In addition, all but one of the 29 entities that reported on projects to reduce emissions of halogenated substances used Form EIA-1605 to report their activities to the Voluntary Reporting Program. Pratt & Whitney North Berwick reported on Form EIA-1605EZ.

For 2000, emissions avoidance and recycling were the two most frequently reported project types (23 and 17 projects reported, respectively), followed by substitution of other chemicals (10 projects reported). Other types of projects reported for 2000 included the destruction of halogenated substances and the use of improved appliances. One general halogenated substance project reported on Form EIA-1605EZ, where the types of activities are not specified, was reported for 2000 (Table 21).

Direct reductions of HFCs, PFCs, and SF_6 emissions were reported by 16 entities for 19 projects, totaling 4,637,909 metric tons carbon dioxide equivalent (Table 22), and 3 entities each reported a project that included direct reductions of SF_6 but did not provide data for 2000. Also for 2000, one entity reported a project that included indirect reductions of SF_6 emissions totaling 81 metric tons carbon dioxide equivalent, and another entity reported unspecified reductions of SF_6 emissions (on Form EIA-1605EZ) that amounted to 20,744 metric tons carbon dioxide equivalent.

Emission Reductions by Gas

Reported project-level reductions of perfluoromethane and perfluoroethane in 2000 were lower than those reported for 1999 (Table 23), primarily because of the increased use of HCFCs and HFCs as replacements for CFCs. The largest GWP-adjusted reductions were reported for PFCs at 3,230,562 metric tons carbon dioxide equivalent (Table 22). Reported direct reductions of SF_6 emissions for 2000 increased by 811,888 metric tons

carbon dioxide equivalent (136 percent) and were almost 16 times the value reported for 1994 (Table 21). American Electric Power, Inc., reported for the first time in this category, and Consolidated Edison of New York, Inc., was a new reporter to the Program for 2000. These two entities together accounted for 57 percent of the increase in reported direct reductions of SF_6 emissions from 1999 to 2000.

Hydrofluorocarbons

HFCs are used as replacements for ozone-depleting substances such as CFCs. U.S. emissions of HFCs were estimated at 103 million metric tons carbon dioxide equivalent in 2000, a 181-percent increase over 1990 levels.[60] HFCs are used to replace CFCs as blowing agents, in automobile air conditioners and refrigerators, and in other manufacturing applications, where emissions result from system leaks. In the semiconductor industry, HFCs are also used in plasma etching and chemical vapor deposition processes. HFC-23 is a byproduct of HCFC-22 manufacturing. One entity, Commonwealth Edison, reported a project with zero direct reductions of HFC-134a (tetrafluoroethane) emissions in 2000. Another entity, Dow Chemical, reported on a project that included a direct reduction in HFC-134a emissions in 2000 but provided no data on the amount of the reduction.

Perfluorocarbons

The principal source of PFC emissions is aluminum smelting. PFCs are produced during aluminum production when the alumina content of the electrolytic bath falls below critical levels required by the electrolytic effect. The resulting electrical upset in the reduction cell is manifested as a rapid voltage increase. The gases formed accumulate at the anode of the reduction cell (hence the name "anode effect"). PFCs are also used in some semiconductor manufacturing processes and, consequently, may be emitted from fabrication plants.

Table 21. Number of Projects Reported for Halogenated Substances, Data Years 1994-2000

Project Type	1994	1995	1996	1997	1998	1999	2000
General	1	1	0	1	0	0	1
Reclamation: Recycling	7	10	10	14	15	15	17
Reclamation: Destruction	0	0	1	1	0	1	1
Substitution	2	6	8	7	8	9	10
Emissions Avoidance	3	6	8	14	17	16	23
Use of Improved Appliances	0	1	1	1	1	1	1
Other Projects/Activities	1	1	0	0	0	0	0
Total Number of Projects	**15**	**22**	**23**	**30**	**35**	**36**	**44**

Note: Project totals may not equal sum of components because some projects may be counted in more than one category.
Sources: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table 22. Reported Reductions of Hydrofluorocarbon, Perfluorocarbon, and Sulfur Hexafluoride Emissions, Data Year 2000

	Emission Reductions Reported					
	Metric Tons of Gas			Metric Tons Carbon Dioxide Equivalent		
Gas	Direct	Indirect	Unspecified[a]	Direct	Indirect	Unspecified[a]
HFC-134a	0	—	—	0	—	—
HFC-152a	—	—	—	—	—	—
Perfluoromethane	469	—	—	2,675,552	—	—
Perfluoroethane	47	—	—	555,010	—	—
Sulfur Hexafluoride	63	*	1	1,407,347	81	20,744
Total	**NA**	**NA**	**NA**	**4,637,909**	**81**	**20,744**

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.
*Less than 0.5 metric tons.
NA = not applicable. — = none reported.
Sources: Energy Information Administration, Form EIA-1605 and EIA-1605EZ. Global warming potentials from Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis* (Cambridge, UK: Cambridge University Press, 2001), Table 6.7, pp. 388-389.

[60]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

For 2000, two companies (Alcan Ingot's Sebree Aluminum Plant and Noranda Aluminum, Inc.) reported reductions in emissions of PFCs totaling 3,230,562 metric tons carbon dioxide equivalent, which accounted for 70 percent of total reported project-level direct reductions in emissions of PFCs, HFCs, and SF_6 in 2000 (Table 22). During 2000, efforts by Noranda to reduce PFC emissions were focused on controlling the amount of alumina in solution to avoid anode effects and monitoring the process more closely to stop or correct them expeditiously. Noranda reported the larger individual reductions between the two projects in this category for 2000. According to Noranda's report, perfluoromethane emissions were reduced by 2,696,100 metric tons carbon dioxide equivalent and perfluoroethane emissions by 559,300 metric tons carbon dioxide equivalent.

Alcan Ingot, meanwhile, reported direct increases in perfluoromethane emissions (20,549 metric tons carbon dioxide equivalent) and perfluoroethane emissions (4,290 metric tons carbon dioxide equivalent). For 1999, Alcan Ingot reported direct reductions in perfluoromethane emissions totaling 64,838 metric ton carbon dioxide equivalent and direct reductions in perfluoroethane emissions totaling 13,542 metric tons carbon dioxide equivalent. The U.S. Environmental Protection Agency sponsors the Voluntary Aluminum Industrial Partnership, which seeks to reduce emissions of PFCs, carbon tetrachloride, and SF_6 during primary aluminum processing. For 2000, both Alcan Ingot and Noranda reported participation in the program.

Sulfur Hexafluoride

Sulfur hexafluoride is used as an insulator for circuit breakers, switch gear, and other electrical equipment and as a cover gas in magnesium smelting. It is also emitted during the aluminum smelting process. It has a very high GWP—22,200 times the warming effect of carbon dioxide per ton emitted. Therefore, even small amounts of SF_6 can play a disproportionate role in U.S. contributions to climate change.[61]

Table 23. Reported Reductions in Emissions of Halogenated Substances by Type of Reduction, Data Years 1994-2000
(Metric Tons of Gas)

Gas and Reduction Type	1994	1995	1996	1997	1998	1999	2000
HFC-134a							
Direct	**	**	**	**	-1	-1	0
Indirect	—	—	—	—	—	—	—
Unspecified[a]	—	—	—	—	—	—	—
HFC-152a							
Direct	—	—	127	*	0	0	—
Indirect	—	—	—	—	—	—	—
Unspecified[a]	—	—	—	—	—	—	—
Perfluoromethane							
Direct	466	431	486	482	507	498	469
Indirect	—	—	—	—	—	—	—
Unspecified[a]	—	—	—	—	—	—	—
Perfluoroethane							
Direct	46	43	48	48	52	49	47
Indirect	—	—	—	—	—	—	—
Unspecified[a]	—	—	—	10	—	—	—
Sulfur Hexafluoride							
Direct	4	8	-3	23	28	27	63
Indirect	—	*	—	*	*	*	*
Unspecified[a]	—	—	—	—	—	—	1

[a]Unspecified reductions represent quantities reported on Form EIA-1605EZ, which does not distinguish between direct and indirect emission reductions.
*Greater than zero but less than 0.5 metric tons of gas.
**Greater than -0.5 but less than zero metric tons of gas.
— = none reported.
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

[61]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.doe.gov/oiaf/1605/1605a.html.

For 2000, 14 companies—including Allegheny Energy, Inc., Baltimore Gas & Electric, Consolidated Edison of New York, Inc., GPU, Inc., Southern Company, and TXU—claimed direct reductions in SF_6 emissions that totaled 1,407,347 metric tons carbon dioxide equivalent, accounting for 30 percent of the total reported project-level direct reductions in emissions of PFCs, HFCs, and SF_6 (Table 22).

The Southern Company reported the largest single reduction in SF_6 emissions for 2000 at 377,400 metric tons carbon dioxide equivalent, followed by Consolidated Edison of New York, Inc. (353,202 metric tons), TXU, Inc. (236,714 metric tons), and GPU, Inc. (142,648 metric tons). These four project-level claims of emission reductions combined to account for 79 percent (1,109,964 metric tons carbon dioxide equivalent) of total reported project-level direct reductions of SF_6 emissions for 2000 and 24 percent of total project-level direct emission reductions claimed for HFCs, PFCs, and SF_6 combined (Table 24).

Table 24. Largest Reported Project-Level Reductions of Sulfur Hexafluoride Emissions by Reporter, Data Year 2000

Reporter	SF_6 Direct Emission Reductions Reported		Percent of Total Reported Direct Reductions of HFCs, PFCs, and SF_6 Emissions
	Metric Tons of Gas	Metric Tons Carbon Dioxide Equivalent	
Southern Company	17.0	377,400	8.1
Consolidated Edison Company of New York, Inc.	15.9	353,202	7.6
TXU	10.7	236,714	5.1
GPU, Inc.	6.4	142,648	3.1
American Electric Power, Inc.	4.8	105,533	2.3
NiSource/NIPSCO	2.2	49,745	1.1
Allegheny Energy, Inc.	2.0	44,911	1.0
Tucson Electric Power Company	1.9	41,931	0.9
PG&E Corporation	1.8	40,864	0.9
Niagara Mohawk Power Corporation	0.5	10,231	0.2
First Energy Corporation	0.2	4,169	0.1
Reported Total	**63.4**	**1,407,347**	**30.3**

Note: Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, Form EIA-1605. Global warming potentials from Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis* (Cambridge, UK: Cambridge University Press, 2001), Table 6.7, pp. 388-389.

7. Entity-Level Reporting and Future Commitments

Overview

The Voluntary Reporting Program permits three distinct types of emissions reporting:

- Entity-level emissions and reductions, defined as the emissions and reductions of an entire organization, usually defined as a corporation
- Project-level emissions and reductions, defined as the emission reductions consequences of a particular action
- Commitments to take action to reduce emissions in the future.

Chapters 2 through 6 of this report cover project-level emissions. This chapter covers entity-level emissions, emission reductions, and commitments to reduce emissions in the future. Entity reporting and project reporting are not mutually exclusive. They correspond to different views of the appropriate answer to the question, "What is a reduction?" Most (183, or 82 percent) of the 222 participants in the program reported project-level information on emissions and/or reductions, and 100 (45 percent) reported entity-level information. Sixty-two (28 percent) of all the participants in the program reported both entity-level information and project-level information. Thus, 62 percent of the entity-level reporters also chose to report project-level information on emissions and/or emission reductions. Thirty-eight firms (17 percent of the total) reported entity-level information only, whereas 121 (55 percent) submitted only project-level information. In addition, 43 percent of the 100 entity-level reporters, or 19 percent of all participants in the program, provided information on commitments to reduce greenhouse gas emissions in the future.

Entity-Level Reporting

Who Reported

Electric power producers accounted for 41 of the 100 entity-level reporters. They included Allegheny Energy Incorporated, the Southern Company, the Tennessee Valley Authority (TVA), and most of the other largest electric utilities in the United States. In addition, three subsidiaries of the AES Corporation (an independent power producer) reported on domestic power plants with emissions offset by international forestry projects. The remaining 59 entity-level reporters included aluminum smelters (Alcan Ingot's Sebree Aluminum Plant and Noranda Aluminum, Inc.), two semiconductor manufacturers (Lucent and Motorola Austin), and several large manufacturers (GM, IBM, and Johnson & Johnson). Also reporting at the entity level were cement manufacturers (including three plants of the California Portland Cement Company, as well as Calaveras Cement Company and Lehigh Portland Cement Company), four oil companies (BP, Sunoco, Inc., Texaco, Inc., and Unocal Corporation), a trade association (Integrated Waste Services Association [IWSA]), the Miller Brewing Company, and one household.

Reported Emissions

Total 2000 entity-level direct emissions of greenhouse gases reported to the Voluntary Reporting Program were 1,036.1 million metric tons carbon dioxide equivalent or 15 percent of total estimated U.S. emissions of greenhouse gases.[62] Total 2000 entity-level indirect emissions reported to the program were 107.1 million metric tons carbon dioxide equivalent, or 2 percent of total estimated U.S. emission of greenhouse gases. Reported entity-level direct carbon dioxide emissions for 2000 were 1,008 million metric tons, which represented 97 percent of reported direct emissions—weighted by global warming potential (GWP).

The single largest category of direct emissions reported was the 995.8 million metric tons carbon dioxide emitted by stationary combustion sources, mostly electric utilities, which represented 99 percent of the total direct carbon dioxide emissions reported for 2000 (Table 25). Reported direct emissions of carbon dioxide for 2000 were moderately concentrated. The largest direct emissions reported were from the Southern Company, with emissions of 105.6 million metric tons carbon dioxide (Table 26). The second largest direct emissions reported were from Tennessee Valley Authority, with emissions of 78.2 million metric tons carbon dioxide, followed by Cinergy Corporation (62.9 million metric tons), Duke Energy Corporation (53.9 million metric tons), and FPL Group (51.8 million metric tons). In addition, Allegheny Energy, Inc., DTE Energy/Detroit Edison, FirstEnergy Corporation, PacifiCorp, Entergy Services, BP, and

[62]Energy Information Administration, *Emissions of Greenhouse Gases in the United States 2000*, DOE/EIA-0573(2000) (Washington, DC, November 2001), web site http://www.eia.gov/oiaf/1605/1605a.html.

Reliant Energy-HLP each reported direct emissions of carbon dioxide in the range of 37.1 to 48.4 million metric tons for 2000.

Carbon dioxide also accounted for 95 percent of reported indirect emissions of greenhouse gases weighted by GWP. The single largest category of reported indirect emissions for 2000 was 99.4 million metric tons carbon dioxide resulting from the reporting entities' purchased power transactions, which represented 93 percent of total indirect emissions of greenhouse gases reported. This represents a change over 1999, when the reported emissions of indirect carbon dioxide from other sources (343.5 million metric tons) exceeded the indirect carbon dioxide emissions from purchased power (111.5 million metric tons). Ninety-nine percent (340.6 million metric tons) of the reported indirect carbon dioxide from other sources for 1999 was reported by General Motors Corporation (GM) on behalf of the entire U.S. fleet of GM-built vehicles. GM did not report data on the emissions of this fleet for 2000, which resulted in the decline in total reported indirect carbon dioxide emissions from 343.5 million metric tons in 1999 to 2.5 million metric tons in 2000.

Manufacturers that purchase electricity usually view themselves as responsible for the electricity they consume and, consequently, for any reductions in the quantity of electricity consumed. Utilities, however, have adopted more diverse views. Most electric utilities view

Table 25. Total Reported Entity-Level Carbon Dioxide Emissions by Type and Source, Data Year 2000
(Million Metric Tons Carbon Dioxide Equivalent)

Emissions Source	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Direct Emissions											
Stationary Combustion	859.5	652.2	755.5	782.3	818.2	833.2	839.6	893.8	997.1	985.0	995.8
Transportation	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.7	0.6	0.5
Other Direct Sources	7.0	5.8	7.4	7.8	8.1	11.0	11.2	11.5	11.5	11.8	11.6
Total Direct	**867.2**	**658.2**	**763.1**	**790.3**	**826.4**	**844.3**	**851.0**	**905.5**	**1,009.3**	**997.4**	**1,008.0**
Indirect Emissions											
Purchased Power	64.4	64.4	64.1	70.0	69.5	77.5	101.9	114.7	118.4	111.5	99.4
Other Indirect Emissions	377.3	368.6	371.9	372.0	373.2	367.7	360.6	354.3	348.1	343.5	2.5
Total Indirect	**441.7**	**433.0**	**436.0**	**442.1**	**442.7**	**445.2**	**462.5**	**469.0**	**466.5**	**455.1**	**101.9**
Electricity Wholesaling	7.6	13.4	8.2	7.1	4.2	5.8	-3.6	-44.2	-26.8	-20.6	-9.6

Note: The General Motors Corporation (GM) reported emissions from other indirect sources but did not provide quantitative data on those emissions for 2000.
Source: Energy Information Administration, Form EIA-1605.

Table 26. Largest Reported Entity-Level Direct Carbon Dioxide Emissions by Reporter and Source, Data Year 2000

Reporter	Emissions Source	Reported Direct Emissions (Million Metric Tons)	Percentage of Total Reported Direct Emissions of All Greenhouse Gases
Southern Company	Stationary Combustion	105.6	10.5
Tennessee Valley Authority	Stationary Combustion	78.2	7.8
Cinergy Corp.	Stationary Combustion	62.9	6.2
Duke Energy Corporation	Stationary Combustion	53.9	5.3
FPL Group	Stationary Combustion	51.8	5.1
PacifiCorp	Stationary Combustion	48.4	4.8
Entergy Services, Inc.	Stationary Combustion	48.3	4.8
Reliant Energy - HL&P	Stationary Combustion	43.9	4.4
Allegheny Energy, Inc.	Stationary Combustion	43.1	4.3
DTE Energy/Detroit Edison	Stationary Combustion	41.3	4.1
First Energy Corporation	Stationary Combustion	38.7	3.8
BP	Stationary Combustion	37.1	3.7
Total		**653.2**	**64.8**

Source: Energy Information Administration, Form EIA-1605.

themselves as responsible only for the direct emissions from their stacks. This view is unambiguous, relatively easy to verify, and prevents the same emission from being reported by more than one utility; however, accounting for reductions in emissions caused by substitutions of purchased power for company-generated power adds complexity to the picture.

Some utilities (for example, Hawaiian Electric Company, Portland General Electric, Niagara Mohawk Corporation, and PECO Energy Company) viewed themselves as responsible for their direct emissions plus the indirect emissions from electricity purchases necessary to support their customer base. This approach accounts for the possibility that a decline in generation may be associated with an increase in power purchases, but it may create the appearance of an increase in emissions when a firm is both buying and selling (i.e., trading) increasing volumes of wholesale electricity. Also, double reporting is possible, because both the buyer and seller of the electricity may claim ownership.

A few utilities (for example, Central Hudson Gas & Electric Corporation and DTE Energy/Detroit Edison) report a "net" view, in which they calculate direct generation emissions plus indirect electricity purchase emissions, minus emissions from "wholesale" electricity sales to other utilities. This approach captures net emissions to supply an end-use customer base, but there is greater potential for double counting, because double reporting is possible for both buying and selling. Further, "generation only" electricity producers, such as independent power producers or generation and transmission cooperatives, would be in the position of defining essentially all their direct emissions as belonging to their customers.

Any organization that reports indirect emissions and reductions is presented with a methodological problem: because the reporter does not control the source of emissions, the reporter may not have sufficient information to estimate emissions accurately. In the case of power purchases, firms that buy electricity may not always know precisely what emissions are associated with their purchases. Most reporters, however, reported only direct emissions. For those who reported indirect emissions, with a few exceptions, the impact of indirect emissions was generally small in comparison with the magnitude of direct emissions. Only a few companies reported direct emissions of other greenhouse gases at the entity level.

Reported direct emissions of gases other than carbon dioxide included 27 million metric tons carbon dioxide equivalent of methane and 0.7 million metric tons carbon dioxide equivalent of sulfur hexafluoride. Reported direct emissions of nitrous oxide were less than 0.5 million metric tons carbon dioxide equivalent (Table 27).

Table 27. Total Reported Entity-Level Emissions of Other Greenhouse Gases by Type of Emissions, Data Year 2000
(Million Metric Tons Carbon Dioxide Equivalent)

Gas and Type of Emissions	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Methane											
Direct	55	14	15	11	29	30	26	30	34	28	27
Indirect	2	2	2	2	2	2	2	3	3	3	1
Nitrous Oxide											
Direct	2	*	*	*	*	*	*	*	*	*	*
Indirect	17	18	19	20	20	20	20	19	19	18	*
Hydrofluorocarbons											
Direct	*	*	*	*	*	*	*	*	*	*	*
Indirect	*	*	*	*	1	1	2	2	3	3	4
Perfluorocarbons											
Direct	1	1	1	1	*	*	*	*	*	*	*
Sulfur Hexafluoride											
Direct	*	1	*	*	2	2	2	1	1	1	1
Total											
Direct	**58**	**15**	**16**	**12**	**31**	**32**	**28**	**32**	**35**	**29**	**28**
Indirect	**19**	**20**	**21**	**22**	**23**	**24**	**24**	**24**	**24**	**24**	**5**

*Less than 0.5 million metric tons.

Note: The General Motors Corporation (GM) reported indirect emissions of methane and nitrous oxide but did not provide quantitative data on those emissions for 2000.

Source: Energy Information Administration, Form EIA-1605.

Thirteen companies reported entity-level direct emissions of methane for 2000, including Consol Coal Group, Black Warrior Methane Corporation, BP, CMS Energy, and Public Service Enterprise Group. These five entities together accounted for 93 percent of total reported entity-level direct emissions of other greenhouse gases for 2000 (Table 28). Two entities, Pratt & Whitney North Berwick and Allegheny Energy, Inc., did not have data available for 2000. Only three participants in the program, Allegheny Energy, Inc., Dow Chemical Company, and IWSA, reported direct emissions of nitrous oxide for 2000. As was the case for direct emissions of methane, Allegheny Energy did not have nitrous oxide data available for 2000. The direct emissions of nitrous oxide reported by the two other entities together accounted for less than 0.5 percent of total reported entity-level direct emissions of other greenhouse gases for 2000. In addition, one reporter (Alcan Ingot's Sebree Aluminum Plant) accounted for all direct emissions of perfluorocarbon reported, and five companies, including the Southern Company, NiSource / NIPSCO, and Public Service Enterprise Group, reported direct emissions of sulfur hexafluoride. These three companies together accounted for 3 percent of total reported entity-level direct emissions of other greenhouse gases for 2000.

Reported Reductions

Entity-level reductions were, in general, much smaller than the corresponding emissions reported by participants in the Voluntary Reporting of Greenhouse Gases Program. Reported entity-level direct reductions totaled 164.1 million metric tons carbon dioxide equivalent for 2000, or 16 percent of all reported entity-level direct emissions. Reported entity-level indirect reductions totaled 27.8 million metric tons carbon dioxide equivalent, or 26 percent of all reported entity-level indirect emissions.

Reported entity-level direct emission reductions of carbon dioxide for 2000 totaled 131.9 million metric tons carbon dioxide (Table 29), equal to 8 percent of estimated total U.S. greenhouse gas emissions, and indirect emission reductions of carbon dioxide totaling 19.8 million metric tons. Reported direct reductions in emissions of other greenhouse gases for 2000 totaled 32.2 million metric tons carbon dioxide equivalent, and indirect emissions of other greenhouse gases totaled 8.1 million metric tons (Table 30).

The largest single reported 2000 direct reduction of carbon dioxide emissions was that of the TVA at 27.2 million metric tons (direct reductions from stationary combustion), followed by FPL Group at 16.9 million metric tons, followed by Duke Energy Corporation, which reported a reduction of 14.8 million metric tons (direct reductions from stationary combustion), Niagara Mohawk Corporation at 14.6 million metric tons, and First Energy Corporation at 14.2 million metric tons. These five entity-level claims of carbon dioxide emission reductions combined accounted for 66 percent (87.7 million metric tons) of total reported entity-level claims of direct carbon dioxide emission reductions for 2000 (Table 31).

Most of the emission reductions reported were direct reductions attributable to energy-related carbon dioxide, although the IWSA reported that its members' combustion of municipal solid waste reduced indirect emissions of carbon dioxide by 15.4 million metric tons

Table 28. Largest Reported Entity-Level Direct Emissions of Other Greenhouse Gases by Reporter and Emissions Source, Data Year 2000

Reporter	Gas	Emissions Source	Reported Direct Emissions (Thousand Metric Tons Carbon Dioxide Equivalent)	Percentage of Total Reported Direct Emissions of Other Greenhouse Gases
Consol Coal Group	Methane	Other Direct	13,691.8	48.7
Black Warrior Methane Corp.	Methane	Other Direct	6,402.0	22.8
BP	Methane	Other Direct	4,235.6	15.1
CMS Energy	Methane	Other Direct	1,168.5	4.2
Public Service Enterprise Group	Methane	Other Direct	733.0	2.6
Duke Energy Corporation	Methane	Stationary Combustion	493.4	1.8
Cinergy Corp.	Methane	Other Direct	371.5	1.3
Public Service Enterprise Group	Sulfur Hexafluoride	Other Direct	354.7	1.3
Southern Company	Sulfur Hexafluoride	Other Direct	266.4	1.0
Alcan Ingot - Sebree Aluminum Plant	Perfluoromethane	Other Direct	131.3	0.5
NiSource/NIPSCO	Sulfur Hexafluoride	Other Direct	85.2	0.3
Total			**27,933.4**	**99.4**

Source: Energy Information Administration, Form EIA-1605.

and indirect emissions of methane by 5.3 million metric tons carbon dioxide equivalent, and both Southern Company and Public Service Enterprise reported indirect reductions of carbon dioxide emissions at 2.1 million metric tons each (Table 32). These reductions combined to account for 25.0 million metric tons carbon dioxide equivalent or 90 percent of total reported indirect emission reductions at the entity level for 2000.

Most of the larger reported reductions (direct and indirect) were computed on the basis of "modified" reference cases—i.e., the reporter indicated that emissions were lower than they would have been without the actions taken (Tables 31 and 32). TVA, for example, used a generation planning model to calculate what its emissions from 1990 through 2000 would have been if it had used the set of generating units operational in 1990 at

Table 29. Total Reported Entity-Level Carbon Dioxide Emission Reductions by Type and Source, Data Year 2000
(Million Metric Tons Carbon Dioxide)

Type of Reduction and Emissions Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Direct Reductions										
Stationary Combustion	25	47	47	61	82	97	102	114	124	131
Transportation	*	*	*	*	*	*	*	*	*	*
Other Direct Sources	*	-1	-1	-1	-1	*	*	1	1	1
Total Direct	**25**	**46**	**46**	**60**	**81**	**96**	**102**	**115**	**125**	**132**
Indirect Reductions										
Purchased Power	3	-1	-3	-9	-10	-8	-7	-4	-5	-6
Other Indirect Sources	13	14	15	18	22	24	23	25	26	26
Total Indirect	**16**	**13**	**12**	**9**	**12**	**17**	**16**	**22**	**21**	**20**
Carbon Sequestered	**1**	**2**	**6**	**6**	**7**	**7**	**8**	**8**	**8**	**7**

*Less than 0.5 million metric tons.
Note: Negative numbers indicate increases in emissions.
Source: Energy Information Administration, Form EIA-1605.

Table 30. Total Reported Entity-Level Reductions in Emissions of Other Greenhouse Gases by Gas and Source, Data Year 2000
(Thousand Metric Tons Carbon Dioxide Equivalent)

Gas and Type of Reduction	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Methane										
Direct	6,029	8,245	14,194	19,578	18,874	21,545	23,638	26,060	31,434	31,529
Indirect	1,752	2,783	3,286	3,707	4,204	4,994	5,727	6,084	6,876	7,985
Nitrous Oxide										
Direct	-3	-3	-3	-3	-4	-3	-5	-6	-5	-19
Indirect	71	76	76	76	96	100	97	98	104	94
Hydrofluorocarbons										
Direct	—	—	*	*	2	12	-9	-28	-53	59
Perfluorocarbons										
Direct	-2	55	-8	473	64	40	-88	208	144	-24
Indirect	—	—	*	6	6	10	9	23	5	7
Sulfur Hexafluoride										
Direct	-9	114	111	-48	-201	-300	309	510	1,312	621
Indirect	—	—	—	—	—	—	*	*	*	*
Total										
Direct	**6,015**	**8,410**	**14,294**	**20,000**	**18,734**	**21,293**	**23,845**	**26,744**	**32,831**	**32,166**
Indirect	**1,823**	**2,859**	**3,362**	**3,790**	**4,306**	**5,105**	**5,833**	**6,205**	**6,985**	**8,086**

*Less than 0.5 thousand metric tons.
Note: Negative numbers indicate increases in emissions.
Source: Energy Information Administration, Form EIA-1605.

their 1990 capacity factors and heat rates. Since 1990, TVA has greatly expanded nuclear generation. Browns Ferry Unit 2 returned to service in 1991, Browns Ferry Unit 3 returned to service in 1995, and Watts Bar Unit 1 started commercial operation in 1996. TVA's reported carbon dioxide emissions from stationary combustion sources for 2000 were 3.2 million metric tons above 1990 levels but 27.2 million metric tons below what they would have been if its 1990 generation mix and heat rates had been used.

IWSA reported two sources of indirect reductions: (1) by burning municipal solid waste to generate electricity, its members made it possible for electric utilities to burn less coal; and (2) if the municipal solid waste had not been burned, it could reasonably have been expected to be landfilled, and some portion of the landfilled waste would have decomposed anaerobically, producing methane emissions. Thus, IWSA reported that burning the waste reduced both fossil fuel burning and methane emissions on the part of others.

Thirty-three companies reported emission reductions at the entity level using a "basic" reference case. A basic reference case is defined as total emissions in some baseline year—usually, but not always, 1990. In these cases, reductions were calculated as the difference between actual emissions in the data year and emissions in the baseline year. Of these 33 companies, 20 were electric power producers, including Consolidated Edison of New York, Inc., DTE Energy/Detroit Edison, Duke Energy Corporation, First Energy Corporation, Florida Power Corporation, Niagara Mohawk Corporation, and TVA. Also reporting entity-level emission reductions using a "basic" reference case were 12 reporters that were not electricity producers, including Allergan, Inc., Republic Metals Group, Sunoco, Inc., International Truck and Engine Corporation, Lucent Technologies,

Table 31. Largest Individual Reported Entity-Level Direct Emission Reductions by Gas, Source, and Type of Reference Case Employed, Data Year 2000

Reporter	Gas	Source	Reference Case	Reported Direct Emission Reduction (Million Metric Tons Carbon Dioxide Equivalent)	Percent of Total Reported Direct Reductions
Tennessee Valley Authority	CO_2	Stationary Combustion	M	27.2	16.7
Consol Coal Group	CH_4	Other Direct	B	17.7	10.8
FPL Group	CO_2	Stationary Combustion	M	16.9	10.3
Duke Energy Corporation	CO_2	Stationary Combustion	M	14.8	9.1
Niagara Mohawk Power Corporation	CO_2	Stationary Combustion	B	14.6	8.9
First Energy Corporation	CO_2	Stationary Combustion	M	14.2	8.7
Palmer Capital Corporation	CH_4	Other Direct	B	6.0	3.7
Southern Company	CO_2	Stationary Combustion	M	6.0	3.7
Entergy Services, Inc.	CO_2	Stationary Combustion	M	5.9	3.6
Baltimore Gas & Electric Company	CO_2	Stationary Combustion	M	5.5	3.4
Black Warrior Methane Corp.	CH_4	Other Direct	M	5.2	3.2
Reliant Energy - HL&P	CO_2	Stationary Combustion	M	4.8	2.9
Florida Power Corporation	CO_2	Stationary Combustion	M	4.8	2.9
Bethlehem Steel Corporation	CO_2	Stationary Combustion	M	3.5	2.2
Keyspan Energy Corporation	CO_2	Stationary Combustion	B	2.7	1.7
CMS Energy	CO_2	Stationary Combustion	M	2.6	1.7
PG&E Corporation	CO_2	Stationary Combustion	M	2.6	1.6
BP	CO_2	Stationary Combustion	M	2.1	1.3
Alliant Energy	CO_2	Stationary Combustion	M	1.7	1.1
NiSource/NIPSCO	CO_2	Stationary Combustion	M	1.6	1.0
Sunoco, Inc.	CO_2	Stationary Combustion	B	1.6	1.0
Cinergy Corp.	CO_2	Stationary Combustion	M	1.6	1.0
General Motors Corporation	CO_2	Stationary Combustion	B	1.5	0.9
Total				**165.5**	**100.8**

B = Basic. M = Modified.
Note: Seventeen participants in the Voluntary Reporting Program reported negative entity-level direct emissions reductions.
Source: Energy Information Administration, Form EIA-1605.

Rolls-Royce Corporation, and the General Motors Corporation.

For 2000, the Consol Coal Group reported the largest individual entity-level direct emissions reduction calculated with a basic reference case, at 17.7 million metric tons carbon dioxide, accounting for 11 percent of total reported carbon dioxide equivalent direct reductions during 2000. This direct reduction was from Consol's other direct source activities. In addition, the Niagara Mohawk Power Corporation, another entity-level reporter that relied on the use of a basic reference case to calculate emission reductions, reported the fifth largest single direct emissions reduction at 14.6 million metric tons carbon dioxide, representing 9 percent of total reported carbon dioxide equivalent direct reductions for 2000.

Future Commitments To Reduce Emissions

The Voluntary Reporting Program also permits entities to report commitments to reduce emissions or to take action to reduce emissions in the future. In previous years, virtually all companies reporting future commitments were electric utility participants in the Climate Challenge voluntary program. However, 24 (37 percent) of the 65 future commitment reporters in 2000 were not utilities. They included the Dow Chemical Company, Sunoco, Inc., Noranda Aluminum, Inc., and Lucent Technologies. All 24 of these nonutility reporters indicated that they were participants in other voluntary programs, such as Climate Wise for manufacturers and the Voluntary Aluminum Industrial Partnership.

There are three types of future commitments in the Voluntary Reporting Program: entity commitments, financial commitments, and project commitments. Entity and project commitments roughly parallel the entity and project aspects of emissions reporting: an entity commitment is a commitment to reduce the emissions of an entire organization; a project commitment is a commitment to take a particular action that will have the effect of reducing the reporter's future emissions. A financial commitment has no emissions reporting counterpart: it is a commitment to spend a particular sum of money on emission reduction activities, without a specific promise on the emissions consequences of the expenditure. Most firms reported more than a single commitment, and

Table 32. Largest Individual Reported Entity-Level Indirect Emission Reductions by Gas, Source, and Type of Reference Case Employed, Data Year 2000

Reporter	Gas	Source	Reference Case	Reported Indirect Emission Reduction (Million Metric Tons Carbon Dioxide Equivalent)	Percent of Total Reported Indirect Reductions
Integrated Waste Services Association	CO_2	Other Indirect	M	15.4	55.4
Integrated Waste Services Association	CH_4	Other Indirect	M	5.3	19.0
Southern Company	CO_2	Other Indirect	M	2.1	7.7
Public Service Enterprise Group	CO_2	Power Purchases (Indirect)	M	2.1	7.6
Sacramento Municipal Utility District	CO_2	Power Purchases (Indirect)	B	1.8	6.4
Central Hudson Gas & Electric Corporation	CO_2	Other Indirect	B	1.4	5.2
Los Angeles Department of Water and Power	CO_2	Power Purchases (Indirect)	B	1.1	3.8
Alliant Energy	CO_2	Other Indirect	M	1.0	3.6
PPL CORPORATION	CO_2	Other Indirect	B	1.0	3.5
Portland General Electric Co.	CO_2	Power Purchases (Indirect)	M	0.9	3.4
PG&E Corporation	CH_4	Other Indirect	M	0.8	3.0
Cinergy Corp.	CH_4	Other Indirect	M	0.7	2.5
PG&E Corporation	CO_2	Other Indirect	M	0.7	2.4
Reliant Energy - HL&P	CO_2	Other Indirect	M	0.7	2.4
PacifiCorp	CO_2	Other Indirect	M	0.5	1.8
FPL Group	CO_2	Other Indirect	M	0.5	1.7
Total				**36.0**	**129.4**

B = Basic. M = Modified.
Note: Eleven participants in the Voluntary Reporting Program reported negative entity-level indirect emission reductions.
Source: Energy Information Administration, Form EIA-1605.

many reported more than one type of commitment. Entity commitments are usually to make emissions lower than some level in a target year. Project commitments are usually to reduce emissions by a particular amount over a period of years. Because project commitments can cover a range of years, they are sometimes difficult to compare directly with project-level data for a single year of "achieved reductions."

Entity-level Commitments

Twenty-eight participants in the Voluntary Reporting Program reported entity-level commitments to reduce greenhouse gas emissions. Data on the quantities of reductions expected were provided by 24 firms for 30 of the commitments. These firms made promises to reduce, avoid, or sequester future emissions at the corporate level. As in the case of entity reporting, some commitments were to reduce emissions below a specific baseline, others to limit the growth of emissions per unit of output, and others to limit emissions by a specific amount by comparison with a baseline emissions growth trend. Participants reporting entity-level commitments to reduce greenhouse gas emissions in the future included the Hawaiian Electric Company, First Energy Corporation, IBM, Allegheny Power Service Corporation, TVA, Niagara Mohawk Corporation, Los Angeles Department of Water and Power, and Florida Power & Light Company.

Twenty-two (51 percent) of the 43 entity commitments to reduce future emissions involved reducing emissions by the 2000-2005 period. In their reports for 2000, reporters of entity-level commitments pledged to reduce emissions in the future by 98.4 million metric tons carbon dioxide equivalent (Table 33), with 23 percent of the total coming from the TVA (22.6 million metric tons carbon dioxide equivalent), followed by the Los Angeles Department of Water and Power at 17 percent (16.4 million metric tons carbon dioxide equivalent), Niagara Mohawk Power at 15 percent (15.1 million metric tons carbon dioxide equivalent), Florida Power & Light at 10 percent (10.0 million metric tons carbon dioxide equivalent), and Middlesex Generating Company, LLC at 10 percent (9.3 million metric tons carbon dioxide equivalent). These five commitments combined accounted for 75 percent (73.4 million metric tons carbon dioxide equivalent) of the total reported entity-level commitments to reduce greenhouse gases. TVA, Florida Power & Light, and Middlesex Generating Company measured their reduction commitments using modified reference cases. Niagara Mohawk Corporation and the Los Angeles Department of Water and Power used basic reference cases.

Project-Level Commitments

Thirty-three companies reported on commitments to undertake 211 individual emission reduction projects.

Table 33. Largest Reported Individual Entity-Level Commitments To Reduce Greenhouse Gases by Gas and Type of Reference Case, Data Year 2000

Company	Gas	Reference Case	Carbon Dioxide Equivalent (Million Metric Tons)	Percent of Total Reported Reduction Commitments
Tennessee Valley Authority	CO_2	M	22.6	22.9
Los Angeles Department of Water and Power	CO_2	B	16.4	16.7
Niagara Mohawk Power Corporation	CO_2	B	15.1	15.4
Florida Power & Light Company	CO_2	M	10.0	10.1
Middlesex Generating Company, LLC	CH_4	M	9.3	9.5
PECO Energy Company	CO_2	B	4.5	4.6
First Energy Corporation	CO_2	M	2.9	2.9
Alliant Energy	CO_2	M	2.4	2.4
Pacific Natural Energy, LLC	CH_4	M	2.1	2.1
Greater New Bedford Regional Refuse Mgt District	CH_4	M	1.9	1.9
Allegheny Power Service Corporation	CO_2	B	1.8	1.8
South Carolina Electric & Gas Company	CO_2	B	1.8	1.8
Noranda Aluminum, Inc.	PFM	B	1.8	1.8
Alliant Energy	CO_2	M	1.8	1.8
Public Service Company of New Mexico	CO_2	B	1.5	1.5
Alliant Energy	CO_2	M	1.0	1.0
Total			**96.8**	**98.3**

B = Basic. M = Modified. PFM = perfluoromethane.
Note: Reporters are not asked to indicate whether future reductions will be direct or indirect.
Source: Energy Information Administration, Form EIA-1605.

Some of the commitments were linked to future results from projects already underway and forming part of the reporters' submissions. Others were for projects not yet begun. Data on the quantities of reductions expected were provided by 28 firms for 145 projects.

Reporters indicated that projects were expected to reduce future emissions by 160.4 million metric tons carbon dioxide equivalent. Of this amount, 66 percent (105.7 million metric tons) would be methane and 32 percent (51.3 million metric tons) would be carbon dioxide.

The single largest project-level commitment was made by Fidelity Exploration & Production Company (87.1 million metric tons carbon dioxide equivalent of methane), followed by the TVA (17.6 million metric tons carbon dioxide) and Middlesex Generating Company, LLC (9.3 million metric tons carbon dioxide equivalent of methane). These three project-level commitments account for 71 percent of total reported project-level commitments (Table 34).

Fidelity's commitment is related to its Tongue River project, which involves pre-mining degasification of coal deposits in the Powder River Basin of Wyoming and Montana. According to Fidelity, extraction of the methane, which is being sold to natural gas customers in large volumes, began in 2000. This project was reported as a commitment because the avoided methane emissions will not occur unless coal extraction begins sometime in the future. In the case of TVA, the project was described as "an increase in low emitting capacity," most likely a result of TVA's nuclear program. The Middlesex commitment was described as "landfill methane gas control and energy recovery to produce electric power."

Financial Commitments

Twenty-two companies, 18 of which were electric utilities, made a total of 35 financial commitments to reduce greenhouse gas emissions in the future. The total amount of funds promised was $20.6 million, of which $5.6 million was reported to have been expended in 2000. The single largest reported financial commitment to reduce greenhouse gas emissions was that of Noranda Aluminum, Inc., which committed to spend $5.5 million on a "carbon burnout plant" to make fly ash suitable for sale to cement companies, followed by the Ameren Corporation ($5.0 million), Minnesota Power ($3.0 million), and First Energy Corporation ($2.0 million). These four companies reported financial commitments combined accounted for 76 percent of the reported total for 2000 (Table 35). The single largest reported expenditure during 2000 was made by CLE Resources ($2.0 million), followed by Minnesota Power ($1.1 million), Noranda Aluminum, Inc. ($0.6 million), L´ORÉAL USA ($0.6 million), Ameren Corporation ($0.5 million), and Dynegy Midwest Generation, Inc. ($0.4 million). These six expenditures combined accounted for 93 percent of the total reported expenditures in 2000 to reduce greenhouse gas emissions (Table 36).

Table 34. Largest Reported Individual Project-Level Commitments To Reduce Greenhouse Gas Emissions, Data Year 2000

Reporter	Project Description	Carbon Dioxide Equivalent (Million Metric Tons)	Percent of Total Reported Project Commitments
Fidelity Exploration & Production Company	Tongue River Project: pre-mining degasification of coal deposits	87.1	54.3
Tennessee Valley Authority	Increase in low emitting capacity	17.6	11.0
Middlesex Generating Company, LLC	Landfill gas control and energy recovery to produce electric power	9.3	5.8
Commonwealth Edison Company	Landfill methane gas recovery	6.3	3.9
First Energy Corporation	Undertake supply side efficiency improvements	4.4	2.7
First Energy Corporation	Nuclear generation operation improvement	2.5	1.6
Alliant Energy	Modified forest management	2.4	1.5
New York Power Authority	NYPA customer energy services programs	2.3	1.4
Tennessee Valley Authority	Fuel switching	2.2	1.4
CMS Energy	Atlantic Methanol Production Company	2.0	1.2
Hawaiian Electric Company, Inc.	Annually purchase at least 500,000 MWh of renewable energy	2.0	1.2
Greater New Bedford Regional Refuse Mgt.	Landfill gas control and future utilization	1.9	1.2
Noranda Aluminum, Inc.	Reduction of PFC through anode effect reduction program	1.8	1.1
Alliant Energy	Other energy end-use projects/activities-electric	1.7	1.0
PacifiCorp	Other energy end-use projects/activities	1.3	0.8
North American Carbon, Inc.	Saint Felicien cogeneration project in Quebec, Canada	1.2	0.7
Santee Cooper	Cross Unit 2 retrofit	1.1	0.7
Total		**147.1**	**91.7**

Source: Energy Information Administration, Form EIA-1605.

Table 35. Largest Reported Individual Entity-Level Financial Commitments To Reduce Greenhouse Gas Emissions, Data Year 2000

Reporter	Industry	Financial Commitment (Dollars)	Voluntary Program Affiliation	Percent of Total Reported Financial Commitments
Noranda Aluminum Inc.	Primary Metals	5,500,000	Voluntary Aluminum Industrial Partnership	26.7
Ameren Corporation (formerly UE and CIPS)	Electric, Gas, and Sanitary Services	5,000,000	Climate Challenge	24.3
Minnesota Power	Electric, Gas, and Sanitary Services	3,039,000	Climate Challenge	14.8
CLE Resources	Holding and Other Investment	2,000,000	None	9.7
First Energy Corporation	Electric, Gas, and Sanitary Services	2,000,000	Climate Challenge	9.7
L´ORÉAL USA - Florence Manufacturing	Chemicals and Allied Products	600,000	Climate Wise Recognition Program	2.9
Dynegy Midwest Generation Inc.	Electric, Gas, and Sanitary Services	450,000	Climate Challenge	2.2
First Energy Corporation	Electric, Gas, and Sanitary Services	400,000	Climate Challenge	1.9
Conectiv Atlantic Generation (CAG)	Electric, Gas, and Sanitary Services	200,000	Climate Challenge	1.0
First Energy Corporation	Electric, Gas, and Sanitary Services	200,000	Climate Challenge	1.0
NiSource/NIPSCO	Electric, Gas, and Sanitary Services	200,000	Climate Challenge	1.0
L´ORÉAL USA - Florence Manufacturing	Chemicals and Allied Products	150,000	Climate Wise Recognition Program	0.7
Dynegy Midwest Generation Inc.	Electric, Gas, and Sanitary Services	105,000	Climate Challenge	0.5
TXU	Electric, Gas, and Sanitary Services	105,000	Climate Challenge	0.5
Baltimore Gas & Electric Company	Electric, Gas, and Sanitary Services	100,000	Climate Challenge	0.5
Entergy Services, Inc.	Electric, Gas, and Sanitary Services	100,000	Climate Challenge	0.5
Total		**20,149,000**		**97.9**

Source: Energy Information Administration, Form EIA-1605.

Table 36. Reported Entity-Level Financial Expenditures To Reduce Greenhouse Gas Emissions, Data Year 2000

Reporter	Industry	2000 Financial Expenditure (Dollars)	Voluntary Program Affiliation	Percent of Total Reported Financial Expenditures
CLE Resources	Holding and Other Investment	2,000,000	None	35.7
Minnesota Power	Electric, Gas, and Sanitary Services	1,122,000	Climate Challenge	20.0
Noranda Aluminum, Inc.	Primary Metals	601,843	Voluntary Aluminum Industrial Partnership	10.7
L´ORÉAL USA - Florence Manufacturing	Chemicals and Allied Products	600,000	Climate Wise Recognition Program	10.7
Ameren Corporation	Electric, Gas, and Sanitary Services	500,000	Climate Challenge	8.9
Dynegy Midwest Generation, Inc.	Electric, Gas, and Sanitary Services	400,000	Climate Challenge	7.1
NiSource/NIPSCO	Electric, Gas, and Sanitary Services	200,000	Climate Challenge	3.6
Central Hudson Gas & Electric Corporation	Electric, Gas, and Sanitary Services	50,000	Other Federal, State, and local programs	0.9
L´ORÉAL USA - Florence Manufacturing	Chemicals and Allied Products	50,000	Climate Wise Recognition Program	0.9
Entergy Services, Inc.	Electric, Gas, and Sanitary Services	20,000	Climate Challenge	0.4
TXU	Electric, Gas, and Sanitary Services	20,000	Climate Challenge	0.4
Duke Energy Corporation	Electric, Gas, and Sanitary Services	10,000	Climate Challenge	0.2
Dynegy Midwest Generation, Inc.	Electric, Gas, and Sanitary Services	10,000	Climate Challenge	0.2
Cleco Corporation	Electric, Gas, and Sanitary Services	5,000	Climate Challenge	0.1
NiSource/NIPSCO	Electric, Gas, and Sanitary Services	5,000	Climate Challenge	0.1
Xcel Energy	Electric, Gas, and Sanitary Services	5,000	Climate Challenge	0.1
Total		**5,598,843**		**100.0**

Source: Energy Information Administration, Form EIA-1605.

Glossary

Afforestation: Planting of new forests on lands that have not been recently forested.

Anaerobic lagoon: A liquid-based manure management system, characterized by waste residing in water to a depth of at least 6 feet for a period ranging between 30 and 200 days.

Associated gas: Natural gas that occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (dissolved gas).

Baseline period: The years 1987 through 1990 for which entity-level emissions may be reported.

Biofuels: Liquid fuels and blending components produced from biomass (plant) feedstocks, used primarily for transportation.

Biogas: A mixture of carbon dioxide and methane produced through bacterial action.

Biomass: Materials that are biological in origin, including organic material (both living and dead) from above and below ground, e.g., trees, crops, grasses, tree litter, roots, and animals and animal waste.

British thermal unit (Btu): A common unit used in measuring energy, equal to the amount of heat needed to raise the temperature of 1 pound of water by 1ºF.

Carbon sink: A reservoir that absorbs or takes up released carbon from another part of the carbon cycle. The four sinks, which are regions of the Earth within which carbon behaves in a systematic manner, are the atmosphere, terrestrial biosphere (usually including freshwater systems), oceans, and sediments (including fossil fuels).

Chlorofluorocarbons (CFCs): A family of inert, nontoxic, and easily liquefied chemicals used in refrigeration, air conditioning, packaging, and insulation, or as solvents or aerosol propellants.

Cogeneration: The sequential use of energy to generate electricity and another form of useful thermal energy, such as heat or steam.

Commercial scale: Application of a demonstrated technology at a cost-effective scale.

Commitment: An expressed intention to undertake an action or actions that will reduce greenhouse gas emissions, increase carbon sequestration, or achieve a stated emissions goal.

Conversion factor: A ratio used to translate units of one measurement system into corresponding units of another measurement system. (See EIA data products for specific conversion factors.)

Deforestation: The net removal of trees from forested land.

Emission coefficient/factor: A unique value for scaling emissions to activity data in terms of a standard rate of emissions per unit of activity (e.g., pounds of carbon dioxide emissions per unit of fossil fuel consumed).

Emissions: Anthropogenic releases of gases to the atmosphere. In the context of global climate change, they consist of radiatively important greenhouse gases (e.g., the release of carbon dioxide during fuel combustion).

Emissions, direct: Emissions from sources owned (wholly or in part) or leased by an entity.

Emissions, fugitive: Unintended leaks of gas from the processing, transmission, and/or transportation of fossil fuels.

Emissions, indirect: Emissions from sources not owned or leased by an entity that occur, wholly or in part, as a result of its activities.

Emission reduction: A decrease in annual greenhouse gas emissions.

Energy conservation: Activities that reduce end-use demand for energy by reducing the service demanded.

Entity: For the purposes of the Voluntary Reporting Program, an individual or organization that is a legal U.S. person (e.g., a U.S. citizen, resident alien, company, organization, or group incorporated under or recognized by U.S. law; or a Federal, State, or local government agency).

Entity boundary: Conceptually, a line drawn to encompass the emissions sources and sinks to be evaluated in an entity-level report. An entity boundary should include all the emissions sources and sinks owned (wholly or in part) or leased by the entity and, to the extent possible, other emissions sources and sinks affected by the entity's activities.

Entity-level reporting: The reporting of greenhouse gas emissions, emission reductions, and carbon sequestration for an entire entity.

Estimation method: The techniques, including key assumptions and data sources, used by the reporter to derive the reported emissions, emission reductions, or sequestration.

Foreign activities: All actions outside the United States, its territories, and trusts.

Fossil fuel: An energy source formed in the Earth's crust from decayed organic material. The common fossil fuels are petroleum, coal, and natural gas.

Fuel cycle: The entire set of sequential processes or stages involved in the use of fuel, including extraction, transformation, transportation, and combustion. Emissions generally occur at each stage of the fuel cycle.

Fuel switching: The substitution of one type of fuel for another. The fuel substitution may be either temporary (as in the case of a power plant that temporarily switches from coal to natural gas) or permanent (as in the case of a fleet operator who replaces gasoline-powered automobiles with electric cars).

Fugitive emissions: See Emissions, fugitive.

Global warming potential (GWP): An index used to compare the relative radiative forcing of different gases without directly calculating changes in their atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of 1 kilogram of a greenhouse gas to that from the emission of 1 kilogram of carbon dioxide over a fixed period of time, such as 100 years.

Gob: A zone of rubble created when the roof of a coal mine collapses behind the mining operations.

Greenhouse effect: The result of water vapor, carbon dioxide, and other atmospheric gases trapping radiant (infrared) energy, thereby keeping the Earth's surface warmer than it would otherwise be. Greenhouse gases within the lower levels of the atmosphere trap infrared radiation that would otherwise escape into space, and subsequent re-radiation of some of the energy back to the Earth maintains higher surface temperatures than would occur if the gases were absent. See Greenhouse gases.

Greenhouse gases: Those gases, such as water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Halogenated substance: A volatile compound containing halogens, such as chlorine, fluorine, or bromine.

Horizon year: The year in which a commitment to reduce greenhouse gas emissions or increase sequestration (reported on Schedule IV) is expected to be met.

Intergovernmental Panel on Climate Change (IPCC): A panel established jointly in 1988 by the World Meteorological Organization and the United Nations Environment Program to assess scientific information related to climate change and to formulate realistic response strategies.

Life cycle: The progression of a product through its service life. For most products, emissions and energy-consuming characteristics will be altered as they age.

Longwall mining: A technique of underground mining in which a cutting machine is pulled back and forth along a panel of coal 300 to 1,000 feet wide and as much as 2 miles long. As the panel is cut, the broken coal is removed by a conveyor, and movable roof supports advance, allowing the roof in mined-out areas to collapse.

Manure management: The method used to dispose of the solid waste produced by livestock and poultry.

Municipal solid waste: Residential solid waste and some nonhazardous commercial, institutional, and industrial wastes.

Ozone: A molecule made up of three atoms of oxygen. In the stratosphere, ozone occurs naturally and provides a protective layer shielding the Earth from harmful ultraviolet radiation. In the troposphere, it is a chemical oxidant, a greenhouse gas, and major component of photochemical smog.

Photosynthesis: The manufacture of carbohydrates and oxygen by plants from carbon dioxide and water in the presence of chlorophyll, with sunlight as the energy source. Carbon is sequestered and oxygen and water are released in the process.

Pilot project: A small-scale trial designed to test or demonstrate the efficiency or efficacy of a project.

Project: An action undertaken to reduce greenhouse gas emissions or sequester carbon.

Project boundary: Conceptually, a line drawn to encompass the emissions sources and sinks affected by a project. A project boundary should include all the significant and quantifiable effects of the project.

Project ID code: A unique code assigned by the Energy Information Administration to a reported project for tracking purposes.

Project-level reporting: Reporting on emission reductions or carbon sequestration achieved as a result of a specific action or group of actions.

Reconductoring: Replacement of existing conductors with large-diameter conductors to reduce line losses. Conductors (including feeders and transmission lines) are a major source of transmission and distribution system losses. In general, the smaller the diameter of the conductor, the greater its resistance to the flow of electric current, and the greater the consequent line losses.

Reference case: The emissions level to which current actual emissions levels are compared when emission reductions are calculated.

Reference case, basic: A reference case using actual historical emissions or sequestration values.

Reference case, modified: A reference case using projected emissions or sequestration values, representing the emissions level that would have occurred in the absence of reduction or sequestration efforts.

Reforestation: Replanting of forests on lands that have recently been harvested.

Reporter: An entity (see definition above) completing either Form EIA-1605 or Form EIA-1605EZ and submitting it to the Energy Information Administration.

Room and pillar mining: The most common method of underground coal mining, in which the mine roof is supported by coal pillars left at regular intervals.

Sequestered carbon: Carbon that is removed from the atmosphere and retained in a carbon sink (such as a growing tree) or in soil.

Sequestration: The fixation of atmospheric carbon dioxide in a carbon sink through biological or physical processes, such as photosynthesis.

Sink: See Carbon sink.

Third-party reporter: An authorized party that submits a report on behalf of two or more entities which have engaged in emissions-reducing or sequestration-increasing activities. Possible third-party reporters include trade associations reporting on behalf of members that have undertaken reduction projects.

Vhar metering: Phase shifters on watthour meters that measure reactive volt ampere hours or varhours.

Watt (W): The unit of electrical power equal to 1 ampere under a pressure of 1 volt. A watt is equal to 1/746 horsepower.

Appendix A

The Voluntary Reporting Program: A Developmental Overview

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The Voluntary Reporting Program: A Developmental Overview

Introduction

Rising global atmospheric concentrations of carbon dioxide, methane, nitrous oxide, and other "greenhouse gases" have been a subject of increasing scientific and policy concern for the past decade. Many scientists and policymakers believe that increasing atmospheric concentrations of these gases (thought to be caused by human activities, particularly, the combustion of fossil fuels) may cause significant long-term changes in global weather and climate by trapping more of the sun's heat in the atmosphere.

In 1992, President George Bush signed a multilateral treaty, the Framework Convention on Climate Change, which committed the United States to take steps, in conjunction with other signatory states, to ". . . achieve . . . stabilization of the greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[63]

As the Framework Convention was being negotiated, the Congress began to consider measures that would help the U.S. Government develop the national "commitment" required by the treaty. One such measure was Section 1605(b) of the Energy Policy Act of 1992, which requires the Energy Information Administration (EIA) to create reporting forms and a database for the voluntary reporting of emissions and reductions in emissions of greenhouse gases. The Voluntary Reporting Program was developed in a cooperative effort with potential reporters, the Department of Energy's Office of Policy, and the U.S. Environmental Protection Agency. The program permits individuals, corporations, and other organizations to report to the EIA on actions taken that have reduced emissions of greenhouse gases or increased the sequestration of carbon.

Reporters choose to undertake the effort of preparing their voluntary submissions for a variety of reasons, such as:

- To establish a public record of their contributions to achieving a national policy objective
- To provide the opportunity for others to benefit from their experience in reducing emissions
- To demonstrate their commitment to voluntary approaches to solving or ameliorating environmental conditions
- To record the activities undertaken pursuant to voluntary programs under President Clinton's Climate Change Action Plan
- To establish a basis for requesting consideration of prior actions in a possible future "credit for early reductions" program or a possible future regulatory scheme to stabilize or reduce national emissions of greenhouse gases.

Development of the Voluntary Reporting Program

The Voluntary Reporting Program is required by Section 1695(b) of the Energy Policy Act of 1992 (see box on page 2). About 3 years elapsed from the passage of the law, in October 1992, to the completion of the first reporting cycle. The development of the Voluntary Reporting Program consisted of three phases:

- Guidelines development (October 1992 to October 1994)
- Forms development (February 1994 to July 1995)
- First report cycle (July 1995 to March 1996).

Guidelines Development

The principal clauses of Section 1605(b) of the Energy Policy Act require the U.S. Department of Energy (DOE), in consultation with the U.S. Environmental Protection Agency (EPA), to issue guidelines for reporting

[63]United Nations, "Report of the Intergovernmental Negotiating Committee for a Framework on Convention for Climate Change on the Work of the Second Part of its Fifth Session, Held at New York from 30 April to 9 May 1992," UN Document A/AC.237/18, Part II (May 15, 1992), http://www.unfcc.de.

emissions of greenhouse gases. The EIA was then required to develop a reporting framework consistent with the guidelines. The information collected was to be accessible for public use.

The development of the guidelines was assigned to DOE's Office of Policy, which began a series of public workshops to gather information about public expectations of the program. The public workshops on the guidelines ran from September 1993 to March 1994 and were held in Washington, DC, Atlanta, GA, and Chicago, IL. The workshops spanned a range of issues related to the objectives of the Voluntary Reporting Program, the definition of a "credible" report, and methods of reporting.

Differing notions of the purpose of the Voluntary Reporting Program were expressed, as well as differing views about the nature and type of information to be collected. Many potential reporters tended to stress the notion that the reporting system should be "simple and flexible." They typically opposed suggestions to construct detailed "official" definitions of baselines, reporting entities, and coverage of reports. It was argued that such definitions were premature in an experimental program, would discourage companies from reporting, and would render the program relatively narrow.

Some commenters, who were not potential reporters, argued the reverse. They urged explicit and specific definitions of "who is responsible for an emission." The individuals and organizations holding these views hoped to elicit reports that revealed absolute and verifiable emission reductions.

Following the workshops, a public review draft of the guidelines was published in May 1994. After further public comment, final guidelines were published in October 1994.[64] The guidelines contain several broad themes that have shaped the program:

- The Department held that the primary objective of the program was "broad participation." Any U.S. "legal person" (i.e., individual, corporation, trade association, or private voluntary organization) may report.
- Within the confines of the statute, reporters were given nearly complete flexibility in crafting their reports. Reporters were free to define as they saw fit the nature of the reporting entity, the emissions and reductions to be reported, methods of calculating emissions and reductions, and the type of activity deemed to cause emission reductions.
- Reporters were to be permitted to report on activities both in the United States and abroad, so long as they distinguish between domestic and foreign activities.
- Reporters were to be encouraged to report both emissions and emission reductions as comprehensively as possible, accounting for both "direct" and "indirect" emissions.
- Reporters were to be encouraged to report on emissions and emission reductions for a range of greenhouse gases.
- Reporters were to report "achieved reductions," defined as emission reductions achieved since 1990. Reductions occurring prior to 1990 or reductions expected to occur in the future are not permitted.

The guidelines did not define "property rights" in emissions. For example, the emissions from generating electricity could be the responsibility of an electric utility or the purchaser of the electricity. By accepting the validity of differing possible interpretations of who "owns" emissions, reporters were given considerable flexibility in reporting on their greenhouse gas emissions and emission reduction activities. The guidelines explicitly recognized the possibility that, in the absence of clear "property rights," two or more organizations might report on the same emission reduction activity, an eventuality called "double reporting." The flexibility of the guidelines has, of necessity, resulted in a relatively complex reporting form and database.

Forms Development

The EIA developed, in parallel, reporting forms and a database consistent with the guidelines. In early November 1994, 2 weeks after the issuance of the final guidelines, the EIA issued draft forms for public review. The draft forms were pre-tested by several firms interested in reporting, including Niagara Mohawk Power, Houston Light & Power (now Reliant Energy), and General Motors. Many useful comments were received, both from pre-testers and from the public review process.

Following the public review, the EIA sent the forms to the Office of Management and Budget (OMB) for formal clearance under the Paperwork Reduction Act, a legal requirement for any Federal data collection exercise. The OMB requested further public comment and, after reviewing the forms, cleared them for public use in May 1995. After final editing and layout revisions to enhance readability, the EIA released the forms to the public in July 1995.

[64] U.S. Department of Energy, *Voluntary Reporting of Greenhouse Gases Under Section 1605(b) of the Energy Policy Act of 1992: General Guidelines;* and *Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases Under Section 1605(b) of the Energy Policy Act of 1992*, Volumes 1 and 2, DOE/PO-0028 (Washington, DC, October 1994), http://www.eia.doe.gov/oiaf/1605/guidelns.html.

The Voluntary Reporting Program and the Climate Change Action Plan

On April 21, 1993 (Earth Day), President Clinton committed the United States to stabilizing its emissions of greenhouse gases at 1990 levels by the year 2000. The methods by which the Government proposed to achieve this objective were described in the President's *Climate Change Action Plan*, published in October 1993.[65] That document spelled out a range of largely voluntary programs intended to limit emissions of greenhouse gases. The *Climate Change Action Plan* is updated yearly through the preparation and submission of the United States' *Climate Action Report*, under the annual requirement to the United Framework Convention on Climate Change. The most recent report, *The 1997 Climate Action Report*, was released in July 1997.[66]

As the President's Climate Change Action Plan got underway, managers of certain DOE- and EPA-sponsored voluntary emission reduction programs (as well as some participants) felt the need for a reporting system to record and describe the actions of participants in those programs. The 1605(b) Voluntary Reporting Program, already underway with an OMB-approved data collection instrument and a requirement to collect information about a broad range of emission reduction activities, was a useful vehicle for recording results of the voluntary reduction programs. Participants in the Climate Challenge program (for electric utilities) and the Climate Wise program (for manufacturing firms) were strongly encouraged to file reports with the Voluntary Reporting Program documenting their emission reduction efforts.[67]

Forms Design

The data collection forms for the Voluntary Reporting Program, as developed, endeavored to cover the complexity in categories of emissions required by the guidelines. To this end, the structure of the voluntary reporting database needed to be expansible to cover many different contingencies, including the following:

- Reporters ranged from some of the largest industrial firms in the United States to individual households.
- Reporters could report on particular actions they had taken to reduce emissions or on the emissions (and reductions) of their entire organizations.
- The statute required, and reporters requested, the ability to report on many different classes of actions that have the effect of reducing greenhouse gas emissions, ranging from energy conservation to carbon sequestration.
- The reporting format sought to identify areas where multiple reporting of the same project actually occurred, and to make possible a general assessment of the reliability and possible ownership of the reports.
- The lack of generally accepted accounting principles for greenhouse gas emissions required a design that permitted a variety of reporting formats. This led to ambiguities that the forms design tried to clarify.
- The guidelines permitted the reporting of foreign emission reduction actions.
- The guidelines permitted reporting on reductions for a range of greenhouse gases.
- Managers of voluntary programs asked the EIA to develop a mechanism for collecting participants' commitments to reduce future emissions.

The EIA developed two alternative reporting instruments: the long form (Form EIA-1605), which comprises four schedules (described in the box on page 78), and the short form (Form EIA-1605EZ). The short form is intended to cover reporting solely on emission reduction projects and for a single year only.

The text box on page 78 outlines the basic structure of the long form. The form has four schedules. The first schedule asks for the name and address of the reporter, along with some particulars about the report. The most fundamental distinction is between "project reporting" in Schedule II and "entity reporting" in Schedule III. Project reporters are reporting on specific actions they have taken to reduce emissions. Entity reporters are reporting on emissions and emission reductions for an entire organization. For example, during the seventh reporting cycle of the Voluntary Reporting Program (2000 data year), 100 reporters provided entity-level reports, and 183 reporters provided project-level reports. Sixty-two reporters filed both entity-level and project-level reports, while 38 reporters filed only entity-level reports. Within Schedule II, the report is further subdivided into ten sections, reflecting the diversity of anticipated reduction actions. Each section contains general

[65] President William J. Clinton, *The Climate Change Action Plan* (Washington, DC, October 1993), p. i, http://www.gcrio.org/USCCAP/toc.html.

[66] U.S. Department of State, *The 1997 Climate Action Report*, DOS/10496 (Washington DC, July 1997), http://www.state.gov/www/global/oes/97climate_report/index.html.

[67] Not all participants in those programs have filed 1605(b) reports. Many participants have promised to take actions in the future, which will not be reportable until the actions have produced results. Section 1605(b) obliges the EIA to receive reports of "achieved reductions," meaning the results of actions already taken. Further, many participants joined the voluntary programs after the close of the first reporting cycle in 1995. Finally, some voluntary program participants may have experienced difficulty in gathering together the necessary information to file their reports.

questions that are applicable to all ten sections, as well as other questions specific to the particular type of project, to help reporters and the EIA understand and describe the project.

In order to clarify what reporters are claiming as "their" emissions, the Voluntary Reporting Program generally distinguishes between "direct" and "indirect" emissions. A direct emission is defined as an emission from a facility actually owned by a reporter. An indirect emission is defined as an emission from a facility owned by someone else, but for which the reporter claims be responsibility. Some reporters reported only direct emissions and some reported only indirect emissions, depending on the nature of the project and the reporter's view on the ownership of the emission.

Schedule IV was added to assist participants in DOE- and EPA-sponsored voluntary programs in recording their commitments to reduce future emissions. Sixty-five firms reported on Schedule IV during the 2000 data reporting cycle. Most Schedule IV reporters were electric utilities participating in DOE's Climate Challenge program.

Twenty-eight percent of the reporting entities that filed Schedule IV information for the 2000 reporting cycle were classified under Standard Industrial Classification (SIC) codes other than SIC 49 (Electric, Gas, and Sanitary Services). They included Dow Chemical Company (SIC 28), Sunoco (SIC 29), Noranda Aluminum, Inc. (SIC 33), and IBM (SIC 36).

The Structure of Form EIA-1605

Schedule I. General Information

This schedule asks for the reporter's name, address, and type of entity, and whether the report contains confidential information.

Schedule II. Project Level Emissions and Reductions

This schedule covers reporting of specific actions that the reporter has taken that have reduced emissions. It is divided into ten parts, each covering a specific type of project. Each part requests general information about the location and nature of the project, emissions, emission reductions, and (if applicable) fuel or energy savings. Each part also asks a number of questions specific to the project type that will enhance the ability of data users to assess the emission reductions claimed.

Section 1	Electric Power Generation, Transmission, and Distribution
Section 2	Cogeneration and Waste Heart Recovery
Section 3	Energy End Use
Section 4	Transportation and Off-Road Vehicles
Section 5	Waste Treatment and Disposal—Methane
Section 6	Agriculture—Methane and Nitrous Oxide
Section 7	Oil and Natural Gas Systems and Coal Mining—Methane
Section 8	Carbon Sequestration
Section 9	Halogenated Substances
Section 10	Other Emission Reduction Projects

Schedule III. Entity Level Emissions and Reductions

This schedule covers reporting on the emissions of an entire entity. It requests direct emissions (Part Ia) and reductions in direct emissions (Part Ib) from sources such as stationary combustion, transportation, and other direct sources. Schedule III also requests indirect emissions (Part IIa) and reductions in indirect emissions (Part IIb) from sources such as power transactions, which include purchased power and electricity wholesaling, and other indirect sources. Carbon sequestered, total emissions, and total reductions in emissions (Parts III, IVa, and IVb, respectively) for the entire entity are also requested on Schedule III. It should also be noted that if reporting entities had both foreign and domestic emission reduction activities, they were requested to submit two separate copies of Schedule III, Parts I through III—one representative of their domestic emission reduction activities and the other representative of their foreign emission reduction activities.

Schedule IV. Commitments to Emission Reduction or Sequestration Projects

This schedule permits reporters to outline commitments to reduce emissions some time in the future, generally as part of a Government-sponsored voluntary program. Commitments can take several forms. The reporter can describe entity-level commitments to reduce greenhouse gas emissions (Section 1). Section 2 allows the reporter to report on financial commitments in terms of dollars pledged toward emission reduction or sequestration activities or research. Section 3 can be used to report on commitments to undertake specific actions or projects whose intended objective is to reduce greenhouse gas emissions or sequester carbon.

Appendix B

Summary of Reports Received

Table B1. Reporting Entities, Data Year 2000

Reporter Name	Sector	Type of Form	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
8309 Tujunga Avenue Corporation	Alternative Energy	1605	5	Yes	No
A&N Electric Cooperative	Electric Power	1605	2	No	Yes
Abe Krasne Home Furnishings, Inc.	Other	1605		Yes	No
Advanced Micro Devices	Industry	1605EZ	7	N/A	N/A
AES Hawaii, Inc.	Electric Power	1605	1	Yes	No
AES Shady Point	Electric Power	1605	1	Yes	No
AES Thames	Electric Power	1605	1	Yes	Yes
AES Warrior Run, Inc.	Electric Power	1605	1	Yes	No
Ajinomoto USA, Inc.	Industry	1605		Yes	No
Alabama Biomass Partners, Ltd	Alternative Energy	1605EZ	1	N/A	N/A
Alcan Ingot, Sebree Aluminum Plant	Industry	1605	1	Yes	Yes
Allegheny Energy, Inc.	Electric Power	1605	43	Yes	Yes
Allergan, Inc.	Industry	1605	22	Yes	Yes
Alliant Energy	Electric Power	1605	36	Yes	Yes
Ameren Corporation (formerly UE and CIPS)	Electric Power	1605	25	No	Yes
American Electric Power, Inc.	Electric Power	1605	62	No	No
American Forests	Agriculture	1605	164	No	No
American Municipal Power - Ohio	Electric Power	1605	24	No	Yes
Anoka Municipal Utility	Electric Power	1605EZ	4	N/A	N/A
Arizona Electric Power Cooperative, Inc.	Electric Power	1605EZ	4	N/A	N/A
Arizona Portland Cement Co.	Industry	1605	11	Yes	Yes
Arizona Public Service Company	Electric Power	1605		Yes	Yes
Arthur Rypinski & Jacquelyn Porth	Other	1605	5	Yes	No
Asheville Landfill Gas, LLC	Alternative Energy	1605	1	No	No
Atlas Paper Mills	Industry	1605	4	No	Yes
Austin Energy	Electric Power	1605EZ	7	N/A	N/A
Austin Parks & Rec. Dept.- Urban Forestry Program	Other	1605	1	No	No
Austin Quality Foods, Inc.	Industry	1605		Yes	No
Avista Utilities	Electric Power	1605	4	No	No
Azdel, Inc	Industry	1605		Yes	No
Baltimore Gas & Electric Company	Electric Power	1605	23	Yes	Yes
BARC Electric Cooperative	Electric Power	1605	2	No	No
Baxter Healthcare Inc.	Industry	1605		Yes	No
The Bentech Group of Delaware, Inc.	Alternative Energy	1605	4	No	No
Bethlehem Steel Corporation	Industry	1605		Yes	No
Biomass Partners, LP	Alternative Energy	1605EZ	1	N/A	N/A
Black Warrior Methane Corp.	Alternative Energy	1605	4	Yes	No
BP	Industry	1605	7	Yes	Yes
Burlington County Board of Chosen Freeholders	Other	1605	2	No	No
Calaveras Cement Company	Industry	1605	1	Yes	No
California Portland Cement Co. - Colton Plant	Industry	1605	8	Yes	Yes
California Portland Cement Co. - Mojave Plant	Industry	1605	6	Yes	Yes
Cargill, Inc. - Oil Seeds Division	Industry	1605		Yes	No
Carolina Power & Light Company	Electric Power	1605	1	No	No

Table B1. Reporting Entities, Data Year 2000

Reporter Name	Sector	Type of Form	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Catawba Landfill Gas, LLC	Alternative Energy	1605	1	No	No
Cedar Falls Utilities	Electric Power	1605	15	No	No
Central Hudson Gas & Electric Corporation	Electric Power	1605	8	Yes	Yes
Choptank Electric Cooperative	Electric Power	1605	1	No	No
Cinergy Corp.	Electric Power	1605	37	Yes	No
City of Edmond, Oklahoma, Electric Department	Electric Power	1605EZ	3	N/A	N/A
City of Palo Alto	Electric Power	1605EZ	12	N/A	N/A
CLE Resources	Industry	1605	9	No	Yes
Cleco Corporation	Electric Power	1605	6	No	Yes
CMS Energy	Electric Power	1605	6	Yes	Yes
Columbia Falls Aluminum Company, LLC	Industry	1605	2	Yes	No
CommonWealth Bethlehem Energy, LLC	Alternative Energy	1605	1	Yes	No
Commonwealth Edison Company (ComEd)	Electric Power	1605	21	No	Yes
CommScope	Industry	1605		Yes	No
Community Electric Cooperative	Electric Power	1605	1	No	No
Conectiv Atlantic Generation (CAG)	Electric Power	1605	8	No	No
Conectiv Delmarva Generation	Electric Power	1605	16	No	Yes
Consol Coal Group	Industry	1605		Yes	No
Consolidated Edison Company of New York, Inc.	Electric Power	1605	3	Yes	Yes
County Sanitation Districts of Los Angeles County	Alternative Energy	1605	2	No	No
Danaher Controls	Industry	1605		Yes	No
DeBourgh Manufacturing Company	Industry	1605EZ	W	N/A	N/A
Delaware Electric Cooperative	Electric Power	1605	1	No	No
Delaware Solid Waste Authority	Alternative Energy	1605	4	No	No
Delta Electric Power Association	Electric Power	1605EZ	5	N/A	N/A
Deptford Electric Company, LLC	Alternative Energy	1605	1	Yes	No
Dominion Generation	Alternative Energy	1605	2	No	No
The Dow Chemical Company	Industry	1605	4	Yes	Yes
Doxey Furniture Corporation	Industry	1605		Yes	No
Drummond Company, Inc.	Industry	1605	1	No	No
DTE Energy/ Detroit Edison	Electric Power	1605	37	Yes	No
Duke Energy Corporation	Electric Power	1605	15	Yes	Yes
Dynegy Midwest Generation Inc.	Electric Power	1605	29	Yes	Yes
El Paso Production Company	Alternative Energy	1605	1	No	No
The Empire District Electric Co.	Electric Power	1605	6	No	No
Energy Management Partners, LP	Alternative Energy	1605EZ	2	N/A	N/A
Energy Northwest	Electric Power	1605EZ	1	N/A	N/A
Entergy Services, Inc.	Electric Power	1605	31	Yes	Yes
Environmental Synergy, Inc.	Agriculture	1605EZ	1	N/A	N/A
Fidelity Exploration & Production Company	Alternative Energy	1605	1	No	Yes
FirstEnergy Corporation	Electric Power	1605	31	Yes	Yes
Florida Power Corporation	Electric Power	1605		Yes	No
Florida Transport 82	Industry	1605	6	No	Yes
FPL Group	Electric Power	1605	9	Yes	Yes
General Motors Corporation	Industry	1605	3	Yes	No
Generating Resource Recovery	Electric Power	1605	4	No	No

Table B1. Reporting Entities, Data Year 2000

Reporter Name	Sector	Type of Form	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Partners, LP					
Golden Valley Electric Association, Inc	Electric Power	1605EZ	4	N/A	N/A
GPU, Inc.	Electric Power	1605	38	No	No
Granger Electric Company	Alternative Energy	1605	9	No	No
Greater Caribbean Energy & Environment Foundation	Agriculture	1605EZ	6	N/A	N/A
Greater New Bedford Regional Refuse Mgt District	Alternative Energy	1605	1	Yes	Yes
Hackensack Meadowlands Development Com.	Alternative Energy	1605	5	Yes	No
Hanes Dye and Finishing	Industry	1605		Yes	No
Hawaiian Electric Company, Inc.	Electric Power	1605	12	Yes	Yes
Highland Industries, Inc.	Industry	1605		Yes	No
IBM	Industry	1605		Yes	No
Integrated Waste Services Association	Alternative Energy	1605	1	Yes	No
International Truck and Engine Corporation	Industry	1605		Yes	Yes
Iredell Landfill Gas, LLC	Alternative Energy	1605	1	No	No
J.M. Gilmer and Company, Inc.	Agriculture	1605	3	No	No
JEA	Electric Power	1605EZ	4	N/A	N/A
Johnson & Johnson	Industry	1605	10	Yes	No
KeySpan Energy Corporation	Electric Power	1605		Yes	No
L′ORÉAL USA - Florence Manufacturing	Industry	1605		Yes	Yes
Lafarge U.S. Cementitious	Industry	1605		Yes	No
Landfill Energy Systems	Alternative Energy	1605	13	No	No
Lehigh Portland Cement Company	Industry	1605	6	Yes	No
LFG Energy, Inc.	Alternative Energy	1605	2	No	No
Litton Poly-Scientific Clifton Precision	Industry	1605		Yes	No
Los Angeles Department of Water and Power	Electric Power	1605	21	Yes	Yes
Lower Colorado River Authority	Electric Power	1605	6	Yes	Yes
Lucent Technologies Inc.	Industry	1605	22	Yes	Yes
Lynchburg Gas Producers, LLC	Alternative Energy	1605	1	No	No
M.J. SOFFE COMPANY	Industry	1605		Yes	No
Madison County Depart. of Solid Waste & Sanitation	Alternative Energy	1605	3	No	No
Majestic Metals, Inc.	Industry	1605EZ	3	N/A	N/A
Mallinckrodt, Inc.	Industry	1605		Yes	No
Maple Springs Laundry	Other	1605		Yes	No
McNeil Generating Station	Electric Power	1605		Yes	No
Mead Johnson Nutls/Bristol-Meyers Squibb	Industry	1605	2	No	No
Mecklenburg Electric Cooperative	Electric Power	1605	1	No	No
Michigan CAT	Industry	1605	2	No	No
Middlesex Generating Company, LLC	Alternative Energy	1605	3	Yes	Yes
Miller Brewing Company	Industry	1605		Yes	No
Minnesota Power	Electric Power	1605	8	No	Yes
Minnesota Resource Recovery Association	Other	1605EZ	3	N/A	N/A
Moorhead Public Service	Electric Power	1605EZ	6	N/A	N/A
Motorola Austin	Industry	1605		Yes	Yes
Nashville Electric Service	Electric Power	1605EZ	8	N/A	N/A

Table B1. Reporting Entities, Data Year 2000

Reporter Name	Sector	Type of Form	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
National By-Products Inc	Industry	1605	1	No	No
National Grid USA	Electric Power	1605	8	No	No
National Spinning Co., Inc.	Industry	1605		Yes	No
Natural Power, Inc.	Alternative Energy	1605	1	No	No
NC Muni Landfill Gas Partners, LLC	Alternative Energy	1605	1	No	No
Nebraska Public Power District	Electric Power	1605EZ	9	N/A	N/A
NEO Corporation	Alternative Energy	1605	34	No	No
New York Power Authority	Electric Power	1605		Yes	Yes
Newton Landfill Gas, LLC	Alternative Energy	1605	1	No	No
Niagara Mohawk Power Corporation	Electric Power	1605	14	Yes	Yes
NiSource/NIPSCO	Electric Power	1605	30	Yes	Yes
Noranda Aluminum Inc.	Industry	1605	1	No	Yes
North American Carbon, Inc.	Alternative Energy	1605	4	No	Yes
North Carolina Biomass Partners	Alternative Energy	1605EZ	1	N/A	N/A
North Carolina Electric Membership Corporation	Electric Power	1605EZ	1	N/A	N/A
Northern Neck Electric Cooperative	Electric Power	1605	2	No	No
Northern Virginia Electric Cooperative	Electric Power	1605	2	No	No
Northwest Fuel Development, Inc.	Alternative Energy	1605	1	No	No
NRG Energy Inc	Electric Power	1605	3	No	No
Oak Creek Energy Systems Inc.	Alternative Energy	1605	1	No	No
Ocean County Landfill Corporation	Alternative Energy	1605	2	No	No
Old Dominion Electric Cooperative	Electric Power	1605	2	No	No
Omaha Public Power District	Electric Power	1605EZ	10	N/A	N/A
Pacific Energy Operating Group, LP	Electric Power	1605	4	No	No
Pacific Natural Energy, LLC	Alternative Energy	1605	18	Yes	Yes
Pacific Recovery Corporation	Alternative Energy	1605	6	No	No
PacifiCorp	Electric Power	1605	39	Yes	Yes
Pak-Lite, Inc. - Mebane Plant	Industry	1605		Yes	No
Palmer Capital Corporation	Alternative Energy	1605	10	Yes	No
PECO Energy Company	Electric Power	1605	14	Yes	Yes
PEI Power Corp	Alternative Energy	1605	1	Yes	No
Penn Compression Moulding, Inc.	Industry	1605		Yes	No
PG&E Corporation	Electric Power	1605	23	Yes	No
Pharmacia & Upjohn Caribe, Inc.	Industry	1605EZ	5	N/A	N/A
Pitt Landfill Gas, LLC	Alternative Energy	1605	1	No	No
Platte River Power Authority & 4 owner cities	Electric Power	1605	26	No	No
Portland General Electric Co.	Electric Power	1605	24	Yes	No
PPL CORPORATION	Electric Power	1605	27	Yes	Yes
Pratt & Whitney North Berwick	Industry	1605	43	Yes	No
Prince George Electric Cooperative	Electric Power	1605	1	No	No
Public Service Company of New Mexico	Electric Power	1605	4	No	Yes
Public Service Enterprise Group	Electric Power	1605	13	Yes	No
Public Utility District No. 1 of Snohomish County	Electric Power	1605	9	No	No
Quad/Graphics, Inc.	Industry	1605	6	No	No
Rangely Weber Sand Unit	Industry	1605	1	No	No
Rappahannock Electric Cooperative	Electric Power	1605	3	No	No

Table B1. Reporting Entities, Data Year 2000

Reporter Name	Sector	Type of Form	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Reliant Energy - HL&P	Electric Power	1605	5	Yes	Yes
Republic Metals Corporation	Industry	1605		Yes	No
Rolls-Royce Corporation	Industry	1605	4	Yes	No
Sacramento Municipal Utility District	Electric Power	1605	7	Yes	No
Salt River Project	Electric Power	1605EZ	19	N/A	N/A
Santee Cooper	Electric Power	1605	10	Yes	Yes
Seattle City Light	Electric Power	1605	19	Yes	No
SeaWest Windpower, Inc.	Alternative Energy	1605	6	No	No
Seminole Electric Cooperative, Inc.	Electric Power	1605EZ	4	N/A	N/A
Seneca Energy, Inc.	Alternative Energy	1605	2	No	No
Separation Technologies, Inc	Industry	1605EZ	3	N/A	N/A
Shenandoah Valley Electric Cooperative	Electric Power	1605	3	No	No
Sherry Manufacturing	Industry	1605	3	No	Yes
Shrewsbury Electric Light Plant	Electric Power	1605EZ	2	N/A	N/A
Siemens Power Transmission & Distribution, Inc.	Industry	1605		Yes	No
South Carolina Electric & Gas Company	Electric Power	1605	13	No	Yes
Southeastern Biomass Partners, LP	Alternative Energy	1605EZ	1	N/A	N/A
Southern California Edison Co.	Electric Power	1605	12	No	No
Southern Company	Electric Power	1605	28	Yes	Yes
Southside Electric Cooperative	Electric Power	1605	1	No	No
Steuben Rural Electric Co-op	Electric Power	1605EZ	10	N/A	N/A
Sunoco, Inc.	Industry	1605		Yes	Yes
Tampa Electric Company	Electric Power	1605	7	Yes	Yes
Tennessee Valley Authority	Electric Power	1605	22	Yes	Yes
Texaco, Inc.	Industry	1605EZ	1	N/A	N/A
Tucson Electric Power Company	Electric Power	1605	16	No	Yes
TXU	Electric Power	1605	22	No	Yes
U. S. Steel Mining Company, LLC	Alternative Energy	1605	2	No	No
U.S. Department of Energy- Office of Solar	Other	1605	1	No	No
Unocal Corporation	Industry	1605	1	No	No
Utah Municipal Power Agency	Electric Power	1605EZ	7	N/A	N/A
Valdese Manufacturing Company	Industry	1605		Yes	No
Vermont Public Power Supply Authority	Electric Power	1605	13	No	No
The Virkler Company	Industry	1605		Yes	No
Waverly Light & Power Company	Electric Power	1605	9	Yes	Yes
Western Resources, Inc.	Electric Power	1605	54	No	Yes
Wisconsin Electric Power Co.	Electric Power	1605	19	No	Yes
Wisconsin Public Power Inc.	Electric Power	1605EZ	25	N/A	N/A
World Wood Co.	Industry	1605		Yes	No
Wyeth-Lederle Vaccines	Industry	1605		Yes	No
Xcel Energy	Electric Power	1605	34	No	Yes
Zahren Alternative Power Corporation	Alternative Energy	1605EZ	40	N/A	N/A
Zeeland Board of Public Works	Electric Power	1605EZ	3	N/A	N/A
Total Number of Projects Reported for 2000			1882		
Total Number of Entities Reporting on Schedule			**183**	**100**	**65**

Notes: W = Data Withheld
Source: Energy Information Administration, Forms EIA-1605 and EIA-1605b.

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
8309 Tujunga Avenue Corporation										
Indirect										18,450
8309 Tujunga Avenue Corporation										
Direct										379,965
A&N Electric Cooperative										
Indirect		1	85	169	169	2,577	2,566	3,581	3,312	5,449
Advanced Micro Devices										
Total (EZ)										1,972
AES Hawaii, Inc.										
Sequestration		1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000
AES Shady Point										
Sequestration			4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000
AES Thames										
Sequestration	550,000	70,000	290,000	370,000	480,000	440,000	440,000	590,000	530,000	370,000
AES Warrior Run, Inc.										
Indirect						2,926	15,518	30,562	31,708	20,017
Alabama Biomass Partners, Ltd										
Total (EZ)										64,614
Alcan Ingot, Sebree Aluminum Plant										
Direct	0	0	0	0	0	0	0	112,782	78,374	-24,838
Allegheny Energy, Inc.										
Direct	158,688	240,497	330,730	526,288	812,086	963,417	1,040,641	1,312,476	1,241,357	1,381,739
Indirect	11,209	29,542	37,098	39,192	70,262	68,309	98,365	162,706	261,557	244,824
Sequestration		66	66	66	4,278	4,278	5,100	5,116	5,454	1,491
Allergan, Inc.										
Direct					0	0	0	552	552	552
Indirect	0	0	0	0	116	116	444	3,495	4,390	6,046
Alliant Energy										
Direct	60,096	96,708	252,654	407,818	653,130	782,098	948,079	1,095,118	1,272,630	1,727,301
Indirect	17,835	27,971	41,300	59,367	73,045	411,234	442,854	476,094	750,845	1,015,702
Sequestration	17	28,203	28,257	28,327	29,617	29,715	30,227	30,151	30,784	30,490
Ameren Corporation (formerly UE and CIPS)										
Direct	1,932,744	117,298	433,327	2,042,924	363,408	1,029,094	1,111,638	530,338	784,760	2,152,628
Indirect	921	1,166	2,643	5,651	15,949	34,833	67,604	85,680	118,287	119,794
Sequestration								814	755	158
American Electric Power, Inc.										
Direct	4,161,585	-3,217,946	5,599,899	27,673	4,845,066	7,528,277	2,327,361	-7,401,966	-7,259,483	-2,644,214
Indirect	223,425	295,977	346,900	612,498	586,185	558,641	664,270	663,011	735,762	710,040
Sequestration	2,756	4,075	6,032	10,230	27,481	49,364	1,103,419	1,128,225	1,148,385	1,147,764
American Forests										
Sequestration	2,925	4,479	8,872	18,753	24,860	33,624	38,650	52,320	69,767	108,880
American Municipal Power - Ohio										
Direct	31,716	68,091	141,710	183,110	162,948	177,855	214,321	251,533		
Indirect	84,729	157,550	219,725	128,630	151,375	61,535	213,293	85,140	215,914	352,777
Sequestration	2	5	8	33	78	125	179	222	266	310
Anoka Municipal Utility										
Total (EZ)										40
Arizona Electric Power Cooperative, Inc.										
Total (EZ)										61,654
Arizona Portland Cement Co.										
Direct		22,543	35,583	29,663	51,692	34,775	54,636	61,389	70,151	42,575
Indirect		2,483	3,681	4,507	5,901	8,014	8,403	7,057	11,644	33,474
Arthur Rypinski & Jacquelyn Porth										
Direct	2	2	3	4	4	4	4	4	4	4
Indirect			0	1	1	1	1	1	1	1

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Asheville Landfill Gas, LLC										
Direct							32,800	94,353	82,752	87,926
Indirect							0	4,692	3,724	7,959
Atlas Paper Mills										
Direct								110	278	1,018
Indirect								7	10	12
Austin Energy										
Total (EZ)										1,150,969
Austin Parks & Rec. Dept.- Urban Forestry Program										
Sequestration										9
Avista Utilities										
Direct									6,246	10,849
Indirect				22	41	68	57	99	3,239	3,613
Baltimore Gas & Electric Company										
Direct	1,495	1,494,152	3,021,310	2,321,116	3,961,994	3,297,031	4,315,401	4,558,427	5,051,855	5,553,721
Indirect			88,089	137,910	136,510	116,537	119,559	138,295	157,943	250,048
Sequestration					1,203	1,203	1,130	949	881	252
BARC Electric Cooperative										
Indirect	392	668	1,536	898	1,392	1,178	2,430	3,386	1,798	2,445
Biomass Partners, LP										
Total (EZ)										92,949
Black Warrior Methane Corp.										
Direct	5,090,683	4,774,846	5,319,950	4,257,033	4,615,539	4,330,416	4,425,353	5,023,622	5,594,787	5,242,457
BP										
Direct	0	353,367	566,665	740,436	1,064,126	1,362,135	1,737,478	1,995,365	2,237,843	2,143,508
Sequestration							102,980	102,980	102,980	102,980
Burlington County Board of Chosen Freeholders										
Direct	679	1,313	1,932	2,559	3,157	9,919	76,519	279,874	195,196	201,044
Indirect	16,797	21,787	24,599	27,438	29,448	32,856	37,608	43,220	44,643	30,496
Calaveras Cement Company										
Direct				0	73,989	94,575	112,899	94,285	91,866	78,846
Indirect				0	4,238	5,850	8,505	9,145	4,904	2,821
California Portland Cement Co. - Colton Plant										
Direct	26,183	6,801	63,738	-11,818	-4,053	53,589	40,322	42,328	18,868	65,492
Indirect	938	1,296	3,571	2,773	3,457	4,959	5,405	3,823	4,040	4,450
California Portland Cement Co. - Mojave Plant										
Direct	11,929	79,005	44,691	97,384	51,690	32,403	47,533	66,489	37,557	36,184
Indirect	1,341	7,422	7,333	10,620	8,724	8,559	7,209	8,429	7,383	6,801
Carolina Power & Light Company										
Direct				3,493,951	4,906,992	5,182,056	5,595,117	6,974,302	7,403,076	8,163,018
Catawba Landfill Gas, LLC										
Direct								39,894	96,502	93,080
Indirect								0	11,397	
Cedar Falls Utilities										
Direct	8,695	9,406	8,643	9,416	12,870	10,358	11,791	13,161	16,174	15,086
Indirect	319	581	843	1,082	1,170	1,444	1,934	2,254	2,664	3,265
Sequestration	1	1	2	2	4	7	10	12	16	25
Central Hudson Gas & Electric Corporation										
Direct	7	415,949	170,789	386,081	469,343	172,227	339,785	251,107	309,953	175,811
Indirect	718	775	4,743	13,039	27,019	14,967	29,467	34,577	41,300	38,167
Choptank Electric Cooperative										
Indirect	9,752	14,820	2,233	29,061	25,420	23,886	29,005	19,750	19,734	10,667
Cinergy Corp.										
Direct	120	95,407	194,297	420,238	1,257,648	1,635,386	1,468,161	1,630,361	1,571,487	1,557,252
Indirect	63,888	519,314	467,617	755,896	662,948	854,346	707,002	728,513	712,535	737,772
Sequestration	2	24	284	511	169,479	169,794	170,722	170,892	173,669	30,658

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
City of Edmond, Oklahoma, Electric Department										
Total (EZ)										2,472
City of Palo Alto										
Total (EZ)										3,715
CLE Resources										
Indirect						340	811	1,396	8,669	12,297
Cleco Corporation										
Sequestration					1,805	1,805	2,218	2,271	2,457	717
CMS Energy										
Direct	1,736,624	1,726,976	391,584	1,390,986	1,763,273	2,267,261	2,866,543	2,459,804	2,199,141	2,859,394
Indirect						6,578	104,122	73,517	46,438	141,855
Columbia Falls Aluminum Company, LLC										
Indirect						81	81	81	81	712
CommonWealth Bethlehem Energy, LLC										
Direct								38,339	73,702	112,684
Commonwealth Edison Company (ComEd)										
Direct	96,602	92,575	300,649	838,515	986,399	726,922	1,233,540	1,406,966	1,154,141	366
Indirect	498,539	476,622	675,685	799,723	1,028,821	1,172,628	1,372,533	2,067,798	2,039,793	1,854,088
Sequestration					349	483	537	562	2,311	3,894
Community Electric Cooperative										
Indirect	331	729	1,291	1,450	2,495	2,977	2,648	3,093	2,296	3,228
Conectiv Atlantic Generation (CAG)										
Direct		156,070	217,970	208,840	249,890	80,410	77,010	56,502	87,852	64,302
Indirect				23,920	21,440	22,230	23,680	11,685	14,861	15,285
Sequestration								0	6	8
Conectiv Delmarva Generation										
Direct	131,031	143,264	469,359	888,551	1,433,207	1,379,883	812,513	599,800	1,052,398	473,621
Indirect	1,068	16,832	3,901	6,504	10,132	18,884	26,287	27,392	28,092	22,795
Sequestration	14	30	50	73	1,301	1,331	1,289	1,144	1,111	451
Consolidated Edison Company of New York, Inc.										
Direct	717,583	1,133,341	1,586,610	1,608,376	1,456,657	1,594,610	943,144	1,880,247	1,596,344	434,368
County Sanitation Districts of Los Angeles County										
Direct								4,399,535	4,248,470	4,170,710
Indirect								187,706	192,282	212,214
Delaware Electric Cooperative										
Indirect	12,890	14,524	25,241	12,397	23,990	25,485	18,172	23,712	26,407	40,177
Delaware Solid Waste Authority										
Direct					110,022	318,594	401,242	432,354	431,397	374,280
Delta Electric Power Association										
Total (EZ)										30,627
Deptford Electric Company, LLC										
Direct							0	158,335	296,738	0
Dominion Generation										
Direct	4,924,666	4,410,697	3,809,520	6,361,163	6,087,394	7,159,621	7,902,529	8,042,549	9,035,444	9,054,485
Drummond Company, Inc.										
Direct										5,018
Indirect										5,018
DTE Energy/ Detroit Edison										
Direct	-645,223	526,734	1,495,067	-6,427,801	-1,557,140	-1,823,155	-792,710	1,107,553	3,140,348	1,952,135
Indirect	-1,199	157,603	379,470	557,598	815,348	1,411,923	2,248,375	3,667,596	4,548,356	5,716,772
Sequestration					167,981	187,131	202,941	223,937	235,628	103,534
Duke Energy Corporation										
Direct	7,898,659	6,883,847	6,858,749	9,350,458	12,640,570	5,524,723	3,977,240	12,017,898	13,142,008	14,809,531
Indirect	-33,173	-15,919	29,057	72,973	166,484	126,998	233,028	303,751	154,306	134,201
Sequestration					1,203	1,203	2,176	2,642	3,152	795

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Dynegy Midwest Generation Inc.										
Direct	1,934	39,385	64,818	173,310	296,271	259,458	278,559	349,214	119,006	128,828
Indirect		7,038	4,582	3,807	4,260	7,714	2,087	3,682	10,847	70,239
Sequestration					4,814	11,079	23,176	34,689	47,818	90,748
El Paso Production Company										
Direct						1,024,755	2,335,385	3,372,951	3,727,681	3,227,040
Energy Management Partners, LP										
Total (EZ)										673,338
Energy Northwest										
Total (EZ)										1,570,000
Entergy Services, Inc.										
Direct	447,503	427,207	804,472	737,733	2,514,081	2,863,454	5,601,172	6,432,942	3,748,616	5,941,437
Indirect	70,418	83,249	94,393	120,298	227,757	230,687	267,217	298,035	333,864	289,077
Sequestration					2,407	22,365	46,377	66,981	68,000	56,474
Environmental Synergy, Inc.										
Total (EZ)										0
Fidelity Exploration & Production Company										
Direct										18,382
FirstEnergy Corporation										
Direct	3,407,342	4,283,321	1,173,271	2,051,070	5,379,445	3,806,134	4,956,931	10,499,321	10,415,952	14,235,393
Indirect	58,283	60,471	65,570	53,721	50,704	60,544	65,096	116,923	144,643	94,462
Sequestration		10	23	37	12,084	12,097	21,834	18,388	17,097	3,703
Florida Transport 82										
Direct					198	198	198	198	284	284
Indirect					39	39	61	91	92	103
FPL Group										
Direct								-110,848	-109,681	-109,360
Indirect								78,968	318,326	648,411
Sequestration					3,008	3,008	2,824	2,373	2,203	461
General Motors Corporation										
Direct	46,600	168,759	243,665	289,451	210,320	481,951	633,297	899,308	808,750	803,960
Indirect	66,191	249,429	351,451	420,055	280,802	419,009	536,531	863,907	763,878	719,151
Generating Resource Recovery Partners, LP										
Direct										133,396
Indirect										325,748
Golden Valley Electric Association, Inc										
Total (EZ)										13,310
GPU, Inc.										
Direct	281,532	2,707,984	504,564	658,563	779,166	708,359	812,248	920,829	900,952	984,440
Indirect	198,677	199,550	184,743	185,184	160,591	147,971	416,326	639,529	829,975	843,364
Sequestration		2	3	5	6,024	6,026	7,752	7,333	7,508	1,722
Granger Electric Company										
Direct	-6,623	-8,051	-14,880	-35,940	-50,901	-60,821	-68,561	-72,399	170,183	329,082
Indirect	111,200	123,415	172,189	370,595	513,555	587,040	649,156	686,850	702,338	707,789
Greater New Bedford Regional Refuse Mgt District										
Direct										65,563
Hackensack Meadowlands Development Com.										
Direct	324,941	368,274	394,915	378,381	370,838	397,577	413,896	871,905	813,857	735,112
Hawaiian Electric Company, Inc.										
Direct						16,731	50,271	45,220	45,892	38,486
Sequestration					1,203	1,203	1,130	949	881	184
Integrated Waste Services Association										
Direct	-7,260,856	-7,714,656	-7,714,656	-7,714,656	-7,806,113	-7,897,008	-7,806,148	-7,806,177	-8,532,238	-9,438,949
Indirect	13,725,220	14,880,113	15,213,582	15,547,050	18,530,980	19,603,404	19,393,158	19,822,052	21,719,492	20,804,366
Iredell Landfill Gas, LLC										
Direct							26,234	59,740	88,968	88,581

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
J.M. Gilmer and Company, Inc.										
Sequestration					298	584	609	998	3,583	3,867
JEA										
Total (EZ)										344,299
Johnson & Johnson										
Direct	0	19,336	28,946	32,673	38,007	42,138	49,938	57,084	70,710	74,615
Indirect	4,447	18,043	50,275	78,747	98,961	136,794	157,651	173,138	191,737	196,849
Landfill Energy Systems										
Direct	112,818	387,822	600,147	691,015	679,185	686,216	919,156	1,026,800	1,195,287	1,304,454
Lehigh Portland Cement Company										
Direct				-61,824	395,431	402,756	428,096	466,325	505,017	409,705
Indirect				-65,113	57,853	48,268	44,593	31,828	46,426	28,117
LFG Energy, Inc.										
Direct							186,994	164,439	189,874	178,001
Indirect							14,701	12,387	6,709	11,642
Los Angeles Department of Water and Power										
Direct					371,722	257,507	296,920	374,926	575,923	634,956
Indirect	8,508	8,508	8,508	8,508	8,475	8,475	8,475	8,475	8,475	7,086
Sequestration		1,669	2,003	2,003	2,003	2,003	2,003	2,253	2,503	2,601
Lower Colorado River Authority										
Direct	15,422	26,490	41,458	59,239	98,430	226,343	266,259	285,672	280,139	310,620
Indirect	47,536	50,802	68,130	91,172	112,037	121,018	126,643	116,936	151,409	123,286
Lucent Technologies Inc.										
Indirect						19,674	16,279	75,289	11,356	29,011
Direct			7,947	15,508	13,996	15,790	13,371	10,333	12,053	13,806
Lynchburg Gas Producers, LLC										
Direct										14,251
Indirect										-1,704
Madison County Depart. of Solid Waste & Sanitation										
Direct	0	0	0	0	0	1,461	11,059	23,786	36,931	31,298
Indirect	17,437	23,452	18,927	23,644	20,517	20,551	25,931	19,951	23,963	21,612
Majestic Metals, Inc.										
Total (EZ)										112
Mead Johnson Nutls/Bristol-Meyers Squibb										
Direct						23,685	40,439		51	91
Indirect					1,442	1,945	1,945	1,945	1,945	1,945
Mecklenburg Electric Cooperative										
Indirect	1,754	3,058	5,903	2,633	11,659	11,395	10,023	11,646	10,738	13,785
Michigan CAT										
Direct							251,468	284,164	316,401	303,026
Indirect							251,468	234,880	250,404	253,262
Middlesex Generating Company, LLC										
Direct							8,947	306,511	452,006	452,519
Minnesota Power										
Direct	28,455	89,462	138,891	225,371	322,141	385,147	516,895	540,260	631,303	602,031
Indirect			7,256	47,855	70,738	70,738	70,738	70,738	70,738	70,738
Sequestration					4,010	18,567	22,228	22,228	22,228	22,228
Minnesota Resource Recovery Association										
Total (EZ)										1,192,788
Moorhead Public Service										
Total (EZ)										14,442
Nashville Electric Service										
Total (EZ)										3,853
National By-Products Inc										
Direct								438	5,826	4,841

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
National Grid USA										
Direct									3	3
Indirect	91,217	229,036	361,223	519,129	697,456	809,108	927,903	1,014,524	1,088,304	1,212,258
Natural Power, Inc.										
Direct	89,206	81,401	88,179	108,179	113,380	140,815	133,003	222,834	387,526	353,302
Indirect	10,746	10,258	10,243	10,522	10,160	11,792	12,004	16,321	14,593	16,891
NC Muni Landfill Gas Partners, LLC										
Direct					21,011	32,362	62,137	80,999	82,397	65,872
Indirect								7,355	7,151	6,734
Nebraska Public Power District										
Total (EZ)										589,484
NEO Corporation										
Direct					289,104	402,047	2,911,814	5,891,914	6,829,814	7,113,436
Newton Landfill Gas, LLC										
Direct							14,188	52,080	32,800	28,731
Indirect										1,172
Niagara Mohawk Power Corporation										
Direct	2,490,763	1,646,778	3,267,287	4,218,391	3,700,152	4,307,314	2,950,224	3,844,762	2,477,913	2,141,281
Indirect	6,274	7,870	14,027	15,168	43,515	31,315	62,832	95,367	77,310	9,205
NiSource/NIPSCO										
Direct	7,034	10,280	13,531	18,277	56,008	340,053	1,034,327	1,487,090	1,959,071	1,752,032
Indirect	19,414	61	21,010	29,701	99,453	116,069	121,847	114,157	111,175	98,552
Sequestration			4	57	1,263	1,346	1,276	1,098	1,043	350
Noranda Aluminum Inc.										
Direct	2,595,400	2,784,500	2,853,400	2,939,400	2,922,300	3,272,500	3,255,400	3,404,600	3,347,100	3,255,400
North American Carbon, Inc.										
Indirect		11,746	25,004	40,768	82,241	114,215	120,823	159,655	247,800	232,827
North Carolina Biomass Partners										
Total (EZ)										60,475
North Carolina Electric Membership Corporation										
Total (EZ)										196,741
Northern Neck Electric Cooperative										
Indirect	931	891	2,121	1,432	2,426	2,826	2,055	3,331	1,560	3,087
Northern Virginia Electric Cooperative										
Indirect	37	15,275	27,979	9,958	32,283	32,437	30,892	33,140	43,336	22,566
Northwest Fuel Development, Inc.										
Direct		553	20,439	261,496	11,539	11,721	4,966	15,379	12,914	6,573
Indirect		45	281	1,270	1,579	1,606	452	1,087	1,922	0
NRG Energy Inc										
Indirect			51,625	105,039	136,718	274,289	363,631	370,794	340,926	331,619
Oak Creek Energy Systems Inc.										
Indirect							3,556	4,706	10,410	22,766	40,459
Ocean County Landfill Corporation										
Direct			323,978	329,061	348,726	343,459	294,009	390,816	532,496	417,657
Old Dominion Electric Cooperative										
Indirect					60	61	61	61	61	61
Sequestration					0	1	1	2	2	2
Omaha Public Power District										
Total (EZ)										1,671,132
Pacific Energy Operating Group, LP										
Direct										-26,573
Indirect										386,170
Pacific Natural Energy, LLC										
Direct	106,621	121,644	138,963	131,451	141,884	141,466	181,945	198,220	889,068	835,236

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Pacific Recovery Corporation										
Direct										447,927
Indirect										11,040
PacifiCorp										
Direct			110,652	277,744	512,796	662,193	799,568	883,448	988,786	951,296
Indirect	36,603	108,214	107,523	120,175	128,452	240,580	199,159	322,156	727,931	523,792
Sequestration			361	2,393	169,902	169,902	904,599	903,698	902,987	759,195
Palmer Capital Corporation										
Direct	489,421	885,021	1,323,839	1,323,875	1,494,827	2,069,062	4,534,869	5,216,414	5,628,924	5,988,577
Indirect	-618	-43,423	-60,507	-42,193	-31,797	-48,600	-68,432	-85,840	-153,699	-162,020
PECO Energy Company										
Direct							1,472,878	2,168,025	2,627,916	2,626,781
Indirect				62,246	850,814	1,404,756	1,637,695	1,684,715	3,220,719	2,249,993
PEI Power Corp										
Direct								131	300	326
Indirect								7,450	16,321	18,391
PG&E Corporation										
Direct	280,332	1,340,971	1,705,387	2,647,427	3,589,615	4,746,473	5,307,926	5,432,769	4,343,879	2,747,621
Indirect	292,006	133,708	394,542	255,464	214,281	513,878	742,239	460,634	425,637	381,273
Sequestration			8,682	24,930	57,790	44,249	42,312	40,644	36,632	21,405
Pharmacia & Upjohn Caribe, Inc.										
Total (EZ)										1,041
Pitt Landfill Gas, LLC										
Direct								70,504	73,613	69,189
Indirect								6,137	8,000	7,250
Platte River Power Authority & 4 owner cities										
Direct	7,251	3,022	15,306	4,609	4,415	9,509	10,012	9,788	9,624	8,129
Indirect	34,933	36,648	46,714	43,977	45,159	57,203	80,125	57,508	74,910	77,103
Portland General Electric Co.										
Direct			3	8	8	12	23	39	52	59
Indirect	102,339	174,298	282,932	474,233	676,465	756,125	795,822	849,565	931,751	1,017,483
Sequestration						1	135	473	900	1,422
PPL CORPORATION										
Direct	-11,742	77,406	125,673	-399,273	-301,387	-141,496	-71,522	424,127	567,348	858,511
Indirect	108,751	131,077	158,499	347,241	756,169	1,328,685	1,256,572	2,771,643	1,302,144	1,294,693
Sequestration		0	6	51	1,964	2,134	7,240	7,219	7,393	9,150
Pratt & Whitney North Berwick										
Direct	0	0	3	38	38	38	38	38	38	2,185
Indirect	5	803	862	1,269	1,269	1,881	1,982	1,530	1,583	2,798
Prince George Electric Cooperative										
Indirect	15	30	45	60	60	1,383	2,259	5,135	5,113	6,216
Public Service Company of New Mexico										
Direct	501,925	568,855	183,984	322,415	763,258	1,333,793	1,554,079	1,496,336	1,945,937	1,671,397
Public Service Enterprise Group										
Indirect	324,304	355,486	403,971	458,610	955,921	1,213,689	1,419,458	1,752,354	1,898,699	2,195,296
Sequestration					1,203	1,203	2,176	2,642	3,152	795
Public Utility District No. 1 of Snohomish County										
Direct	0	1	2	3	3	3	3	3	3	3
Indirect	1,315	22,925	44,430	65,096	87,982	111,610	118,011	118,637	123,640	129,062
Quad/Graphics, Inc.										
Indirect				83,201	102,918	117,020	143,948	170,993	198,450	242,847
Rangely Weber Sand Unit										
Indirect	2,394,000	1,761,000	1,700,000	1,088,000	745,000	619,000	924,000	756,000	686,000	1,052,000
Rappahannock Electric Cooperative										
Indirect	2,016	1,592	12,757	5,367	-10,595	32,813	27,408	35,049	34,585	35,638
Sequestration	0	0	1	1	1	2	3	3	4	5

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Reliant Energy - HL&P										
Direct	15,422	25,401	60,781	288,303	-104,326	-43,545	-97,976	-73,482	-31,751	-165,108
Indirect	139,706	160,572	194,138	225,889	563,362	663,152	641,380	708,511	688,553	654,987
Rolls-Royce Corporation										
Direct							32,413	29,252	30,809	24,647
Indirect									40,135	278,674
Sacramento Municipal Utility District										
Direct				12	24	8	19	15	18	19
Indirect				517	923	460,052	489,296	497,239	513,459	523,369
Sequestration	69	184	367	619	890	1,158	1,440	1,764	1,945	2,278
Salt River Project										
Total (EZ)										1,709,336
Santee Cooper										
Direct	12,789	17,696	185,506	169,824	217,230	453,130	426,433	880,179	1,093,337	1,236,503
Indirect	12,591	17,110	13,935	10,437	48,795	66,278	92,697	107,771	87,129	66,283
Sequestration	155	397	875	921	940	980	1,004	3,048	3,117	3,209
Seattle City Light										
Indirect	7,238	33,260	56,137	83,829	124,444	170,816	187,980	206,588	235,410	241,626
Sequestration					2	9	15	21	30	41
SeaWest Windpower, Inc.										
Indirect			4,598	4,604	4,823	8,860	6,933	3,602	70,064	102,207
Seminole Electric Cooperative, Inc.										
Total (EZ)										403,218
Seneca Energy, Inc.										
Direct							188,079	284,811	411,588	426,569
Indirect							16,672	25,245	36,481	37,811
Separation Technologies, Inc										
Total (EZ)										334,856
Shenandoah Valley Electric Cooperative										
Indirect		229	897	920	1,104	15,210	10,084	14,227	14,916	13,872
Sequestration			0	0	0	0	1	1	1	1
Sherry Manufacturing										
Indirect							136	169	172	195
Shrewsbury Electric Light Plant										
Total (EZ)										1,980
South Carolina Electric & Gas Company										
Direct				96,172	323,954	316,216	1,794,123	1,801,923	1,806,406	1,763,300
Indirect	44,522	53,097	70,861	81,333	90,622	104,581	109,590	57,968	109,765	123,712
Sequestration			627	1,146	3,567	4,153	4,632	5,157	5,703	5,847
Southeastern Biomass Partners, LP										
Total (EZ)										83,956
Southern California Edison Co.										
Direct	461,178	1,090,809	1,792,663	3,861,505	2,612,549	3,936,699	3,260,444	4,615,556	4,664,879	5,648,232
Indirect	57,969	57,969	59,783	64,773	72,393	82,191	85,910	108,046	111,493	120,202
Southern Company										
Direct	770,340	2,255,635	2,441,647	2,863,002	3,376,687	3,483,795	3,741,520	2,666,235	4,926,296	6,356,527
Indirect		53,406	116,104	240,715	350,087	418,564	763,654	936,322	1,514,218	2,187,254
Sequestration	1,993	3,398	4,477	5,630	20,761	42,432	82,419	107,613	157,892	163,925
Southside Electric Cooperative										
Indirect	-1,001	-21,789	-17,971	-3,031	-15,548	-8,475	9,407	13,051	5,158	21,019
Steuben Rural Electric Co-op										
Total (EZ)										2,085
Tampa Electric Company										
Indirect	240,404	237,682	234,054	240,585	265,406	267,583	266,857	271,909	268,024	353,985
Sequestration					1,203	1,203	1,130	949	881	184

Table B2. Project-Level Emission Reductions and Sequestration Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Tennessee Valley Authority										
Direct	2,860,047	8,560,179	6,971,811	7,764,758	10,285,021	22,314,014	23,905,216	25,646,860	25,758,777	27,231,070
Indirect		74,102	74,652	85,001	120,152	158,031	222,472	376,106	245,554	219,049
Sequestration	1,064	1,710	2,701	3,087	30,549	31,603	31,749	28,702	28,561	13,570
Texaco, Inc.										
Total (EZ)										0
The Bentech Group of Delaware, Inc.										
Direct							-45,030	-60,093	-80,087	-81,985
Indirect							376,597	502,581	666,061	685,674
The Dow Chemical Company										
Direct					7,539	15,236	0	0	0	
The Empire District Electric Co.										
Sequestration					1,203	1,203	1,130	949	881	184
Tucson Electric Power Company										
Direct	34,429	30,166	47,907	35,162	35,891	38,792	76,804	76,322	51,999	67,908
Indirect		18,693	45,427	62,500	83,463	91,003	94,360	94,379	96,352	98,491
Sequestration			1	2	1,214	1,225	1,163	1,811	1,700	425
TXU										
Direct	6,498,984	8,103,439	11,718,779	15,542,079	17,822,885	15,997,578	18,616,412	19,508,705	18,942,265	20,850,534
Indirect	93,354	115,225	84,618	104,562	108,526	367,665	389,882	693,814	663,549	782,062
Sequestration	543	1,087	1,630	2,174	5,632	7,572	13,107	16,765	19,304	21,983
U. S. Steel Mining Company, LLC										
Direct	1,316,034	1,405,958	1,211,914	1,152,905	1,457,480	1,542,668	1,329,272	1,461,890	1,971,717	1,999,556
Indirect	-11,010	-9,592	-8,061	-8,247	-11,445	-10,126	-8,059	-6,468	-14,501	-19,006
U.S. Department of Energy- Office of Solar										
Direct			37	37	37	37	37	37	45	48
Unocal Corporation										
Direct				-30,484	-49,081	-51,071	-79,621	-156,144	-161,981	-249,381
Indirect				487,744	785,285	817,140	1,273,933	2,498,297	2,591,705	3,656,965
Utah Municipal Power Agency										
Total (EZ)										38,089
Vermont Public Power Supply Authority										
Indirect		29	62	851	1,287	1,913	2,069	2,244	1,782	1,856
Waverly Light & Power Company										
Direct	3,468	5,805	9,169	11,063	11,718	12,700	13,417	13,554	15,296	15,642
Indirect	1,674	3,208	4,047	7,100	6,505	5,879	5,393	4,978	5,509	6,354
Sequestration	18	36	54	73	84	95	106	116	124	132
Western Resources, Inc.										
Direct	64,901	69,733	106,229	280,579	362,828	542,998	723,598	720,704	788,982	858,695
Indirect	23,958	29,766	73,305	123,848	213,604	232,988	270,494	405,946	397,870	454,867
Sequestration					8,424	8,424	7,908	6,646	6,167	1,290
Wisconsin Electric Power Co.										
Direct	467,111	955,994	1,641,207	2,234,046	2,436,286	2,824,947	3,121,151	3,000,732	3,039,948	3,255,997
Indirect	709,256	813,922	861,951	927,820	958,352	979,954	955,315	941,334	988,223	1,193,004
Sequestration					162,696	162,696	207,508	380,888	380,820	240,225
Wisconsin Public Power Inc.										
Total (EZ)										19,516
Xcel Energy										
Direct	175,620	431,409	818,285	1,330,950	2,012,771	2,536,734	2,843,292	3,414,176	4,257,545	4,516,216
Indirect	68,605	80,059	134,455	188,273	353,934	445,302	519,279	578,123	636,181	707,558
Zahren Alternative Power Corporation										
Total (EZ)										1,938,277
Zeeland Board of Public Works										
Total (EZ)										397

Notes: This table excludes data reported as confidential.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
AES Hawaii, Inc.											
CO_2	Sequestration		1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000	1,530,000
AES Shady Point											
CO_2	Sequestration			4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000	4,150,000
AES Thames											
CO_2	Sequestration	550,000	70,000	290,000	370,000	480,000	440,000	440,000	590,000	530,000	370,000
AES Warrior Run, Inc.											
CH_4	Indirect						2,926	15,518	30,562	31,708	20,017
Ajinomoto USA, Inc.											
CO_2	Direct	0	127,269	187,542	142,895	331,783	175,260	120,427	232,676	232,391	149,140
CO_2	Indirect	0	1,693	-33	-170	1,888	1,731	2,570	4,626	4,415	3,379
Alcan Ingot, Sebree Aluminum Plant											
CF_4	Direct	-177	2,428	-467	21,529	2,850	1,778	-4,155	9,331	6,487	-20,549
C_2F_6	Direct	-3,665	50,646	-9,782	449,487	59,452	37,152	-86,763	194,791	135,363	-4,290
Allegheny Energy, Inc.											
CO_2	Direct	158,688	240,497	330,730	526,288	812,086	963,417	906,110	1,118,130	1,181,542	1,336,828
CO_2	Indirect	11,209	29,542	37,098	39,192	70,262	68,056	98,049	162,318	261,106	244,321
CO_2	Sequestration		66	66	66	4,278	4,278	5,100	5,116	5,454	1,491
CH_4	Indirect						252	315	388	451	503
SF_6	Direct							134,532	194,346	59,814	44,911
Allergan, Inc.											
CO_2	Direct	0	0	0	0	0	0	0	552	552	552
CO_2	Indirect	0	0	0	0	116	116	444	3,495	4,390	6,046
Alliant Energy											
CO_2	Direct	60,096	96,708	252,654	407,818	653,130	782,098	948,079	1,095,118	1,272,630	1,727,301
CO_2	Indirect	17,835	27,971	41,300	59,367	73,045	411,234	442,854	476,094	750,845	1,015,702
CO_2	Sequestration	17	28,203	28,257	28,327	29,617	29,715	30,227	30,152	30,783	30,490
Arizona Portland Cement Co.											
CO_2	Direct		98,487	127,702	127,165	148,730	137,429	164,814	166,807	181,270	142,182
CO_2	Indirect		2,482	3,681	4,507	5,900	8,014	8,403	7,058	11,645	33,471
Arizona Public Service Company											
CO_2	Direct	1,702,868	1,288,657	1,050,245	1,266,240	2,647,215	2,845,894	2,125,011	1,518,907	903,797	-594,250
CO_2	Indirect	813	14,779	28,419	38,513	30,920	34,908	106,298	140,408	182,851	208,840
Arthur Rypinski & Jacquelyn Porth											
CO_2	Direct	2	2	3	4	4	4	4	4	4	4
CO_2	Indirect			0	1	1	1	1	1	1	1
Azdel, Inc											
CO_2	Direct								0		0
CO_2	Indirect								0		786
Baltimore Gas & Electric Company											
CO_2	Direct	1,495	1,494,152	3,020,555	2,319,515	3,959,433	3,294,374	4,312,367	4,551,379	5,054,516	5,550,028
CO_2	Indirect			87,907	130,800	129,764	110,410	112,983	132,000	152,106	243,806
CO_2	Sequestration					1,203	1,203	1,130	949	881	252
CH_4	Direct			754	1,601	2,560	2,657	3,034	2,456	3,693	3,693
CH_4	Indirect			161	1,112	1,244	1,315	1,490	1,982	1,759	1,934
CF_4	Indirect			16	4,962	4,553	3,982	4,142	3,503	3,307	3,498
C_2F_6	Indirect			5	1,036	950	831	864	729	691	729
SF_6	Direct							0	4,592	-6,354	0
SF_6	Indirect							81	81	81	81
Baxter Healthcare Inc.											
CO_2	Direct				0						1,260
CO_2	Indirect				0						2,723
Bethlehem Steel Corporation											
CO_2	Direct							1,915,067	3,146,117	3,484,497	3,549,814
CO_2	Indirect							379,203	391,904	497,137	390,089

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Black Warrior Methane Corp.											
CH_4	Direct	5,090,683	4,774,846	5,319,950	4,276,688	4,615,539	4,330,416	4,425,353	5,027,795	5,594,787	5,242,457
BP											
CO_2	Direct	0	353,367	566,666	740,435	1,064,125	1,362,134	1,737,478	1,995,365	2,237,843	2,143,508
CO_2	Sequestration							102,980	102,980	102,980	102,980
Calaveras Cement Company											
CO_2	Direct				0	73,989	94,575	112,899	94,285	101,523	88,410
CO_2	Indirect				0	4,238	5,850	8,505	9,145	4,904	2,822
California Portland Cement Co. - Colton Plant											
CO_2	Direct	26,301	7,579	65,154	-10,013	-2,629	54,645	49,538	61,666	34,199	79,684
CO_2	Indirect	-620	-1,432	2,639	2,311	3,505	6,832	5,182	3,851	3,293	4,005
California Portland Cement Co. - Mojave Plant											
CO_2	Direct	14,606	80,282	46,025	98,953	52,938	33,580	36,940	67,668	38,580	37,113
CO_2	Indirect	2,291	8,583	5,347	9,123	6,315	7,272	6,707	8,246	6,268	6,439
Cargill, Inc. - Oil Seeds Division											
CO_2	Direct				0					7,257	8,234
CO_2	Indirect				0					2,193	2,122
Central Hudson Gas & Electric Corporation											
CO_2	Direct	479,228	414,770	1,521,181	1,655,763	1,543,226	1,709,962	1,248,155	330,079	728,249	-1,114,867
CO_2	Indirect	1,127	558,149	1,047,552	1,499,779	1,366,296	1,785,674	1,392,231	706,792	535,477	904,328
CH_4	Direct		0	0	0	5,759	4,169	6,838	3,564	1,669	2,529
Cinergy Corp.											
CO_2	Direct	120	95,407	194,297	420,238	1,257,648	1,635,386	1,468,161	1,630,361	1,571,487	1,557,252
CO_2	Indirect	63,888	64,994	62,686	324,632	189,859	220,313	48,870	50,288	51,075	54,205
CO_2	Sequestration	2	24	284	511	169,448	169,763	170,692	170,862	173,639	30,659
CH_4	Indirect		454,320	404,932	431,264	473,088	634,032	658,132	678,225	661,460	683,566
CMS Energy											
CO_2	Direct	1,736,624	1,726,976	376,269	1,360,355	1,717,328	2,206,000	2,789,968	2,381,881	2,115,150	2,764,561
CO_2	Indirect						6,578	104,122	73,517	46,438	141,855
CH_4	Direct			15,315	30,630	45,945	61,260	76,575	77,923	83,991	94,833
CommonWealth Bethlehem Energy, LLC											
CO_2	Direct								-5,206	-10,010	-15,303
CH_4	Direct								43,546	83,711	127,987
CommScope											
CO_2	Indirect		0								4,863
Consol Coal Group											
CH_4	Direct		2,065,096	6,948,024	13,354,741	12,109,607	14,389,699	13,752,057	13,917,831	17,195,324	17,681,297
Consolidated Edison Company of New York, Inc.											
CO_2	Direct	2,111,503	2,362,581	2,778,264	2,558,252	2,616,122	3,854,943	4,065,382	2,935,068	2,189,430	902,833
CH_4	Indirect	26,123	36,136	44,634	54,848	59,099	65,472	69,249	73,982	78,682	76,788
Danaher Controls											
CO_2	Direct							-84	35	59	-75
CO_2	Indirect							154	-326	813	1,077
Deptford Electric Company, LLC											
CO_2	Direct							0	-21,502	-40,298	0
CH_4	Direct							0	179,838	337,036	0
Doxey Furniture Corporation											
CO_2	Direct										-16
CO_2	Indirect										22
DTE Energy/ Detroit Edison											
CO_2	Direct	67,920	3,499,116	1,095,963	-2,520,646	-1,899,735	-2,210,056	-2,222,172	-3,754,608	-2,373,621	-1,176,943
CO_2	Indirect	-1,162,697	-768,696	-318,143	-4,501,857	-3,423,902	-3,216,902	-4,165,281	-5,129,972	-4,729,455	-6,652,109
CO_2	Sequestration					167,981	187,130	202,941	223,937	235,629	103,534

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Duke Energy Corporation											
CO_2	Direct	7,898,659	6,883,847	6,858,749	9,350,458	12,640,570	5,524,723	3,977,240	12,017,898	13,142,008	14,809,531
CO_2	Indirect	-33,173	-15,919	29,057	72,973	166,484	126,998	77,916	94,842	128,661	105,336
CO_2	Sequestration					1,203	1,203	2,176	2,642	3,152	795
CH_4	Indirect							155,112	208,909	25,645	28,865
Dynegy Midwest Generation Inc.											
CO_2	Direct	1,934	39,385	64,818	173,310	296,271	259,458	278,559	349,214	119,006	128,828
CO_2	Indirect		7,038	4,582	3,807	4,260	7,714	2,087	3,682	10,847	70,239
CO_2	Sequestration					4,814	11,079	23,176	34,689	47,818	90,748
Entergy Services, Inc.											
CO_2	Direct	446,690	426,497	803,763	736,940	2,512,767	2,862,056	5,600,025	6,427,582	3,743,277	5,939,643
CO_2	Indirect	70,418	83,249	94,393	120,298	227,757	230,687	267,217	298,035	333,864	289,077
CO_2	Sequestration					2,407	22,365	46,377	66,982	68,000	56,474
CH_4	Direct	814	709	709	793	1,315	1,398	1,148	1,002	981	1,794
SF_6	Direct								4,358	4,358	0
FirstEnergy Corporation											
CO_2	Direct	3,407,342	4,283,321	1,173,271	2,051,070	5,379,445	3,806,134	4,956,931	10,499,321	10,415,952	14,231,224
CO_2	Indirect	58,283	60,471	65,570	53,721	50,704	60,544	65,096	116,923	144,643	94,462
CO_2	Sequestration		10	23	37	12,084	12,097	21,834	18,388	17,097	3,703
SF_6	Direct										4,169
Florida Power Corporation											
CO_2	Direct				4,437,347	5,607,021	3,985,430	2,934,597	3,114,658	5,040,912	4,752,600
FPL Group											
CO_2	Direct		2,667,060	4,823,048	9,701,035	11,288,890	13,468,327	12,985,063	14,151,003	17,120,047	17,319,373
CO_2	Indirect								38,238	199,490	473,097
CO_2	Sequestration	3,456	11,356	24,377	38,763	58,347	76,037	125,469	147,955	132,899	6,236
CH_4	Indirect								40,729	118,869	196,133
SF_6	Direct		112,649	112,649	112,649	1,880	17,371	0	23,262	66,482	74,074
General Motors Corporation											
CO_2	Direct	465,000	277,000	-33,000	241,000	450,000	622,000	890,000	1,545,000	1,336,000	1,512,000
CO_2	Indirect	240,000	449,000	35,000	-272,000	-330,000	-126,000	-205,000	110,000	-20,000	167,000
CO_2	Sequestration	0	65	160	267	874	1,369	2,160	2,664	3,301	3,822
Greater New Bedford Regional Refuse Mgt District											
CO_2	Direct										-8,905
CH_4	Direct										74,468
Hackensack Meadowlands Development Com.											
CH4	Direct	324,941	368,274	394,915	378,381	370,838	397,577	413,896	871,905	813,857	735,112
Hanes Dye and Finishing											
CO_2	Direct							0			11,720
CO_2	Indirect							0			85
Hawaiian Electric Company, Inc.											
CO_2	Direct		965,245	1,627,490	1,753,588	1,632,025	1,522,256	1,602,088	1,591,202	1,421,559	1,299,996
CO_2	Indirect		-1,291,831	-1,903,274	-2,106,483	-2,220,788	-2,268,869	-2,292,456	-2,729,719	-2,718,833	-2,341,444
CO_2	Sequestration					1,203	1,203	1,130	949	881	184
IBM											
CO_2	Direct	6,985	6,169	22,498	12,519	12,791	7,439	13,308	16,793	13,565	11,699
CO_2	Indirect	119,113	114,033	91,626	88,088	89,902	50,167	67,612	91,386	92,623	95,036
Integrated Waste Services Association											
CO_2	Direct	-7,257,478	-7,711,071	-7,711,071	-7,711,071	-7,801,789	-7,892,508	-7,801,789	-7,801,789	-8,527,537	-9,434,722
CO_2	Indirect	12,337,713	13,154,180	13,154,180	13,154,180	15,785,016	16,510,763	15,966,452	16,057,171	17,145,793	15,422,142
CH_4	Direct	-693	-739	-739	-739	-887	-929	-895	-897	-968	-870
CH_4	Indirect	1,316,347	1,649,941	1,983,409	2,316,877	2,656,126	2,997,335	3,334,601	3,671,992	4,474,344	5,292,805
N_2O	Direct	-2,685	-2,846	-2,846	-2,846	-3,437	-3,571	-3,464	-3,491	-3,733	-3,357
N_2O	Indirect	71,160	75,993	75,993	75,993	91,299	95,327	92,105	92,910	99,355	89,419

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
International Truck and Engine Corporation											
CO_2	Direct						-25,710	-19,060	1,673	-1,070	15,419
CO_2	Indirect						21,751	28,331	4,750	-25,812	-30,829
Johnson & Johnson											
CO_2	Direct	0	19,336	28,946	32,672	38,007	42,218	50,058	57,223	70,886	74,791
CO_2	Indirect	4,446	18,043	50,274	78,745	98,941	136,792	157,648	173,135	191,734	196,845
KeySpan Energy Corporation											
CO_2	Direct	2,064,390	4,594,165	4,963,117	6,497,348	6,151,167	5,790,742	5,269,383	4,882,469	3,689,793	2,731,352
CO_2	Indirect	54,250	77,746	95,527	109,225	120,837	134,898	145,422	156,036	203,572	232,330
CH_4	Direct	0	0	1,024	1,511	2,022	2,523	3,188	3,856	3,856	3,856
L'ORÉAL USA - Florence Manufacturing											
CO_2	Direct					246	36	559	832	758	1,153
CO_2	Indirect					1,029	1,090	1,534	2,739	2,159	4,282
Lafarge U.S. Cementitious											
CO_2	Direct					673,000	688,000	845,000	1,443,000	1,426,000	1,448,000
CO_2	Indirect					39,000	35,000	19,000	50,000	51,000	58,000
Lehigh Portland Cement Company											
CO_2	Direct					114,698	74,172	112,675	166,048	203,396	131,555
CO_2	Indirect					10,856	-14,817	-10,644	-5,973	4,058	-2,346
Los Angeles Department of Water and Power											
CO_2	Direct	1,089,280	-858,911	-245,538	-1,256,904	1,589,997	3,637,171	1,937,200	724,518	-564,934	-1,656,423
CO_2	Indirect	172,249	172,249	83,292	82,818	46,228	148,294	360,646	240,959	390,109	
CO_2	Sequestration		1,669	2,003	2,003	2,003	2,003	2,003	2,253	2,503	2,601
Lower Colorado River Authority											
CO_2	Direct	15,422	26,490	41,458	59,239	98,430	226,343	266,259	285,672	280,139	310,620
CO_2	Indirect	47,536	50,802	68,130	91,172	112,037	121,018	126,643	116,936	151,409	123,286
Lucent Technologies Inc.											
CO_2	Direct			7,947	15,508	13,996	15,790	13,371	10,333	12,053	13,806
CO_2	Indirect						14,021	11,368	54,247	9,585	24,943
CH_4	Indirect						875	1,121	2,978	1,764	2,823
N_2O	Indirect										78
CF_4	Indirect						3,956	3,135	14,945	6	963
C_2F_6	Indirect						822	656	3,119	1	203
M.J. SOFFE COMPANY											
CO_2	Direct								0	450	1,072
CO_2	Indirect								0	-820	14
Mallinckrodt, Inc.											
CO_2	Direct						0				9,227
CO_2	Indirect						0				1,260
Maple Springs Laundry											
CO_2	Direct								0		8
CO_2	Indirect								0		-71
McNeil Generating Station											
CO_2	Indirect		57,966	42,871	52,354	83,663	90,230	101,977	94,560	135,492	141,609
Middlesex Generating Company, LLC											
CO_2	Direct							-1,215	-41,626	-61,384	-61,455
CH_4	Direct							10,161	348,137	513,389	513,974
Miller Brewing Company											
CO_2	Direct					0	-10,498	35,146	15,679	7,854	6,441
CO_2	Indirect					0	7,425	9,819	13,656	15,346	4,253
Motorola Austin											
CO_2	Direct						15,497	1,305	1,100	3,224	-1,618
CO_2	Indirect						40,568	58,699	-128,558	133,099	3,028
New York Power Authority											
CO_2	Direct	3,717	24,219	58,238	99,951	128,945	155,276	197,529	232,789	272,337	300,493
CO_2	Indirect	3,927	14,222	37,146	68,333	101,178	132,371	155,992	179,737	153,096	164,569

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Niagara Mohawk Power Corporation											
CO_2	Direct	901,923	3,601,252	6,165,954	7,123,759	7,291,951	7,701,092	6,982,511	5,451,455	9,745,523	14,600,867
CO_2	Indirect	448,149	-1,963,148	-3,721,272	-3,414,644	-3,462,724	-3,509,898	-3,228,671	-169,644	-2,606,977	-2,632,378
CH_4	Direct	709	1,277	2,078	2,969	3,368	3,558	9,093	9,204	9,356	9,780
N_2O	Direct										5,356
CF_4	Direct	1,153	1,396	1,525	1,489	1,815	1,065	2,663	2,870	1,562	1,029
C_2F_6	Direct	238	291	313	313	378	227	551	605	324	216
SF_6	Direct										10,231
NiSource/NIPSCO											
CO_2	Direct	2,603	4,371	6,144	10,891	41,736	264,571	937,938	1,384,213	1,806,325	1,627,089
CO_2	Indirect	19,414	41	20,951	29,079	98,812	115,318	121,021	112,958	109,655	96,867
CO_2	Sequestration			5	56	1,264	1,347	1,276	1,099	1,043	350
CH_4	Direct	4,432	5,909	7,386	7,386	14,272	50,911	71,818	78,307	114,884	75,198
CH_4	Indirect	0	21	58	169	198	236	325	403	478	492
SF_6	Direct	0	0	0	0	0	24,570	24,570	24,570	37,862	49,745
CF_4	Indirect				377	367	429	414	657	858	988
C_2F_6	Indirect				76	76	86	86	140	184	205
Pacific Natural Energy, LLC											
CH_4	Direct	106,621	121,644	138,963	131,451	141,884	141,466	181,945	198,220	889,068	835,236
PacifiCorp											
CO_2	Direct			110,652	277,744	512,796	662,193	799,568	883,448	988,786	951,296
CO_2	Indirect	36,603	108,214	107,523	120,175	122,271	234,400	181,511	304,508	709,596	505,457
CO_2	Sequestration			361	2,393	169,902	169,902	904,566	903,698	902,987	759,195
CH_4	Indirect					1,509	1,509	12,976	12,976	13,663	13,663
N_2O	Indirect					4,672	4,672	4,672	4,672	4,672	4,672
Palmer Capital Corporation											
CO_2	Indirect	-618	-43,423	-60,507	-42,193	-31,797	-48,600	-68,432	-85,840	-153,699	-162,020
Palmer Capital Corporation											
CH4	Direct	489,421	885,021	1,323,838	1,323,875	1,494,827	2,069,062	4,534,869	5,216,414	5,628,924	5,988,577
PECO Energy Company											
CO_2	Direct	2,505,049	2,232,914	421,407	-436,107	58,557	-554,217	594,825	-47,822	1,047,236	285,149
CO_2	Indirect	2,796,061	1,280,496	1,221,653	1,146,965	-891,371	0	0	0	0	0
PEI Power Corp											
CO_2	Direct								131	300	326
CO_2	Indirect								7,450	16,321	18,391
PG&E Corporation											
CO_2	Direct	280,332	1,340,971	1,694,474	2,619,822	3,562,010	4,711,775	5,267,594	5,443,267	4,281,725	2,646,269
CO_2	Indirect	-47,535	-297,577	-239,373	-329,472	-343,218	-213,463	-151,170	-332,204	-467,584	-467,024
CO_2	Sequestration	0	0	8,682	24,930	57,790	44,249	42,312	40,644	36,632	21,405
CH_4	Direct			10,913	27,605	27,605	34,699	40,333	46,655	52,121	60,488
CH_4	Indirect	339,540	431,285	576,611	584,936	557,499	727,342	893,408	792,838	893,241	848,298
SF_6	Direct									10,032	40,864
Portland General Electric Co.											
CO_2	Direct						1	135	473	900	1,422
CO_2	Indirect	102,339	174,298	282,932	474,233	676,465	756,125	795,822	849,565	931,751	1,017,483
CO_2	Sequestration			3	8	8	12	23	39	52	59
PPL CORPORATION											
CO_2	Direct	-11,742	77,406	125,673	-399,273	-301,387	-141,496	-71,522	424,127	567,348	858,511
CO_2	Indirect	42,004	63,015	91,813	240,182	526,026	1,013,661	936,165	2,453,677	991,127	983,259
CO_2	Sequestration			6	51	1,964	2,134	7,240	7,219	7,393	9,150
CH_4	Indirect	66,748	68,062	66,685	107,060	230,144	315,024	320,407	317,966	311,017	311,435

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Pratt & Whitney North Berwick											
CO_2	Direct			3	38	38	38	38	38	38	2,185
CO_2	Indirect	2	793	848	1,245	1,245	1,728	1,798	1,454	1,502	2,717
CH_4	Direct				0	0	0	0	0	0	0
CH_4	Indirect	3	10	15	23	24	36	59	76	81	81
CF_4	Indirect						97	103			
C_2F_6	Indirect						20	21			
Public Service Enterprise Group											
CO_2	Direct	459,979	1,648,338	2,628,518	2,507,265	2,736,110	2,691,741	1,059,215	1,247,954	1,412,912	766,640
CO_2	Indirect	321,216	349,393	394,916	446,696	936,871	1,185,479	1,384,071	1,708,933	1,848,184	2,141,359
CO_2	Sequestration					1,204	1,204	2,176	2,643	3,152	795
CH_4	Direct	11,445	21,291	29,996	40,447	45,488	50,928	54,984	58,767	63,424	73,241
CH_4	Indirect	3,088	6,093	9,056	11,914	19,050	28,210	35,387	43,421	50,515	53,937
SF_6	Direct	-9,063	1,208	-1,410	-161,116	-277,724	-185,485	-60,821	87,204	90,426	19,334
Reliant Energy - HL&P											
CO_2	Direct	2,440,327	2,763,285	396,440	1,400,693	2,557,354	3,193,290	2,308,785	3,609,688	3,523,506	4,773,606
CO_2	Indirect	139,706	160,572	194,138	225,889	563,362	663,152	641,380	708,511	688,553	654,987
Republic Metals Corporation											
CO_2	Direct						0	68	82	6	119
CO_2	Indirect						0	-73	-38	-35	-70
Rolls-Royce Corporation											
CO_2	Direct								53,365	23,380	29,009
CO_2	Indirect								133,087	110,060	122,749
CH_4	Indirect									40,135	259,808
Sacramento Municipal Utility District											
CO_2	Direct						-156,791	-517,709	-1,032,341	-1,124,407	-1,314,465
CO_2	Indirect						786,869	1,067,915	2,179,511	2,067,389	1,786,303
CO_2	Sequestration						1,158	1,440	1,764	1,945	2,278
Santee Cooper											
CO_2	Direct	12,789	17,696	185,506	169,824	217,230	453,130	426,433	880,179	1,093,337	1,236,505
CO_2	Indirect	12,591	17,110	13,935	10,437	48,795	66,278	92,697	107,771	87,129	66,283
CO_2	Sequestration	155	397	875	921	940	1,135	1,644	3,048	3,117	3,209
Seattle City Light											
CO_2	Indirect	7,238	33,259	56,137	83,830	124,516	170,816	187,980	206,589	235,410	241,625
CO_2	Sequestration					2	9	15	21	30	41
Siemens Power Transmission & Distribution, Inc.											
CO_2	Direct						0				26
CO_2	Indirect						0				338
Southern Company											
CO_2	Direct	770,340	2,255,635	2,441,647	2,863,002	3,376,687	3,483,795	3,741,520	2,666,235	4,542,236	5,979,127
CO_2	Indirect				135,973	271,680	346,850	683,729	862,377	1,465,481	2,136,677
CO_2	Sequestration	1,993	3,398	4,477	5,630	20,761	42,432	82,419	107,613	157,892	163,925
CH_4	Indirect		53,406	116,104	104,742	78,407	71,714	79,925	73,945	48,737	50,577
SF_6	Direct									384,060	377,400
Sunoco, Inc.											
CO_2	Direct	185,366	-39,157	400,345	667,286	701,737	627,253	896,497	1,275,326	1,479,115	1,527,415
CO_2	Indirect	-43,230	-28,870	-9,078	-66,093	-86,306	-254,778	-262,778	-110,028	-130,454	-174,846
Tampa Electric Company											
CO_2	Indirect	240,404	237,682	234,054	240,585	265,406	267,583	266,857	271,909	268,024	353,985
CO_2	Sequestration					1,203	1,203	1,130	949	881	184

Table B3. Entity-Level Emission Reductions Reported, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter and Gas	Reduction Source	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Tennessee Valley Authority											
CO_2	Direct	2,859,607	8,558,862	6,970,759	7,763,632	10,283,520	22,310,595	23,901,553	25,642,873	25,754,777	27,226,845
CO_2	Indirect	0	-10,048	-10,123	-9,456	-7,961	9,971	73,223	243,487	122,199	75,809
CO_2	Sequestration	1,064	1,710	2,701	3,087	30,549	31,603	31,750	28,702	28,561	13,570
CH_4	Direct	440	1,317	1,047	1,152	1,536	3,443	3,714	3,964	4,006	4,236
CH_4	Indirect		84,150	84,776	94,457	128,113	148,060	149,249	132,620	123,355	143,240
HFC-134_a	Direct				-29	-43	-42	-42			
The Dow Chemical Company											
CO_2	Direct					-5,492,632	-629,160	1,976,647	-305,377	1,541,661	-319,647
CH_4	Direct					-7,929	1,669	49,451	-28,377	40,687	1,043
N_2O	Direct					-718	278	-1,788	-2,866	-1,758	-20,505
SF_6	Direct					74,517	-156,084	211,207	171,994	665,078	0
HFC-23	Direct					0	0	-5,715	-1,127	-2,079	1,214
HFC-125	Direct					0	0	-143	143	-1,021	-5,800
HFC-134_a	Direct					-5,900	-3,653	-2,852	-27,104	-49,701	63,388
HFC-152_a	Direct			21	0	7,484	15,236	-1	-4	-1	-7
The Virkler Company											
CO_2	Direct							0			27
CO_2	Indirect							0			9
Valdese Manufacturing Company											
CO_2	Direct							0			-8,073
CO_2	Indirect							0			-4,014
Waverly Light & Power Company											
CO_2	Direct	3,470	5,808	9,174	11,071	11,733	12,727	13,460	13,613	15,376	16,215
CO_2	Indirect	1,674	3,211	4,054	7,116	6,531	5,913	5,435	5,033	5,576	6,879
CO_2	Sequestration	18	37	55	73	85	96	107	118	125	132
World Wood Co.											
CO_2	Indirect										199
Wyeth-Lederle Vaccines											
CO_2	Direct								0		3,083
CO_2	Indirect								0		9,223

CO_2 = carbon dioxide; CH_4 = methane; N_20 = nitrous oxide; SF_6 = sulfur hexafluoride; CF_4 = perfluoromethane; C_2F_6 = perfluoroethane.

Notes: Data are shown as reported on Part IVb of Schedule III and may not equal the summed totals represented elsewhere in this report.

Source: Energy Information Administration, Form EIA-1605.

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
8309 Tujunga Avenue Corporation	Alternative Energy	Direct	379,965	
		Indirect	18,450	
A&N Electric Cooperative	Electric Power	Indirect	5,449	
Abe Krasne Home Furnishings, Inc.	Other	--		*
Advanced Micro Devices	Industry	Unspecified (EZ)	1,972	
AES Hawaii, Inc.	Electric Power	Sequestration	1,530,000	1,530,000
AES Shady Point	Electric Power	Sequestration	4,150,000	4,150,000
AES Thames	Electric Power	Sequestration	370,000	370,000
AES Warrior Run, Inc.	Electric Power	Indirect	20,017	20,017
Ajinomoto USA, Inc.	Industry	Direct		149,140
		Indirect		3,379
Alabama Biomass Partners, Ltd	Alternative Energy	Unspecified (EZ)	64,614	
Alcan Ingot, Sebree Aluminum Plant	Industry	Direct	-24,838	-24,838
Allegheny Energy, Inc.	Electric Power	Direct	1,381,739	1,381,740
		Indirect	244,824	244,824
		Sequestration	1,491	1,491
Allergan, Inc.	Industry	Direct	552	552
		Indirect	6,046	6,046
Alliant Energy	Electric Power	Direct	1,727,301	1,727,301
		Indirect	1,015,702	1,015,702
		Sequestration	30,490	30,490
Ameren Corporation (formerly UE and CIPS)	Electric Power	Direct	2,152,628	
		Indirect	119,794	
		Sequestration	158	
American Electric Power, Inc.	Electric Power	Direct	-2,644,214	
		Indirect	710,040	
		Sequestration	1,147,764	
American Forests	Agriculture	Sequestration	108,880	
American Municipal Power - Ohio	Electric Power	Direct		
		Indirect	352,777	
		Sequestration	310	
Anoka Municipal Utility	Electric Power	Unspecified (EZ)	40	
Arizona Electric Power Cooperative, Inc.	Electric Power	Unspecified (EZ)	61,654	
Arizona Portland Cement Co.	Industry	Direct	42,575	142,182
		Indirect	33,474	33,471
Arizona Public Service Company	Electric Power	Direct		-594,250
		Indirect		208,840
Arthur Rypinski & Jacquelyn Porth	Other	Direct	4	4
		Indirect	1	1
Asheville Landfill Gas, LLC	Alternative Energy	Direct	87,926	
		Indirect	7,959	
Atlas Paper Mills	Industry	Direct	1,018	
		Indirect	12	
Austin Energy	Electric Power	Unspecified (EZ)	1,150,969	
Austin Parks & Rec. Dept.- Urban Forestry Program	Other	Sequestration	9	
Austin Quality Foods, Inc.	Industry	--		
Avista Utilities	Electric Power	Direct	10,849	
		Indirect	3,613	
Azdel, Inc	Industry	Direct		0
		Indirect		786

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
Baltimore Gas & Electric Company	Electric Power	Direct	5,553,721	5,553,721
		Indirect	250,048	250,048
		Sequestration	252	252
BARC Electric Cooperative	Electric Power	Indirect	2,445	
Baxter Healthcare Inc.	Industry	Direct		1,260
		Indirect		2,723
The Bentech Group of Delaware, Inc.	Alternative Energy	Direct	-81,985	
		Indirect	685,674	
Bethlehem Steel Corporation	Industry	Direct		3,549,814
		Indirect		390,089
Biomass Partners, LP	Alternative Energy	Unspecified (EZ)	92,949	
Black Warrior Methane Corp.	Alternative Energy	Direct	5,242,457	5,242,457
BP	Industry	Direct	2,143,508	2,143,508
		Sequestration	102,980	102,980
Burlington County Board of Chosen Freeholders	Other	Direct	201,044	
		Indirect	30,496	
Calaveras Cement Company	Industry	Direct	78,846	88,410
		Indirect	2,821	2,822
California Portland Cement Co. - Colton Plant	Industry	Direct	65,492	79,684
		Indirect	4,450	4,005
California Portland Cement Co. - Mojave Plant	Industry	Direct	36,184	37,113
		Indirect	6,801	6,439
Cargill, Inc. - Oil Seeds Division	Industry	Direct		8,234
		Indirect		2,122
Carolina Power & Light Company	Electric Power	Direct	8,163,018	
Catawba Landfill Gas, LLC	Alternative Energy	Direct	93,080	
		Indirect		
Cedar Falls Utilities	Electric Power	Direct	15,086	
		Indirect	3,265	
		Sequestration	25	
Central Hudson Gas & Electric Corporation	Electric Power	Direct	175,811	-1,112,338
		Indirect	38,167	904,328
Choptank Electric Cooperative	Electric Power	Indirect	10,667	
Cinergy Corp.	Electric Power	Direct	1,557,252	1,557,252
		Indirect	737,772	737,772
		Sequestration	30,658	30,659
City of Edmond, Oklahoma, Electric Department	Electric Power	Unspecified (EZ)	2,472	
City of Palo Alto	Electric Power	Unspecified (EZ)	3,715	
CLE Resources	Industry	Indirect	12,297	
Cleco Corporation	Electric Power	Sequestration	717	
CMS Energy	Electric Power	Direct	2,859,394	2,859,394
		Indirect	141,855	141,855
Columbia Falls Aluminum Company, LLC	Industry	Indirect	712	
CommonWealth Bethlehem Energy, LLC	Alternative Energy	Direct	112,684	112,684
Commonwealth Edison Company (ComEd)	Electric Power	Direct	366	
		Indirect	1,854,088	
		Sequestration	3,894	
CommScope	Industry	Indirect		4,863
Community Electric Cooperative	Electric Power	Indirect	3,228	

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
Conectiv Atlantic Generation (CAG)	Electric Power	Direct	64,302	
		Indirect	15,285	
		Sequestration	8	
Conectiv Delmarva Generation	Electric Power	Direct	473,621	
		Indirect	22,795	
		Sequestration	451	
Consol Coal Group	Industry	Direct		17,681,297
Consolidated Edison Company of New York, Inc.	Electric Power	Direct	434,368	902,833
		Indirect		76,788
County Sanitation Districts of Los Angeles County	Alternative Energy	Direct	4,170,710	
		Indirect	212,214	
Danaher Controls	Industry	Direct		-75
		Indirect		1,077
Delaware Electric Cooperative	Electric Power	Indirect	40,177	
Delaware Solid Waste Authority	Alternative Energy	Direct	374,280	
Delta Electric Power Association	Electric Power	Unspecified (EZ)	30,627	
Deptford Electric Company, LLC	Alternative Energy	Direct	0	0
Dominion Generation	Alternative Energy	Direct	9,054,485	
The Dow Chemical Company	Industry	Direct		-280,315
Doxey Furniture Corporation	Industry	Direct		-16
		Indirect		22
Drummond Company, Inc.	Industry	Direct	5,018	
		Indirect	5,018	
DTE Energy/ Detroit Edison	Electric Power	Direct	1,952,135	-1,176,943
		Indirect	5,716,772	-6,652,109
		Sequestration	103,534	103,534
Duke Energy Corporation	Electric Power	Direct	14,809,531	14,809,531
		Indirect	134,201	134,201
		Sequestration	795	795
Dynegy Midwest Generation Inc.	Electric Power	Direct	128,828	128,828
		Indirect	70,239	70,239
		Sequestration	90,748	90,748
El Paso Production Company	Alternative Energy	Direct	3,227,040	
The Empire District Electric Co.	Electric Power	Sequestration	184	
Energy Management Partners, LP	Alternative Energy	Unspecified (EZ)	673,338	
Energy Northwest	Electric Power	Unspecified (EZ)	1,570,000	
Entergy Services, Inc.	Electric Power	Direct	5,941,437	5,941,437
		Indirect	289,077	289,077
		Sequestration	56,474	56,474
Environmental Synergy, Inc.	Agriculture	Unspecified (EZ)	0	
Fidelity Exploration & Production Company	Alternative Energy	Direct	18,382	
FirstEnergy Corporation	Electric Power	Direct	14,235,393	14,235,393
		Indirect	94,462	94,462
		Sequestration	3,703	3,703
Florida Power Corporation	Electric Power	Direct		4,752,600
Florida Transport 82	Industry	Direct	284	
		Indirect	103	
FPL Group	Electric Power	Direct	-109,360	17,393,448
		Indirect	648,411	669,230
		Sequestration	461	6,236

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
General Motors Corporation	Industry	Direct	803,960	1,512,000
		Indirect	719,151	167,000
		Sequestration		3,822
Generating Resource Recovery Partners, LP	Electric Power	Direct	133,396	
		Indirect	325,748	
Golden Valley Electric Association, Inc	Electric Power	Unspecified (EZ)	13,310	
GPU, Inc.	Electric Power	Direct	984,440	
		Indirect	843,364	
		Sequestration	1,722	
Granger Electric Company	Alternative Energy	Direct	329,082	
		Indirect	707,789	
Greater Caribbean Energy & Environment Foundation	Agriculture	--		
Greater New Bedford Regional Refuse Mgt District	Alternative Energy	Direct	65,563	65,563
Hackensack Meadowlands Development Com.	Alternative Energy	Direct	735,112	735,112
Hanes Dye and Finishing	Industry	Direct		11,720
		Indirect		85
Hawaiian Electric Company, Inc.	Electric Power	Direct	38,486	1,299,996
		Indirect		-2,341,444
		Sequestration	184	184
Highland Industries, Inc.	Industry	--		
IBM	Industry	Direct		11,699
		Indirect		95,036
Integrated Waste Services Association	Alternative Energy	Direct	-9,438,949	-9,438,949
		Indirect	20,804,366	20,804,366
International Truck and Engine Corporation	Industry	Direct		15,419
		Indirect		-30,829
Iredell Landfill Gas, LLC	Alternative Energy	Direct	88,581	
J.M. Gilmer and Company, Inc.	Agriculture	Sequestration	3,867	
JEA	Electric Power	Unspecified (EZ)	344,299	
Johnson & Johnson	Industry	Direct	74,615	74,791
		Indirect	196,849	196,845
KeySpan Energy Corporation	Electric Power	Direct		2,735,208
		Indirect		232,330
L'ORÉAL USA - Florence Manufacturing	Industry	Direct		1,153
		Indirect		4,282
Lafarge U.S. Cementitious	Industry	Direct		1,448,000
		Indirect		58,000
Landfill Energy Systems	Alternative Energy	Direct	1,304,454	
Lehigh Portland Cement Company	Industry	Direct	409,705	131,555
		Indirect	28,117	-2,346
LFG Energy, Inc.	Alternative Energy	Direct	178,001	
		Indirect	11,642	
Litton Poly-Scientific Clifton Precision	Industry	--		
Los Angeles Department of Water and Power	Electric Power	Direct	634,956	-1,656,423
		Indirect	7,086	
		Sequestration	2,601	2,601
Lower Colorado River Authority	Electric Power	Direct	310,620	310,620
		Indirect	123,286	123,286
Lucent Technologies Inc.	Industry	Direct	13,806	13,806
		Indirect	29,011	29,011
Lynchburg Gas Producers, LLC	Alternative Energy	Direct	14,251	
		Indirect	-1,704	

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
M.J. SOFFE COMPANY	Industry	Direct		1,072
		Indirect		14
Madison County Depart. of Solid Waste & Sanitation	Alternative Energy	Direct	31,298	
		Indirect	21,612	
Majestic Metals, Inc.	Industry	Unspecified (EZ)	112	
Mallinckrodt, Inc.	Industry	Direct		9,227
		Indirect		1,260
Maple Springs Laundry	Other	Direct		8
		Indirect		-71
McNeil Generating Station	Electric Power	Indirect		141,609
Mead Johnson Nutls/Bristol-Meyers Squibb	Industry	Direct	91	
		Indirect	1,945	
Mecklenburg Electric Cooperative	Electric Power	Indirect	13,785	
Michigan CAT	Industry	Direct	303,026	
		Indirect	253,262	
Middlesex Generating Company, LLC	Alternative Energy	Direct	452,519	452,519
Miller Brewing Company	Industry	Direct		6,441
		Indirect		4,253
Minnesota Power	Electric Power	Direct	602,031	
		Indirect	70,738	
		Sequestration	22,228	
Minnesota Resource Recovery Association	Other	Unspecified (EZ)	1,192,788	
Moorhead Public Service	Electric Power	Unspecified (EZ)	14,442	
Motorola Austin	Industry	Direct		-1,618
		Indirect		3,028
Nashville Electric Service	Electric Power	Unspecified (EZ)	3,853	
National By-Products Inc	Industry	Direct	4,841	
National Grid USA	Electric Power	Direct	3	
		Indirect	1,212,258	
National Spinning Co., Inc.	Industry			*
Natural Power, Inc.	Alternative Energy	Direct	353,302	
		Indirect	16,891	
NC Muni Landfill Gas Partners, LLC	Alternative Energy	Direct	65,872	
		Indirect	6,734	
Nebraska Public Power District	Electric Power	Unspecified (EZ)	589,484	
NEO Corporation	Alternative Energy	Direct	7,113,436	
New York Power Authority	Electric Power	Direct		300,493
		Indirect		164,569
Newton Landfill Gas, LLC	Alternative Energy	Direct	28,731	
		Indirect	1,172	
Niagara Mohawk Power Corporation	Electric Power	Direct	2,141,281	14,627,479
		Indirect	9,205	-2,632,378
NiSource/NIPSCO	Electric Power	Direct	1,752,032	1,752,032
		Indirect	98,552	98,553
		Sequestration	350	350
Noranda Aluminum Inc.	Industry	Direct	3,255,400	
North American Carbon, Inc.	Alternative Energy	Indirect	232,827	
North Carolina Biomass Partners	Alternative Energy	Unspecified (EZ)	60,475	
North Carolina Electric Membership Corporation	Electric Power	Unspecified (EZ)	196,741	
Northern Neck Electric Cooperative	Electric Power	Indirect	3,087	
Northern Virginia Electric Cooperative	Electric Power	Indirect	22,566	

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
Northwest Fuel Development, Inc.	Alternative Energy	Direct	6,573	
		Indirect	0	
NRG Energy Inc	Electric Power	Indirect	331,619	
Oak Creek Energy Systems Inc.	Alternative Energy	Indirect	40,459	
Ocean County Landfill Corporation	Alternative Energy	Direct	417,657	
Old Dominion Electric Cooperative	Electric Power	Indirect	61	
		Sequestration	2	
Omaha Public Power District	Electric Power	Unspecified (EZ)	1,671,132	
Pacific Energy Operating Group, LP	Electric Power	Direct	-26,573	
		Indirect	386,170	
Pacific Natural Energy, LLC	Alternative Energy	Direct	835,236	835,236
Pacific Recovery Corporation	Alternative Energy	Direct	447,927	
		Indirect	11,040	
PacifiCorp	Electric Power	Direct	951,296	951,296
		Indirect	523,792	523,792
		Sequestration	759,195	759,195
Pak-Lite, Inc. - Mebane Plant	Industry			*
Palmer Capital Corporation	Alternative Energy	Direct	5,988,577	5,988,577
		Indirect	-162,020	-162,020
PECO Energy Company	Electric Power	Direct	2,626,781	285,149
		Indirect	2,249,993	0
PEI Power Corp	Alternative Energy	Direct	326	326
		Indirect	18,391	18,391
Penn Compression Moulding, Inc.	Industry	--		
PG&E Corporation	Electric Power	Direct	2,747,621	2,747,621
		Indirect	381,273	381,273
		Sequestration	21,405	21,405
Pharmacia & Upjohn Caribe, Inc.	Industry	Unspecified (EZ)	1,041	
Pitt Landfill Gas, LLC	Alternative Energy	Direct	69,189	
		Indirect	7,250	
Platte River Power Authority & 4 owner cities	Electric Power	Direct	8,129	
		Indirect	77,103	
Portland General Electric Co.	Electric Power	Direct	59	59
		Indirect	1,017,483	1,017,483
		Sequestration	1,422	1,422
PPL CORPORATION	Electric Power	Direct	858,511	858,511
		Indirect	1,294,693	1,294,693
		Sequestration	9,150	9,150
Pratt & Whitney North Berwick	Industry	Direct	2,185	2,185
		Indirect	2,798	2,798
Prince George Electric Cooperative	Electric Power	Indirect	6,216	
Public Service Company of New Mexico	Electric Power	Direct	1,671,397	
Public Service Enterprise Group	Electric Power	Direct		859,215
		Indirect	2,195,296	2,195,296
		Sequestration	795	795
Public Utility District No. 1 of Snohomish County	Electric Power	Direct	3	
		Indirect	129,062	
Quad/Graphics, Inc.	Industry	Indirect	242,847	
Rangely Weber Sand Unit	Industry	Indirect	1,052,000	
Rappahannock Electric Cooperative	Electric Power	Indirect	35,638	
		Sequestration	5	

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
Reliant Energy - HL&P	Electric Power	Direct	-165,108	4,773,606
		Indirect	654,987	654,987
Republic Metals Corporation	Industry	Direct		119
		Indirect		-70
Rolls-Royce Corporation	Industry	Direct	24,647	29,009
		Indirect	278,674	382,557
Sacramento Municipal Utility District	Electric Power	Direct	19	-1,314,465
		Indirect	523,369	1,786,303
		Sequestration	2,278	2,278
Salt River Project	Electric Power	Unspecified (EZ)	1,709,336	
Santee Cooper	Electric Power	Direct	1,236,503	1,236,505
		Indirect	66,283	66,283
		Sequestration	3,209	3,209
Seattle City Light	Electric Power	Indirect	241,626	241,625
		Sequestration	41	41
SeaWest Windpower, Inc.	Alternative Energy	Indirect	102,207	
Seminole Electric Cooperative, Inc.	Electric Power	Unspecified (EZ)	403,218	
Seneca Energy, Inc.	Alternative Energy	Direct	426,569	
		Indirect	37,811	
Separation Technologies, Inc	Industry	Unspecified (EZ)	334,856	
Shenandoah Valley Electric Cooperative	Electric Power	Indirect	13,872	
		Sequestration	1	
Sherry Manufacturing	Industry	Indirect	195	
Shrewsbury Electric Light Plant	Electric Power	Unspecified (EZ)	1,980	
Siemens Power Transmission & Distribution, Inc.	Industry	Direct		26
		Indirect		338
South Carolina Electric & Gas Company	Electric Power	Direct	1,763,300	
		Indirect	123,712	
		Sequestration	5,847	
Southeastern Biomass Partners, LP	Alternative Energy	Unspecified (EZ)	83,956	
Southern California Edison Co.	Electric Power	Direct	5,648,232	
		Indirect	120,202	
Southern Company	Electric Power	Direct	6,356,527	6,356,527
		Indirect	2,187,254	2,187,254
		Sequestration	163,925	163,925
Southside Electric Cooperative	Electric Power	Indirect	21,019	
Steuben Rural Electric Co-op	Electric Power	Unspecified (EZ)	2,085	
Sunoco, Inc.	Industry	Direct		1,527,415
		Indirect		-174,846
Tampa Electric Company	Electric Power	Indirect	353,985	353,985
		Sequestration	184	184
Tennessee Valley Authority	Electric Power	Direct	27,231,070	27,231,080
		Indirect	219,049	219,049
		Sequestration	13,570	13,570
Texaco, Inc.	Industry	Unspecified (EZ)	0	
Tucson Electric Power Company	Electric Power	Direct	67,908	
		Indirect	98,491	
		Sequestration	425	
TXU	Electric Power	Direct	20,850,534	
		Indirect	782,062	
		Sequestration	21,983	

Table B4. Total Emission Reductions and Sequestration Reported at Project and Entity Levels, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Reporter	Sector	Reduction Source	Project-Level	Entity-Level
U. S. Steel Mining Company, LLC	Alternative Energy	Direct	1,999,556	
		Indirect	-19,006	
U.S. Department of Energy- Office of Solar	Other	Direct	48	
Unocal Corporation	Industry	Direct	-249,381	
		Indirect	3,656,965	
Utah Municipal Power Agency	Electric Power	Unspecified (EZ)	38,089	
Valdese Manufacturing Company	Industry	Direct		-8,073
		Indirect		-4,014
Vermont Public Power Supply Authority	Electric Power	Indirect	1,856	
The Virkler Company	Industry	Direct		27
		Indirect		9
Waverly Light & Power Company	Electric Power	Direct	15,642	16,215
		Indirect	6,354	6,879
		Sequestration	132	132
Western Resources, Inc.	Electric Power	Direct	858,695	
		Indirect	454,867	
		Sequestration	1,290	
Wisconsin Electric Power Co.	Electric Power	Direct	3,255,997	
		Indirect	1,193,004	
		Sequestration	240,225	
Wisconsin Public Power Inc.	Electric Power	Unspecified (EZ)	19,516	
World Wood Co.	Industry	Indirect		199
Wyeth-Lederle Vaccines	Industry	Direct		3,083
		Indirect		9,223
Xcel Energy	Electric Power	Direct	4,516,216	
		Indirect	707,558	
Zahren Alternative Power Corporation	Alternative Energy	Unspecified (EZ)	1,938,277	
Zeeland Board of Public Works	Electric Power	Unspecified (EZ)	397	

* No reductions reported.

Note: This table excludes confidential reporters.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
8309 Tujunga Avenue Corporation	EIA-1605	Austin Road Landfill	U.S.	Waste Methane
		Gude Southlawn Sanitary Landfill	U.S.	Waste Methane
		Penrose Sanitary Landfill	U.S.	Waste Methane
		Sheldon Arleta Landfill	U.S.	Waste Methane
		Toyon Canyon Sanitary Landfill	U.S.	Waste Methane
A&N Electric Cooperative	EIA-1605	Demand-side Management Load Control Program	U.S.	Energy End Use
		Transmission and Distribution Efficiency Improvements	U.S.	Electric Power
		Mbaracayu Conservation	Foreign	Sequestration
		OXFAM America Amazon	Foreign	Sequestration
AES Thames	EIA-1605	CARE Agroforestry	Foreign	Sequestration
AES Warrior Run, Inc.	EIA-1605	Indian Dairy Project	Foreign	Agriculture Methane
Advanced Micro Devices	EIA-1605EZ	Centralization of Boilers	U.S.	Energy End Use
		HEPA Filter Air Flow Reduction	U.S.	Energy End Use
		Humidification Control Relocation	U.S.	Energy End Use
		Humidification Control Relocation	U.S.	Energy End Use
		Tree Planting	U.S.	Sequestration
		Utility Cross-Connect of Chillers, Compressors, and Driers	U.S.	Energy End Use
		Variable Frequency Drive Installation for Eqpt. Exhaust	U.S.	Energy End Use
Alabama Biomass Partners, Ltd	EIA-1605EZ	Biomass Waste to Energy	U.S.	Electric Power
Alcan Ingot, Sebree Aluminum Plant	EIA-1605	PFC Emissions Reductions	U.S.	Halogenates
		Adjustable Speed Drives for PA Fans - Hatfield's Ferry P.S.	U.S.	Electric Power
		Adjustable Speed Drives-Plastic Injection Molding Machines	U.S.	Energy End Use
		Application of Capacitors	U.S.	Electric Power
		Armstrong Boiler No. 1 Emissions Reduction Project	U.S.	Electric Power
		Armstrong Boiler No. 2 Emissions Reduction Project	U.S.	Electric Power
		Armstrong Unit 1 - Boiler Controls Replacement	U.S.	Electric Power
		Armstrong Unit 2 - Boiler Controls Replacement	U.S.	Electric Power
		Auxiliary Fuel Switching	U.S.	Electric Power
		Black Oak Property Tree Planting	U.S.	Sequestration
		Carryall Vehicle Program	U.S.	Transportation
		Conversion to Higher Voltage Distribution	U.S.	Electric Power
		Demand-Side Management Programs	U.S.	Energy End Use
		Economic Conductor Selection	U.S.	Electric Power
		Efficient Distribution Transformers	U.S.	Electric Power
		Energy Star Transformer Program	U.S.	Electric Power
		EnviroTech Fund - Domestic Activities	U.S.	Other
		EnviroTech Fund - Foreign Activities	Foreign	Other
		Fly Ash use as replacement for cement	U.S.	Other
		Green Lights Utility Ally Program	U.S.	Energy End Use
		Hatfield's Ferry Unit 1 - HP/IP Turbine Rotor Replacement	U.S.	Electric Power
		Hatfield's Ferry Unit 1 - LP Turbine Rotor Replacement	U.S.	Electric Power
		Hatfield's Ferry Unit 2 - HP/IP Turbine Rotor Replacement	U.S.	Electric Power
		Hatfield's Ferry Unit 2 LP Turbine Rotor Replacement	U.S.	Electric Power
		Hatfield's Ferry Unit 2 Natural Gas Reburn Demonstration	U.S.	Electric Power
		Hatfield's Ferry Unit 3 - LP Turbine Rotor Replacement	U.S.	Electric Power
		Lake Lynn Hydro Electric Station Relicensing	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Performance Monitoring Systems	U.S.	Electric Power
		Potomac Edison 138/500 kV System Split	U.S.	Electric Power
		R. P. Smith Unit 4 - Boiler Controls Replacement	U.S.	Electric Power
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Replace Small Primary Conductors	U.S.	Electric Power
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rivesville Unit 6 - High Pressure Turbine Rotor Replacement	U.S.	Electric Power
		Rivesville Unit No. 6 - Boiler Controls Replacement	U.S.	Electric Power
		SF6 Breaker Replacement	U.S.	Halogenates
		Small Hydroelectric Station Relicensing	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Willow Island Unit 1- Low Pressure Turbine Rotor Replacement	U.S.	Electric Power
		Willow Island Unit 2 Boiler Controls Replacement	U.S.	Electric Power
		Wire Replacement on Transmission Lines	U.S.	Electric Power

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Allergan, Inc.	EIA-1605	AMO Facility Closure	U.S.	Energy End Use
		Air Compressor System Upgrade	U.S.	Energy End Use
		Allergan Brazil Building Management System Installation	Foreign	Energy End Use
		Allergan Facility Divestiture	U.S.	Energy End Use
		Allergan Italy Facility Closure	Foreign	Energy End Use
		Allergan LOK Brazil Operation Consolidation	Foreign	Energy End Use
		Allergan Medical Plastics Energy Managment System Upgrade	U.S.	Energy End Use
		CFC Substitution with Chiller Replacement	U.S.	Halogenates
		Chilled Water Decouple Loop	U.S.	Energy End Use
		Chiller Replacement	U.S.	Energy End Use
		Compressed Air Leak Repair	Foreign	Energy End Use
		Compressor Replacement	U.S.	Energy End Use
		Curtail Weekend Energy Usage	Foreign	Energy End Use
		Direct Expansion Cooler Unit Redesign	U.S.	Energy End Use
		Elimination of CFCs at Farnborough, UK	Foreign	Halogenates
		Elimination of CFCs at U.S. Plants	U.S.	Halogenates
		Elimination of Catalytic Thermal Oxidizer	U.S.	Energy End Use
		Floor Fan Elimination	U.S.	Energy End Use
		Insulate Process Lines	Foreign	Energy End Use
		Lighting Retrofits and Upgrades	U.S.	Energy End Use
		Reduction in Operating Time for Blowmolding Equipment	Foreign	Energy End Use
		Replace Mercury Vapor Lamps with Fluorescent Lamps	Foreign	Energy End Use
Alliant Energy	EIA-1605	Afforestation	U.S.	Sequestration
		Cedar Rapids Landfill Methane IES	U.S.	Electric Power
		Columbia 1 turbine blade Efficiency improvements	U.S.	Electric Power
		Columbia 1&2 Excess Air Efficiency improvements	U.S.	Electric Power
		Columbia 2 economizer Efficiency improvements	U.S.	Electric Power
		Columbia 2 turbine blade Heat rate improvement	U.S.	Electric Power
		Conservation tillage	U.S.	Sequestration
		Edge 5 Excess Air Efficiency improvements	U.S.	Electric Power
		Energy End Use - Electric IES	U.S.	Energy End Use
		Energy End Use - Electric IPC	U.S.	Energy End Use
		Energy End Use - Gas IES	U.S.	Energy End Use
		Energy End Use - Gas IPC	U.S.	Energy End Use
		Energy end use projects-Electric	U.S.	Energy End Use
		Energy end use-Gas	U.S.	Energy End Use
		Fly Ash Utilization	U.S.	Other
		Forest preservation	U.S.	Sequestration
		Fuel Switching	U.S.	Electric Power
		Habitat Restoration	U.S.	Sequestration
		Mallard Ridge Landfill Methane	U.S.	Electric Power
		Minergy Waste Generation	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Switchgrass Cofiring	U.S.	Electric Power
		Tire Derived Fuel Generation	U.S.	Electric Power
		Transmission line improvements	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Urban Forestry IES	U.S.	Sequestration
		Urban Forestry IES	U.S.	Energy End Use
		Urban Forestry IPC	U.S.	Sequestration
		Urban Forestry IPC	U.S.	Energy End Use
		Verona Landfill Methane	U.S.	Electric Power
		WP&L Green Lights Projects	U.S.	Energy End Use
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Wind Power	U.S.	Electric Power

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Carpooling	U.S.	Transportation
		Conversion to a dry flyash handling system.	U.S.	Electric Power
		Demand Side Management Projects	U.S.	Energy End Use
		EnviroTech Fund - Foreign	Foreign	Energy End Use
		EnviroTech Fund - US	U.S.	Energy End Use
		Flyash substitution for cement.	U.S.	Other
		Green Leaf Project	U.S.	Sequestration
		Increased Nuclear generation	U.S.	Electric Power
		Install adjustible speed fan drives replacing fixed speed	U.S.	Electric Power
		Meramec Power Plant Control Upgrade	U.S.	Electric Power
		Meramec Power Plant Lighting Upgrade	U.S.	Energy End Use
		Milam Landfill Methane Recovery	U.S.	Waste Methane
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Purchase of Light Weight Rail Cars	U.S.	Transportation
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Replaced motor-generator exciters with static exciter system	U.S.	Electric Power
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Sioux Plant Control Upgrade	U.S.	Electric Power
		Street Light Conversion	U.S.	Energy End Use
		Subtransmission Reconductoring	U.S.	Electric Power
		Transformer Replacement	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Waste Oil Heat Recovery	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
American Electric Power, Inc.	EIA-1605	AEP-AGSPOIL-1992	U.S.	Sequestration
		AEP-AGSPOIL-1993	U.S.	Sequestration
		AEP-AGSPOIL-1994	U.S.	Sequestration
		AEP-AGSPOIL-1995	U.S.	Sequestration
		AEP-AGSPOIL-1996	U.S.	Sequestration
		AEP-AGSPOIL-1997	U.S.	Sequestration
		AEP-AGSPOIL-1998	U.S.	Sequestration
		AEP-AGSPOIL-1999	U.S.	Sequestration
		AEP-AGSPOIL-2000	U.S.	Sequestration
		AEP-FM-1991	U.S.	Sequestration
		AEP-FM-1992	U.S.	Sequestration
		AEP-FM-1993	U.S.	Sequestration
		AEP-FM-1994	U.S.	Sequestration
		AEP-FM-1995	U.S.	Sequestration
		AEP-FM-1996	U.S.	Sequestration
		AEP-FM-1997	U.S.	Sequestration
		AEP-FM-1998	U.S.	Sequestration
		AEP-FM-1999	U.S.	Sequestration
		AEP-FM-2000	U.S.	Sequestration
		AEP-MARAG- 1992	U.S.	Sequestration
		AEP-MARAG-1991	U.S.	Sequestration
		AEP-MARAG-1993	U.S.	Sequestration
		AEP-MARAG-1993-2	U.S.	Sequestration
		AEP-MARAG-1994	U.S.	Sequestration
		AEP-MARAG-1994-2	U.S.	Sequestration
		AEP-MARAG-1995	U.S.	Sequestration
		AEP-MARAG-1996	U.S.	Sequestration
		AEP-MARAG-1997	U.S.	Sequestration
		AEP-MARAG-1998	U.S.	Sequestration
		AEP-MARAG-1999	U.S.	Sequestration
		AEP-MARAG-2000	U.S.	Sequestration
		AEP-West Land Management	U.S.	Sequestration
		ClearChoice(sm) Green Pricing Initiative: AEP-West	U.S.	Electric Power
		Commercial/Industrial DSM Programs: AEP-East	U.S.	Energy End Use
		Demand Side Management Activities: AEP-West	U.S.	Energy End Use
		Distribution System Equipment Improvements	U.S.	Electric Power
		Enviro Tech Investment Fund I Limited Partnership - US	U.S.	Other
		Enviro Tech Investment Funds - Foreign	Foreign	Other
		Fly Ash Utilization Program (Cement Replacement)	U.S.	Other
		Fuel Switch Coal to Natural Gas (Conesville Unit 1-3)	U.S.	Electric Power
		Green Lights	U.S.	Energy End Use

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
American Electric Power, Inc.	EIA-1605	Heat Rate Improvement (Due to improved load optimization)	U.S.	Electric Power
		Heat Rate Improvement Projects (Oper. and Equip. Changes)	U.S.	Electric Power
		Hydroelectric Facility Improvements: AEP-East	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Noel Kempff Mercado Climate Action Project	Foreign	Sequestration
		Nuclear Plant Improved Utilization	U.S.	Electric Power
		Open-Loop Transmission Groundwire Resistive Loss Reduction	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Renewable Generation - Solar	U.S.	Electric Power
		Renewable Generation - Wind: AEP-East	U.S.	Electric Power
		Renewable Generation - Wind: AEP-West	U.S.	Electric Power
		Residential Demand Side Management Programs: AEP-East	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Southwest Mesa Wind Farm	U.S.	Electric Power
		Sulfur Hexafluoride Gas Reduction	U.S.	Halogenates
		Transmission Efficiency Improvements: AEP-West	U.S.	Electric Power
		Transmission System Reinforcements	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Watts on Schools	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
American Forests	EIA-1605	Global ReLeaf -- Alazan Bayou WMA, TX	U.S.	Sequestration
		Global ReLeaf -- Green`n New Jersey, NJ	U.S.	Sequestration
		Global ReLeaf -- Hens Peak Fire, Fishlake NF, UT	U.S.	Sequestration
		Global ReLeaf -- Lake Sammamish Watershed, WA	U.S.	Sequestration
		Global ReLeaf -- Lake Superior Watershed, WI	U.S.	Sequestration
		Global ReLeaf -- Otsego Creek, NY	U.S.	Sequestration
		Global ReLeaf -- Re-Greening Logging Roads, WA	U.S.	Sequestration
		Global ReLeaf -- Skagit Wild & Scenic River System, WA	U.S.	Sequestration
		Global ReLeaf -- Wicker Park, North Carolina	U.S.	Sequestration
		Global ReLeaf Forests - Gunpowder Falls, Maryland	U.S.	Sequestration
		Global ReLeaf Forests - Hart Miller Island, MD	U.S.	Sequestration
		Global ReLeaf Forests - Marais des Cygnes, Kansas	U.S.	Sequestration
		Global ReLeaf Forests - Moraine Hills, IL	U.S.	Sequestration
		Global ReLeaf Forests - P/P/P Riparian, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- 3 Sisters Eagle Roost, CA	U.S.	Sequestration
		Global ReLeaf Forests -- ASCM Preserve, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Afton Canyon, CA	U.S.	Sequestration
		Global ReLeaf Forests -- Allegheny, Pennsylvania	U.S.	Sequestration
		Global ReLeaf Forests -- Apalacicola, Florida	U.S.	Sequestration
		Global ReLeaf Forests -- Applegate River, Oregon	U.S.	Sequestration
		Global ReLeaf Forests -- Appomattox, Virginia	U.S.	Sequestration
		Global ReLeaf Forests -- Aqua Fria, Arizona	U.S.	Sequestration
		Global ReLeaf Forests -- AuSable, Michigan	U.S.	Sequestration
		Global ReLeaf Forests -- Bass River, New Jersey	U.S.	Sequestration
		Global ReLeaf Forests -- Bayou Cocodrie NWR, LA	U.S.	Sequestration
		Global ReLeaf Forests -- Beaver Creek, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Bell Farm, Kentucky	U.S.	Sequestration
		Global ReLeaf Forests -- Belleplain, New Jersey	U.S.	Sequestration
		Global ReLeaf Forests -- Beltrami, Minnesota	U.S.	Sequestration
		Global ReLeaf Forests -- Betsie River, Michigan	U.S.	Sequestration
		Global ReLeaf Forests -- Big Walnut Nature Preserve, Indiana	U.S.	Sequestration
		Global ReLeaf Forests -- Big Woods, Minnesota	U.S.	Sequestration
		Global ReLeaf Forests -- Black Ridge, Colorado	U.S.	Sequestration
		Global ReLeaf Forests -- Black River, Wisconsin	U.S.	Sequestration
		Global ReLeaf Forests -- Blackfoot-Clearwater, Montana	U.S.	Sequestration
		Global ReLeaf Forests -- Blackwater, Florida	U.S.	Sequestration
		Global ReLeaf Forests -- Boise, Idaho	U.S.	Sequestration
		Global ReLeaf Forests -- Brokenback Diversity, Wyoming	U.S.	Sequestration
		Global ReLeaf Forests -- Buffalo Creek, CO	U.S.	Sequestration
		Global ReLeaf Forests -- Cache River Bioreserve, Illinois	U.S.	Sequestration
		Global ReLeaf Forests -- Cache River, Arkansas	U.S.	Sequestration
		Global ReLeaf Forests -- Caddo Parish, Louisiana	U.S.	Sequestration
		Global ReLeaf Forests -- Carson, New Mexico	U.S.	Sequestration
		Global ReLeaf Forests -- Casper, Wyoming	U.S.	Sequestration
		Global ReLeaf Forests -- Chittenden, Michigan	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
American Forests	EIA-1605	Global ReLeaf Forests -- Choccolocco, Alabama	U.S.	Sequestration
		Global ReLeaf Forests -- Conecuh, Alabama	U.S.	Sequestration
		Global ReLeaf Forests -- Coshocton, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Cossatot, Arkansas	U.S.	Sequestration
		Global ReLeaf Forests -- Croatan, North Carolina	U.S.	Sequestration
		Global ReLeaf Forests -- Cuba, New Mexico	U.S.	Sequestration
		Global ReLeaf Forests -- Darton College, Georgia	U.S.	Sequestration
		Global ReLeaf Forests -- Dawson Demo Forest, Georgia	U.S.	Sequestration
		Global ReLeaf Forests -- DeSoto, Mississippi	U.S.	Sequestration
		Global ReLeaf Forests -- Double Trouble, New Jersey	U.S.	Sequestration
		Global ReLeaf Forests -- Duck Creek, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Eastern Neck NWR, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Econofina, Florida	U.S.	Sequestration
		Global ReLeaf Forests -- Ellis, Texas	U.S.	Sequestration
		Global ReLeaf Forests -- Fairfax, Virginia	U.S.	Sequestration
		Global ReLeaf Forests -- Farragut, Idaho	U.S.	Sequestration
		Global ReLeaf Forests -- Francis Marion, South Carolina	U.S.	Sequestration
		Global ReLeaf Forests -- Glades Preserve, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Grailville, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Great Plains RC & D, Oklahoma	U.S.	Sequestration
		Global ReLeaf Forests -- Greater Grand Forks, North Dakota	U.S.	Sequestration
		Global ReLeaf Forests -- Greenwood WMA, New Jersey	U.S.	Sequestration
		Global ReLeaf Forests -- Hakalau, Hawaii	U.S.	Sequestration
		Global ReLeaf Forests -- Harrison, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Holly Springs, Mississippi	U.S.	Sequestration
		Global ReLeaf Forests -- Homer, Alaska	U.S.	Sequestration
		Global ReLeaf Forests -- Indian Creek, California	U.S.	Sequestration
		Global ReLeaf Forests -- Indian Lake, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Indian Mounds, Texas	U.S.	Sequestration
		Global ReLeaf Forests -- Janes Island State Park, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Jordon River, Utah	U.S.	Sequestration
		Global ReLeaf Forests -- Kenosha Pass, Colorado	U.S.	Sequestration
		Global ReLeaf Forests -- Kettle Moraine, Wisconsin	U.S.	Sequestration
		Global ReLeaf Forests -- King Range, California	U.S.	Sequestration
		Global ReLeaf Forests -- Kisatchie, Louisiana	U.S.	Sequestration
		Global ReLeaf Forests -- Kula Forest Preserve, Hawaii	U.S.	Sequestration
		Global ReLeaf Forests -- Lake George, Florida	U.S.	Sequestration
		Global ReLeaf Forests -- Lake Monroe, FL	U.S.	Sequestration
		Global ReLeaf Forests -- Ledge View Co. Park, Wisconsin	U.S.	Sequestration
		Global ReLeaf Forests -- Lindsay, Oklahoma	U.S.	Sequestration
		Global ReLeaf Forests -- Little River, Arkansas	U.S.	Sequestration
		Global ReLeaf Forests -- Long Island, Illinois	U.S.	Sequestration
		Global ReLeaf Forests -- Lower MI Riparian Corridors, MI	U.S.	Sequestration
		Global ReLeaf Forests -- Marys River, Nevada	U.S.	Sequestration
		Global ReLeaf Forests -- Mattole River, California	U.S.	Sequestration
		Global ReLeaf Forests -- Mescalero Apache, New Mexico	U.S.	Sequestration
		Global ReLeaf Forests -- Michaux, Pennsylvania	U.S.	Sequestration
		Global ReLeaf Forests -- Milford Neck Preserve, DE	U.S.	Sequestration
		Global ReLeaf Forests -- Monocacy NRMA, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Moxley Farm, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Mt. Baldy Demo, CA	U.S.	Sequestration
		Global ReLeaf Forests -- Nanticoke WMA, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Nooksack, Washington	U.S.	Sequestration
		Global ReLeaf Forests -- Oklawaha, Florida	U.S.	Sequestration
		Global ReLeaf Forests -- Oneida County, New York	U.S.	Sequestration
		Global ReLeaf Forests -- Oneida Nation, Wisconsin	U.S.	Sequestration
		Global ReLeaf Forests -- Patapsco River, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Perry State Forest, Ohio	U.S.	Sequestration
		Global ReLeaf Forests -- Pike, Colorado	U.S.	Sequestration
		Global ReLeaf Forests -- Pillsbury, Minnesota	U.S.	Sequestration
		Global ReLeaf Forests -- Pine Barrens, New York	U.S.	Sequestration
		Global ReLeaf Forests -- Pine Creek, Idaho	U.S.	Sequestration
		Global ReLeaf Forests -- Point Remove NWR, AR	U.S.	Sequestration
		Global ReLeaf Forests -- Rio Grande NWR, Texas	U.S.	Sequestration
		Global ReLeaf Forests -- Rio Salada, New Mexico	U.S.	Sequestration
		Global ReLeaf Forests -- Rockland Forest, Florida	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
American Forests	EIA-1605	Global ReLeaf Forests -- SW OK Riparian Forest, Oklahoma	U.S.	Sequestration
		Global ReLeaf Forests -- Sam Houston, Texas	U.S.	Sequestration
		Global ReLeaf Forests -- San Pedro, Arizona	U.S.	Sequestration
		Global ReLeaf Forests -- Sanborn, South Dakota	U.S.	Sequestration
		Global ReLeaf Forests -- Sands Ponds, Missouri	U.S.	Sequestration
		Global ReLeaf Forests -- Savage River, Maryland	U.S.	Sequestration
		Global ReLeaf Forests -- Spokane, Washington	U.S.	Sequestration
		Global ReLeaf Forests -- St. Catherine, Mississippi	U.S.	Sequestration
		Global ReLeaf Forests -- Starr Hill, New York	U.S.	Sequestration
		Global ReLeaf Forests -- Stephens Forest, Iowa	U.S.	Sequestration
		Global ReLeaf Forests -- Tangipahoa, Louisiana	U.S.	Sequestration
		Global ReLeaf Forests -- Telfair, Georgia	U.S.	Sequestration
		Global ReLeaf Forests -- Temple, Michigan	U.S.	Sequestration
		Global ReLeaf Forests -- Three Mile Lake, Iowa	U.S.	Sequestration
		Global ReLeaf Forests -- Two Rocks, Pennsylvania	U.S.	Sequestration
		Global ReLeaf Forests -- Voyagers, Minnesota	U.S.	Sequestration
		Global ReLeaf Forests --- Island Park Caldera, ID	U.S.	Sequestration
		Global ReLeaf Forests --- San Luis NWR, CA	U.S.	Sequestration
		Global ReLeaf Forests- Bayou Bartholomew, AR	U.S.	Sequestration
		Global ReLeaf Forests- St. Marks NWR, FL	U.S.	Sequestration
		Global ReLeaf Forests- Wye Island Riparian, MD	U.S.	Sequestration
		Global ReLeaf Forests-- African American Reforestation, TN	U.S.	Sequestration
		Global ReLeaf Forests-- Barron County, WI	U.S.	Sequestration
		Global ReLeaf Forests-- Beaverkill/Willowemoc, NY	U.S.	Sequestration
		Global ReLeaf Forests-- Big Creek Fisheries, WI	U.S.	Sequestration
		Global ReLeaf Forests-- Calvert County, MD	U.S.	Sequestration
		Global ReLeaf Forests-- Cherokee Indian Res., NC	U.S.	Sequestration
		Global ReLeaf Forests-- Chesapeake Bay, MD	U.S.	Sequestration
		Global ReLeaf Forests-- Elm Fork, Denton, TX	U.S.	Sequestration
		Global ReLeaf Forests-- Fernwood SF, OH	U.S.	Sequestration
		Global ReLeaf Forests-- Flint River, GA	U.S.	Sequestration
		Global ReLeaf Forests-- Great Dismal Swamp NWR, VA	U.S.	Sequestration
		Global ReLeaf Forests-- Hancock County, IN	U.S.	Sequestration
		Global ReLeaf Forests-- Horicon Service Center, WI	U.S.	Sequestration
		Global ReLeaf Forests-- Illinois River Watershed, OR	U.S.	Sequestration
		Global ReLeaf Forests-- Mission Trails, TX	U.S.	Sequestration
		Global ReLeaf Forests-- Mountains to Sounds, WA	U.S.	Sequestration
		Global ReLeaf Forests-- Natchitoches Parish, LA	U.S.	Sequestration
		Global ReLeaf Forests-- New Michigan SF, NY	U.S.	Sequestration
		Global ReLeaf Forests-- Oak Foundation, CA	U.S.	Sequestration
		Global ReLeaf Forests-- Okefenokee NWR, GA	U.S.	Sequestration
		Global ReLeaf Forests-- Potawot Health Village, CA	U.S.	Sequestration
		Global ReLeaf Forests-- Salina Canyon, UT	U.S.	Sequestration
		Global ReLeaf Forests-- Sandy River Delta, OR	U.S.	Sequestration
		Global ReLeaf Forests-- Schoolcraft County, MI	U.S.	Sequestration
		Global ReLeaf Forests-- Seneca Creek SP, MD	U.S.	Sequestration
		Global ReLeaf Forests-- Sorefoot Creek, OR	U.S.	Sequestration
		Global ReLeaf Forests-- St. Sebastian, FL	U.S.	Sequestration
		Global ReLeaf Forests-- Sterling Nature Center, NY	U.S.	Sequestration
		Global ReLeaf Forests-- Stewardship Forests, MN	U.S.	Sequestration
		Global ReLeaf Forests-- West Ox Rd, VA	U.S.	Sequestration
		Global ReLeaf Forests-- Whatcom Land Trust	U.S.	Sequestration
		Global ReLeaf Forests--Sunrise Fire-Long Island, NY	U.S.	Sequestration
American Municipal Power - Ohio	EIA-1605	AMP-OHIO: NYPA Hydro Purchases	U.S.	Electric Power
		City of Bowling Green Lighting Improvement	U.S.	Energy End Use
		City of Columbus: O'Shaughnessy Hydro	U.S.	Electric Power
		City of Hamilton Hydro Electric Plant	U.S.	Electric Power
		City of Hamilton: Greenup Hydro	U.S.	Electric Power
		City of Niles: Lighting Improvement	U.S.	Energy End Use
		City of Painesville: Heat Rate Improvement	U.S.	Electric Power
		City of Piqua: Plant Derating	U.S.	Electric Power
		City of Shelby: Lighting Improvement	U.S.	Energy End Use
		City of St. Clairsville: Lighting Improvement	U.S.	Energy End Use
		City of Wadsworth: Lighting Improvement	U.S.	Energy End Use
		Line Loss Reduction	U.S.	Electric Power
		Main Office Recycling Program	U.S.	Other

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
American Municipal Power - Ohio	EIA-1605	Newton Falls Reconductoring Project	U.S.	Electric Power
		OMEGA JV5 Belleville Hydro Plant	U.S.	Electric Power
		Ohio City: Lighting Improvement	U.S.	Energy End Use
		Urban Forestry - Tree City USA	U.S.	Sequestration
		Village of Arcadia Lighting Upgrade	U.S.	Energy End Use
		Village of Custar: Lighting Improvement	U.S.	Energy End Use
		Village of Eldorado: Lighting Improvement	U.S.	Energy End Use
		Village of Lucas: Lighting Improvement	U.S.	Energy End Use
		Village of New Knoxville: Lighting Improvement	U.S.	Energy End Use
		Wadsworth Distribution Upgrade	U.S.	Electric Power
		Water Furnace	U.S.	Energy End Use
Anoka Municipal Utility	EIA-1605EZ	Central A/C Replacement	U.S.	Energy End Use
		Demand Management	U.S.	Energy End Use
		Urban Forestry	U.S.	Sequestration
		Wind Generation	U.S.	Electric Power
Arizona Electric Power Cooperative, Inc.	EIA-1605EZ	Carpool	U.S.	Transportation
		Fly Ash Sales	U.S.	Other
		Lighting & Exit Sign Replacemnt	U.S.	Energy End Use
		Utility Photo Voltaic -- Group Membership	U.S.	Other
Arizona Portland Cement Co.	EIA-1605	100 Ton Haul Trucks	U.S.	Transportation
		Bulk Load Bin Filling	U.S.	Energy End Use
		CM7 High Efficiency Separator	U.S.	Energy End Use
		D3 Finish Grind System Improvements	U.S.	Energy End Use
		Lighting Program	U.S.	Energy End Use
		New Vertical Roller Mill	U.S.	Energy End Use
		Optimize AC Raw Mill Systems	U.S.	Energy End Use
		Optimize Compressed Air System	U.S.	Energy End Use
		PGNA Analyzer	U.S.	Energy End Use
		Rimod 3000	U.S.	Energy End Use
		Upgrade the D2 Raw Mill System	U.S.	Energy End Use
Arthur Rypinski & Jacquelyn Porth	EIA-1605	Compact Flourescent Lightbulbs	U.S.	Energy End Use
		High Efficiency Central Air Conditioning System	U.S.	Energy End Use
		High Efficiency Water Heater	U.S.	Energy End Use
		Mass Transit Commuting	U.S.	Transportation
		Super Efficient Refrigerator	U.S.	Energy End Use
Asheville Landfill Gas, LLC	EIA-1605	Buncombe County Landfill	U.S.	Waste Methane
Atlas Paper Mills	EIA-1605	Increase dryers efficiency	U.S.	Energy End Use
		Install an automatic combustion control for 2 boilers	U.S.	Energy End Use
		Lighting retrofit	U.S.	Energy End Use
		Replace motors with efficient models	U.S.	Energy End Use
Austin Energy	EIA-1605EZ	Coal Combustion ByProduct Reutilization	U.S.	Other
		Demand Side Management Programs	U.S.	Energy End Use
		General Transmission/Distribution Efficiency Improvements	U.S.	Electric Power
		Landfill Gas Generation (Power Purchase)	U.S.	Electric Power
		Photovoltaic Generation	U.S.	Electric Power
		South Texas Project	U.S.	Electric Power
		West Texas Wind Turbine Power Purchase	U.S.	Electric Power
Austin Parks & Rec. Dept.- Urban Forestry Program	EIA-1605	Urban Forestry Program	U.S.	Sequestration
Avista Utilities	EIA-1605	Commute Trip Reduction	U.S.	Transportation
		Customer Energy Efficiency	U.S.	Energy End Use
		Investment Recovery Recycling	U.S.	Other
		Office Recycling	U.S.	Other
BARC Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.	Energy End Use
		System Line Conversions and Reconductoring	U.S.	Electric Power
BP	EIA-1605	Crude Production Emission Reduction	U.S.	Other
		Crude production and exploration process improvements	U.S.	Energy End Use
		Noel Kempff Mercado Climate Action Project	Foreign	Sequestration
		Petroleum Refining and Chemicals process modifications	U.S.	Energy End Use
		Petroleum refining + Chemical plant emission control project	U.S.	Other
		Petroleum refining and Chemical Plant VOC control projects	U.S.	Other
		Thermal Process Efficiency Improvements	U.S.	Cogeneration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Baltimore Gas & Electric Company	EIA-1605	Alternatively Fueled Vehicles	U.S.	Transportation
		Baltimore RESCO Waste-to-Energy MWh Purchases	U.S.	Electric Power
		Brandon Shores Generating Station Heat Rate Improvement	U.S.	Electric Power
		Brandon Shores Station Auxiliary-Load Reductions	U.S.	Energy End Use
		C.P. Crane Generating Station Heat Rate Improvements	U.S.	Electric Power
		Calvert Cliffs Nuclear Power Plant Generation Increases	U.S.	Electric Power
		Coal Ash Substitution for Portland Cement	U.S.	Other
		Demand Side Management Programs	U.S.	Energy End Use
		Employee Commute Options	U.S.	Transportation
		Energy Star Buildings/Green Lights Program Participation	U.S.	Energy End Use
		Gas Systems O & M (Natural Gas Star Partnership)	U.S.	Methane - Oil, Gas, & Coal
		H.A. Wagner Generating Station Heat Rate Improvements	U.S.	Electric Power
		Hydroelectric Generation Improvements	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Refrigerant/Solvent Recycling and Reduction	U.S.	Halogenates
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		SF6 Handling Procedures in Electric Distribution	U.S.	Halogenates
		Solid Waste Recycling and Source Reduction	U.S.	Other
		Transmission / Distribution Improvements	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Biomass Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.	Electric Power
Black Warrior Methane Corp.	EIA-1605	Gobwell Degasification Program	U.S.	Methane - Oil, Gas, & Coal
		Horizontal Degasification Program	U.S.	Methane - Oil, Gas, & Coal
		Nitrogen Rejection Plant Program (LQG)	U.S.	Methane - Oil, Gas, & Coal
		Standard Degasification Well Program	U.S.	Methane - Oil, Gas, & Coal
Burlington County Board of Chosen Freeholders	EIA-1605	Burlington County Regional Recycling Program	U.S.	Other
		Landfill Gas Flaring	U.S.	Waste Methane
CLE Resources	EIA-1605	Active Power	U.S.	Energy End Use
		Cycloid	U.S.	Transportation
		Electronic Lighting (OK Industries)	U.S.	Energy End Use
		Industrial Devices Corporation (IDC)	U.S.	Energy End Use
		Lightware	U.S.	Energy End Use
		McHugh Software	U.S.	Transportation
		Revolve Technologies - Dry Gas Seals	U.S.	Methane - Oil, Gas, & Coal
		Revolve Technologies - Magnetic Bearings	U.S.	Energy End Use
		Valdor	U.S.	Halogenates
CMS Energy	EIA-1605	CMS VIRON	U.S.	Energy End Use
		Increased Nuclear Availibility (Consumers)	U.S.	Electric Power
		Karn 3 and Aux Boiler Fuel Switch	U.S.	Electric Power
		Karn 4 Fuel Switch (Consumers)	U.S.	Electric Power
		Natural Gas Star Program (Consumers)	U.S.	Methane - Oil, Gas, & Coal
		Toledo Power Efficiency Improvements	Foreign	Electric Power
Calaveras Cement Company	EIA-1605	Project 1. Plant Modernization	U.S.	Energy End Use
California Portland Cement Co. - Colton Plant	EIA-1605	Energy Conservation in Office, Lab, Garage and Shop Areas	U.S.	Energy End Use
		Finish Mill System Optimization	U.S.	Energy End Use
		Install New Gravity Blend Homogenizing Silo	U.S.	Energy End Use
		Install New Raw Material Transport System	U.S.	Energy End Use
		Kiln Systems Optimization	U.S.	Energy End Use
		Optimize High Pressure Air System	U.S.	Energy End Use
		Raw Grinding System Improvements	U.S.	Energy End Use
		Reduce Plant Water Consumption	U.S.	Energy End Use
California Portland Cement Co. - Mojave Plant	EIA-1605	Finish Grinding Process Addition	U.S.	Energy End Use
		New D3-1/FM6 Finish Mill System	U.S.	Energy End Use
		Optimize the D3-1 Finish Mill System	U.S.	Energy End Use
		Plant High Pressure Air System Improvements	U.S.	Energy End Use
		Pyro System Optimization	U.S.	Energy End Use
		Raw Mill Energy Efficiency Improvements	U.S.	Energy End Use
Carolina Power & Light Company	EIA-1605	Nuclear Capacity Improvement	U.S.	Electric Power
Catawba Landfill Gas, LLC	EIA-1605	Blackburn Landfill	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Cedar Falls Utilities	EIA-1605	Cedar Falls Trees	U.S.	Sequestration
		Cooling Effect of Trees	U.S.	Energy End Use
		Council Bluffs #3 ESP Hot-Side Conversion	U.S.	Electric Power
		Good Cents Improved Home	U.S.	Energy End Use
		Good Cents New Home	U.S.	Energy End Use
		High-Effciency Distribution Transformers	U.S.	Electric Power
		Home Energy Survey	U.S.	Energy End Use
		Neal 4 Hot-Side ESP Conversion	U.S.	Electric Power
		Small Commercial High-Efficiency Lighting	U.S.	Energy End Use
		Streeter Air-Cooled Condenser (ACC)	U.S.	Electric Power
		Streeter Unit 6 Controls Upgrade	U.S.	Electric Power
		Streeter Unit 6 Fuel-Switching Project	U.S.	Electric Power
		Streetlight Conversion	U.S.	Energy End Use
		Water Heater Retrofits	U.S.	Energy End Use
		Windfarm	U.S.	Electric Power
Central Hudson Gas & Electric Corporation	EIA-1605	Coal Ash Utilization	U.S.	Other
		Danskammer Heat Pipe Air Heater	U.S.	Electric Power
		Danskammer Unit 4 Main Step-Up Transformer Replacement	U.S.	Electric Power
		Demand-Side Management	U.S.	Energy End Use
		EPA Natural Gas Star Program	U.S.	Methane - Oil, Gas, & Coal
		Natural Gas Vehicles	U.S.	Transportation
		Roseton Gas Co-Firing	U.S.	Electric Power
		Roseton Unit 2 Main Step-Up Transformer Replacement	U.S.	Electric Power
Choptank Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.	Electric Power
Cinergy Corp.	EIA-1605	AFC Electric Generation	U.S.	Methane - Oil, Gas, & Coal
		Benificial Use of Coal Fly Ash	U.S.	Other
		Cayuga Heat Rate Improvements	U.S.	Electric Power
		Cinergy Corp. Ducks Unlimited Bottomland Hardwood Reforest.	U.S.	Sequestration
		Cinergy Corp. The Nature Conservancy Reforestation and Bio.	U.S.	Sequestration
		Cinergy Corp. Wild Turkey Federation Operation Big Sky.	U.S.	Sequestration
		Commercial Audit/Incentive Program	U.S.	Energy End Use
		Commercial Direct Lighting	U.S.	Energy End Use
		Commercial/Industrial Adjustable Speed Drive Plan	U.S.	Energy End Use
		Commercial/Industrial High Efficiency Motors Plan	U.S.	Energy End Use
		Commercial/Industrial Lighting Rebate Program	U.S.	Energy End Use
		Commercial/Industrial Peak Reduction Program	U.S.	Energy End Use
		Danville, IN Electric Generation	U.S.	Waste Methane
		Facility Tree Planting Program	U.S.	Sequestration
		Fleet Alternative Fuels	U.S.	Transportation
		Gibson Performance Maximization Program	U.S.	Electric Power
		Green Lights Program	U.S.	Energy End Use
		Industrial Efficiency Improvement & Energy Awareness Program	U.S.	Energy End Use
		Merger Dispatch Savings	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Planergy	U.S.	Energy End Use
		Recycled Paper and Aluminum	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Residential Energy Efficient Lighting Program	U.S.	Energy End Use
		Residential Seal-Up & Low-Income Efficiency Program	U.S.	Energy End Use
		Residential Smart $aver & Heat Pump Savings Programs	U.S.	Energy End Use
		Residential Wrap-Up Program	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign	Sequestration
		Rumpke Landfill Gas Recovery	U.S.	Waste Methane
		Thermal Energy (Cool) Storage Program	U.S.	Energy End Use
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		WRP Tree Planting Program	U.S.	Sequestration
		Wabash River Heat Rate Improvement	U.S.	Electric Power
		Wabash River Unit 1 Repowering Project	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
City of Edmond, Oklahoma, Electric Department	EIA-1605EZ	High Efficiency Heat Pumps	U.S.	Energy End Use
		High Efficiency Transformers	U.S.	Electric Power
		Tree/Shrub Planting	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
City of Palo Alto	EIA-1605EZ	City employee carpooling	U.S.	Transportation
		City employee mass transit	U.S.	Transportation
		City fleet conversion to CNG	U.S.	Transportation
		City fleet conversion to EV	U.S.	Transportation
		DSM - Industrial Comprehensive Audit Program '99	U.S.	Energy End Use
		DSM - Residential Appliances '99	U.S.	Energy End Use
		DSM-Commercial AC, motor	U.S.	Energy End Use
		DSM-Commercial Lighting	U.S.	Energy End Use
		DSM-Refrigerator Replacement	U.S.	Energy End Use
		DSM-Residential CFL	U.S.	Energy End Use
		Residential Appliances, CFL's & A/C "Efficiency Advantage"	U.S.	Energy End Use
		Utility Street Light conversion	U.S.	Energy End Use
Cleco Corporation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Columbia Falls Aluminum Company, LLC	EIA-1605	1996 Lighting Replacement	U.S.	Energy End Use
		2000 Lighting Replacement	U.S.	Energy End Use
CommonWealth Bethlehem Energy, LLC	EIA-1605	North Country Landfill Gas Utilization Facility	U.S.	Waste Methane
Commonwealth Edison Company (ComEd)	EIA-1605	Afforestation	U.S.	Sequestration
		Alternative Fuel Vehicles	U.S.	Transportation
		Aluminum Railroad Cars	U.S.	Transportation
		Chicago Public School Solar Partnership	U.S.	Electric Power
		Coal Combustion By-product utilization	U.S.	Other
		Collins Station 12345-Fuel Switch	U.S.	Electric Power
		ComEd North Commercial Center - Solar Panels	U.S.	Electric Power
		ComEd Thermal Cooling Plant	U.S.	Energy End Use
		ComEd Thermal Cooling Plant	U.S.	Halogenates
		Energy Cooperative & Demand Side Management Activities	U.S.	Energy End Use
		Freon Recycling	U.S.	Other
		Fuel Switching at Bynov Plant in Decin, Czech Republic	Foreign	Cogeneration
		High Efficiency Transformers	U.S.	Electric Power
		Illinois Brotherhood of Electrical Workers - Solar Panels	U.S.	Electric Power
		Illinois Prairie Grass Plantings	U.S.	Sequestration
		Investment Recovery/Life Cycle Management/Recycling	U.S.	Other
		Methane Gas Landfill Recovery	U.S.	Waste Methane
		Urban Tree Planting	U.S.	Sequestration
		Utility Pole Reuse	U.S.	Sequestration
		Wind and Photovoltaic Generation Pricing Experiment	U.S.	Electric Power
		Windmill	U.S.	Electric Power
Community Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.	Electric Power
Conectiv Atlantic Generation (CAG)	EIA-1605	AGI - Pedricktown Cogeneration Limited Partnership	U.S.	Cogeneration
		AGI - Vineland Cogeneration Facility	U.S.	Cogeneration
		Deepwater Natural Gas Usage	U.S.	Electric Power
		Employee Telecommuting	U.S.	Transportation
		Employee Van Pooling	U.S.	Transportation
		Peach Bottom Nuclear Units #2 & 3 Uprate Program	U.S.	Electric Power
		Urban Tree Planting	U.S.	Sequestration
		Wetlands Reclamation Project	U.S.	Sequestration
Conectiv Delmarva Generation	EIA-1605	Ash Reuse	U.S.	Other
		CNG Vehicles	U.S.	Transportation
		DP&L Facility Energy Saving	U.S.	Energy End Use
		Demand Side Management	U.S.	Energy End Use
		Edge Moor Fuel Substitution	U.S.	Electric Power
		Edge Moor Landfill Gas Use	U.S.	Waste Methane
		Hay Road Combined Cycle	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Peach Bottom Nuclear Units #2 & #3 Uprate Program	U.S.	Electric Power
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Conectiv Delmarva Generation	EIA-1605	Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		T&D Loss Reduction	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Urban Tree Planting	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Consolidated Edison Company of New York, Inc.	EIA-1605	Arthur Kill - Fuel Switching to Natural Gas	U.S.	Electric Power
		Natural Gas STAR Best Management Practices	U.S.	Methane - Oil, Gas, & Coal
		SF6 Best Management Practices	U.S.	Halogenates
County Sanitation Districts of Los Angeles County	EIA-1605	Recovery of Methane at Landfills	U.S.	Waste Methane
		Recovery of Methane from Wastewater Treatment	U.S.	Waste Methane
DTE Energy/ Detroit Edison	EIA-1605	Coal Ash Reuse - Canada	Foreign	Other
		Coal Ash Reuse - U.S.	U.S.	Other
		Distribution Improvements	U.S.	Electric Power
		Electric Vehicle Demonstration Project	U.S.	Transportation
		Energy Partnerships	U.S.	Energy End Use
		Forest Land Management	U.S.	Sequestration
		Geothermal Projects	U.S.	Energy End Use
		Greenwood Energy Center Fuel Switching	U.S.	Electric Power
		Increased Nuclear Utilization	U.S.	Electric Power
		LFG Recovery & Energy Gen - DTE Proj outside Service Area	U.S.	Waste Methane
		LFG Recovery & Energy Gen - DTE Projects in Service Area	U.S.	Waste Methane
		Landfill Energy Purchases, non-DTE Projects	U.S.	Waste Methane
		Landfill Gas Recovery Projects	U.S.	Waste Methane
		Miscellaneous Tree Plantings - 1999	U.S.	Sequestration
		Miscellaneous Tree Plantings - 1995	U.S.	Sequestration
		Miscellaneous Tree Plantings - 1996	U.S.	Sequestration
		Miscellaneous Tree Plantings - 1997	U.S.	Sequestration
		Miscellaneous Tree Plantings - 1998	U.S.	Sequestration
		Miscellaneous Tree Plantings - 2000	U.S.	Sequestration
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Plant Efficiency Improvements	U.S.	Electric Power
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign	Sequestration
		Solar Power - California	U.S.	Electric Power
		Solar Power - Michigan	U.S.	Electric Power
		Southeast Michigan Afforestation - 1996	U.S.	Sequestration
		Southeast Michigan Afforestation - 1997	U.S.	Sequestration
		Southeastern Michigan Afforestation - 1995	U.S.	Sequestration
		State Forest Land Afforestation - 1996	U.S.	Sequestration
		State Forest Land Afforestation - 1997	U.S.	Sequestration
		State Forest Land Afforestation - 1998	U.S.	Sequestration
		State Forest Land Afforestation - 1999	U.S.	Sequestration
		State Forest Land Afforestation - 2000	U.S.	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Delaware Electric Cooperative	EIA-1605	System Line Conversions & Reconductoring	U.S.	Electric Power
Delaware Solid Waste Authority	EIA-1605	Central Solid Waste Management Center (CSWMC)	U.S.	Waste Methane
		Cherry Island Landfill (CIL)	U.S.	Waste Methane
		Pigeon Point Landfill (PPLF)	U.S.	Waste Methane
		Southern Solid Waste Management Center (SSWMC)	U.S.	Waste Methane
Delta Electric Power Association	EIA-1605EZ	High Efficiency Transformers	U.S.	Electric Power
		Load Control Interruptible Rate	U.S.	Electric Power
		MV conversion to HPS	U.S.	Energy End Use
		Off Peak Pumping and Aeration	U.S.	Energy End Use
		Reconductoring	U.S.	Electric Power
Deptford Electric Company, LLC	EIA-1605	Kinsley Landfill Gas Utilization Project	U.S.	Waste Methane
Dominion Generation	EIA-1605	Increased Nuclear Generation at North Anna Nuclear Power St.	U.S.	Electric Power
		Increased Nuclear Generation at Surry Power Station	U.S.	Electric Power
Drummond Company, Inc.	EIA-1605	C Panel Gob Wells	U.S.	Methane - Oil, Gas, & Coal

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Duke Energy Corporation	EIA-1605	Improved Hydro Efficiency at Dearborn Hydro	U.S.	Electric Power
		Improved Hydro Efficiency at Lookout Shoals Hydro	U.S.	Electric Power
		Improved Hydro Efficiency at Oxford Hydro	U.S.	Electric Power
		Improved Hydro Efficiency at Wylie Hydro	U.S.	Electric Power
		Increased Nuclear Generation at Catawba Nuclear Station	U.S.	Electric Power
		Increased Nuclear Generation at McGuire Nuclear Station	U.S.	Electric Power
		Increased Nuclear Generation at Oconee Nuclear Station	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Recycling Flyash	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		White Street Landfill Gas Recovery Project	U.S.	Waste Methane
Dynegy Midwest Generation Inc.	EIA-1605	Add Turbine Shell Heaters on Wood River 4	U.S.	Electric Power
		Baldwin 2 Turbine H.E.L.P. Blades Installation	U.S.	Electric Power
		Baldwin 3 Heat Rate Improvement	U.S.	Electric Power
		Burn Waste Oil at Baldwin 3	U.S.	Electric Power
		Cofire Plastic at Baldwin	U.S.	Electric Power
		Combustion of used lubricating oil	U.S.	Electric Power
		Convert Vermilion Units 1 And 2 To Natural Gas	U.S.	Electric Power
		Dynegy Mississippi River Valley Refoestation Project	U.S.	Sequestration
		Flyash Sales (Baldwin, Havana, Hennepin, Vermilion, Wd Rvr)	U.S.	Other
		Fuel Switch To Natural Gas at Hennepin	U.S.	Electric Power
		Fuel Switch To Natural Gas at Wood River	U.S.	Electric Power
		Havana 6 Cooling Tower Upgrade	U.S.	Electric Power
		Hennepin Gas Reburn Project	U.S.	Electric Power
		Hennepin I Turbine Steam Path Upgrade	U.S.	Electric Power
		Hennepin Orimulsion Reburn	U.S.	Electric Power
		IDNR Tree Planting Partnership	U.S.	Sequestration
		Install Natural Gas Fired Aux. Boiler at Havana	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		New Boiler Controls at Hennepin	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduce Numberof Plant Start-ups	U.S.	Electric Power
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Tire-Derived Fuel Cofiring at Baldwin	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Vermilion 1 Heat Rate Improvements	U.S.	Electric Power
		Vermilion 2 Heat Rate Improvements	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Wood River 4 Turbine Rotor Replacement	U.S.	Electric Power
El Paso Production Company	EIA-1605	White Oak Creek Coalbed Methane Recovery	U.S.	Methane - Oil, Gas, & Coal
Energy Management Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.	Electric Power
		Biomass Waste to Energy (Corn Products)	U.S.	Electric Power
Energy Northwest	EIA-1605EZ	Columbia Generating Station	U.S.	Electric Power
Entergy Services, Inc.	EIA-1605	Entergy Forestry Projects	U.S.	Sequestration
		Entergy Integrated Solutions, Inc. (Entergy SASI Lighting)	U.S.	Energy End Use
		Fly Ash use as replacement for cement	U.S.	Other
		Grand Gulf Nuclear Station Turbine Upgrade	U.S.	Electric Power
		Independence Unit 1 Feedwater Heater Replacement	U.S.	Electric Power
		Lake Catherine Unit 4 Efficiency Improvement Project	U.S.	Electric Power
		Lewis Creek Combustion Control	U.S.	Electric Power
		Little Gypsy Unit 3 #6LP Feedwater Heater Replacement	U.S.	Electric Power
		Louisiana Station 1 Repowering and Unit Upgrade	U.S.	Electric Power
		Michoud Unit 3 Efficiency Improvement Project	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Natural Gas Pipeline Leak Repairs	U.S.	Methane - Oil, Gas, & Coal
		Natural Gas Vehicle Program	U.S.	Transportation
		Ninemile Turbine Retrofit	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Raise Nuclear Unit Targets on Annual Capacity Factor	U.S.	Electric Power
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Entergy Services, Inc.	EIA-1605	SF6 Reductions	U.S.	Halogenates
		Sabine Unit 2 Feedwater Heater Replacement	U.S.	Electric Power
		Texas Eastern Gas Compressor Replacement	U.S.	Energy End Use
		Transmission and Distribution Efficiency	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Vidalia Hydroelectric Station	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Wetlands and Carbon Sequestration - Southeast LA & TX	U.S.	Sequestration
		White Bluff Unit 1 Feedwater Heater Replacement	U.S.	Electric Power
		White Bluff Unit 2 Feedwater Heaters Replacement	U.S.	Electric Power
		Willow Glen Unit 3 #2B Feedwater Heater Replacment	U.S.	Electric Power
		Willow Glen Unit 5 Air Heater Replacement Project	U.S.	Electric Power
		Willow Glen Unit 5 Kidney Trap Replacement	U.S.	Electric Power
Environmental Synergy, Inc.	EIA-1605EZ	St. Catherine Creek National Wildlife Refuge Afforestation	U.S.	Sequestration
FPL Group	EIA-1605	Aroostook Valley Electric Company	U.S.	Waste Methane
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Montenay Power Plant	U.S.	Waste Methane
		Multitrade Power Plant	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Fidelity Exploration & Production Company	EIA-1605	Tongue River	U.S.	Methane - Oil, Gas, & Coal
FirstEnergy Corporation	EIA-1605	Audit/Infiltration Single and Multi-Family	U.S.	Energy End Use
		Efficient Lighting (Industrial and Commercial)	U.S.	Energy End Use
		Efficient Lighting (Residential)	U.S.	Energy End Use
		Efficient Motors	U.S.	Energy End Use
		Energy Efficient Geothermal System	U.S.	Energy End Use
		Energy Star	U.S.	Energy End Use
		Food Service Conservation	U.S.	Energy End Use
		Fuel Switching	U.S.	Electric Power
		Good Cents New Home Program	U.S.	Energy End Use
		Heat Pump Maintenance Check	U.S.	Energy End Use
		Heat Rate Improvement	U.S.	Electric Power
		High Efficiency Heat Pump Rebates	U.S.	Energy End Use
		Hot Water Conservation	U.S.	Energy End Use
		Increased Generation at Beaver Valley Nuclear Power Station	U.S.	Electric Power
		Increased Generation at Davis-Besse Nuclear Power Station	U.S.	Electric Power
		Increased Generation at Perry Nuclear Power Plant	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Refrigerator Recycling	U.S.	Halogenates
		Refrigerator Recycling Program	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		SF6 Emissions Reduction	U.S.	Halogenates
		Substitution of Fly Ash for Portland Cement in Concrete	U.S.	Other
		Thermal Energy Storage - Cooling	U.S.	Energy End Use
		Tree Source	U.S.	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Various CFC Replacements	U.S.	Halogenates
		Water Heater Efficiency Improvements	U.S.	Energy End Use
		Water Heating - Conservation	U.S.	Energy End Use
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Florida Transport 82	EIA-1605	Collect condensate to preheat boiler	U.S.	Energy End Use
		Install a small back up air compressor	U.S.	Energy End Use
		Lighting retrofit	U.S.	Energy End Use
		Operate on a continuous cycle	U.S.	Energy End Use
		Preventive maintenance for boiler	U.S.	Energy End Use
		Upgrade shaft for main cooker to double efficiency	U.S.	Energy End Use

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
GPU, Inc.	EIA-1605	Biomass Co-firing R & D Program	U.S.	Electric Power
		Building Energy Consumption Reduction Program	U.S.	Energy End Use
		Corry	U.S.	Waste Methane
		Electric Vehicles and Employee Trip Reduction Program	U.S.	Transportation
		FR & S Landfill NUG	U.S.	Waste Methane
		Front Street Generating Station Retirement	U.S.	Electric Power
		GPU Service Lighting & Building Energy Efficiency Project	U.S.	Energy End Use
		Hamm's Landfill NUG	U.S.	Waste Methane
		Information Services - Green Computers	U.S.	Energy End Use
		JCP & L Green Lights Program	U.S.	Energy End Use
		JCP&L Appliance Turn-In Service Program	U.S.	Halogenates
		JCP&L DSM, Efficiency & Electrotechnology Program	U.S.	Energy End Use
		JCP&L Fuel Cell-Crawford Hill	U.S.	Cogeneration
		L & D Landfill NUG	U.S.	Waste Methane
		Lake View Landfill	U.S.	Waste Methane
		Lebanon Methane NUG	U.S.	Waste Methane
		Manchester Renewable	U.S.	Waste Methane
		Mason Dixon Farms, Inc.	U.S.	Agriculture Methane
		Met-Ed Lighting & Building Energy Consumption Reduction Prog	U.S.	Energy End Use
		Met-Ed/Penelec DSM, Efficiency & Electrotechnology Program	U.S.	Energy End Use
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Modern Landfill NUG	U.S.	Waste Methane
		Monmouth County Reclamation Center NUG	U.S.	Waste Methane
		Municipal Tree Replacement	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Photovoltaics Project-User Scale Applications-(USAPV)	U.S.	Electric Power
		Recycling Program	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Shunt Capacitor Program	U.S.	Electric Power
		T & D System Improvements	U.S.	Electric Power
		Transformer Loss Evaluation Program	U.S.	Electric Power
		Transmission & Distribution Facility Maintenance - JCP&L	U.S.	Halogenates
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Valley Pork	U.S.	Agriculture Methane
		Video - Conferencing	U.S.	Transportation
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Yards Creek Pumped Storage Upgrade	U.S.	Electric Power
General Motors Corporation	EIA-1605	1991-2000 GM Annual Energy Competition & Projects	U.S.	Energy End Use
		1991-2000 Powerhouse Conversions	U.S.	Energy End Use
		1993 - 1997 Mich. Demand Side Mgt and Energy Partner Program	U.S.	Energy End Use
Generating Resource Recovery Partners, LP	EIA-1605	Otay Power Station	U.S.	Waste Methane
		Oxnard Power Station	U.S.	Waste Methane
		Salinas Power Station	U.S.	Waste Methane
		Santa Clara Power Station	U.S.	Waste Methane
Golden Valley Electric Association, Inc	EIA-1605EZ	Energy Sense DSM Program	U.S.	Energy End Use
		Tree Give-Away for planting under power lines	U.S.	Sequestration
		Use of Hydropower	U.S.	Electric Power
		Wind Turbine	U.S.	Electric Power
Granger Electric Company	EIA-1605	Brent Run Landfill Generating Station	U.S.	Waste Methane
		Grand Blanc Landfill Generating Station	U.S.	Waste Methane
		Granger #1 Generating Station - Wood Road Landfill	U.S.	Waste Methane
		Granger #2 Generating Station - Grand River Avenue Landfill	U.S.	Waste Methane
		Granger MotorWheel Facility	U.S.	Waste Methane
		Indianapolis/South Side Landfill Gas Project	U.S.	Waste Methane
		Lake County Landfill Gas Project	U.S.	Waste Methane
		Ottawa County Farms Landfill Generating Station	U.S.	Waste Methane
		Seymour Road Landfill Generating Station	U.S.	Waste Methane
Greater Caribbean Energy & Environment Foundation	EIA-1605EZ	Coral Planting	U.S.	Sequestration
		Coralline & Calcareous algae planting	U.S.	Sequestration
		Marsh Planting Jacksonville (FL)	U.S.	Sequestration
		Seagrass Planting Broward City (FL)	U.S.	Sequestration
		Seagrass Planting Dade County (FL)	U.S.	Sequestration
		Seagrass Planting Jacksonville (FL)	U.S.	Sequestration
Greater New Bedford Regional Refuse Mgt District	EIA-1605	Crapo Hill Landfill Gas Control Project	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Hackensack Meadowlands Development Com.	EIA-1605	HMDC 1-A Landfill	U.S.	Waste Methane
		HMDC 1-C Landfill	U.S.	Waste Methane
		HMDC Balefill	U.S.	Waste Methane
		Kingsland Landfill	U.S.	Waste Methane
		MSLA 1-D Landfill	U.S.	Waste Methane
Hawaiian Electric Company, Inc.	EIA-1605	Commercial & Industrial Custom Rebate Program	U.S.	Energy End Use
		Commercial & Industrial Energy Efficiency Program	U.S.	Energy End Use
		Commercial & Industrial New Construction Program	U.S.	Energy End Use
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Residential Eff. Water Heating Program (Existing Customers)	U.S.	Energy End Use
		Residential Efficient Water Heating (New Construction)	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Showerhead Distribution	U.S.	Energy End Use
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Integrated Waste Services Association	EIA-1605	Waste-to-Energy - Waste Diversion	U.S.	Waste Methane
Iredell Landfill Gas, LLC	EIA-1605	Iredell County Landfil	U.S.	Waste Methane
J.M. Gilmer and Company, Inc.	EIA-1605	Flatwoods Tract Afforestation Project	U.S.	Sequestration
		Smith Place Short Rotation Woody Crop Project	U.S.	Sequestration
		Smith Place Tract Afforestation Project	U.S.	Sequestration
JEA	EIA-1605EZ	Fuel Switching	U.S.	Waste Methane
		Fuel Switching - Natural Gas	U.S.	Electric Power
		Photovoltaic Systems	U.S.	Electric Power
		Urban Forestry	U.S.	Sequestration
Johnson & Johnson	EIA-1605	Building Shell	U.S.	Energy End Use
		Equipment & Appliances	U.S.	Energy End Use
		Fuel Switching	U.S.	Energy End Use
		HVAC	U.S.	Energy End Use
		Installation of Energy Efficient Systems	U.S.	Energy End Use
		Installation of Timer Controls and Shutdowns	U.S.	Energy End Use
		Lighting & Lighting Controls	U.S.	Energy End Use
		Load Control	U.S.	Energy End Use
		Motor & Motor Drives	U.S.	Energy End Use
		Process Improvements	U.S.	Energy End Use
LFG Energy, Inc.	EIA-1605	LFG Energy - Phases I & II	U.S.	Waste Methane
		LFG Energy Upgrade Facility	U.S.	Waste Methane
Landfill Energy Systems	EIA-1605	Adrian	U.S.	Waste Methane
		Ann Arbor	U.S.	Waste Methane
		Carleton Farms	U.S.	Waste Methane
		I-95 Phase I	U.S.	Waste Methane
		I-95 Phase II	U.S.	Waste Methane
		MRPC	U.S.	Waste Methane
		MRPC Flare	U.S.	Waste Methane
		Pine Tree	U.S.	Waste Methane
		Riverview	U.S.	Waste Methane
		Salem	U.S.	Waste Methane
		Salem Flare	U.S.	Waste Methane
		Sumpter	U.S.	Waste Methane
		Wichita	U.S.	Waste Methane
Lehigh Portland Cement Company	EIA-1605	Project 1: Plant Shutdown	U.S.	Energy End Use
		Project 2: Waste Tire Burning	U.S.	Energy End Use
		Project 3: Waste Tire Burning	U.S.	Energy End Use
		Project 4: Plant Modernization	U.S.	Energy End Use
		Project 5: Lighting retrofit	U.S.	Energy End Use
		Project 6: Motor retrofit	U.S.	Energy End Use
Los Angeles Department of Water and Power	EIA-1605	Chiller Replacement / Efficiency Program	U.S.	Energy End Use
		Cool Schools Urban Forestry - Energy Efficiency Effects	U.S.	Energy End Use
		Cool Schools Urban Forestry Project	U.S.	Sequestration
		DWP Rideshare Program	U.S.	Transportation
		Electric Vehicles	U.S.	Transportation
		Energy Efficient Transformers	U.S.	Electric Power
		Energy Star Office Equipment	U.S.	Energy End Use
		Fuel Switching (Fuel Oil #6 to Natural Gas)	U.S.	Electric Power
		HVAC Replacement Program	U.S.	Energy End Use

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Los Angeles Department of Water and Power	EIA-1605	HVAC Tune-up	U.S.	Energy End Use
		High Efficiency Clothes Washers	U.S.	Energy End Use
		JFB (aka "GOB") Lighting Retrofit	U.S.	Energy End Use
		LADWP Recycling Program	U.S.	Other
		Lighting Program - Small Commercial	U.S.	Energy End Use
		Mountain Reforestation Project	U.S.	Sequestration
		NBRS ("Neighborhood Bill Reduction Service") Program	U.S.	Energy End Use
		Refrigeration Tune-Up Program	U.S.	Energy End Use
		Refrigerator Replacement Program	U.S.	Energy End Use
		Scattergood Digester Gas Displacement of Natural Gas as Fuel	U.S.	Waste Methane
		Solar Power	U.S.	Electric Power
		Water Conservation Program	U.S.	Energy End Use
Lower Colorado River Authority	EIA-1605	Coal Combustion By-Product Recycling	U.S.	Other
		Hydroelectric Dam Modernization	U.S.	Electric Power
		Neural-Network Technology	U.S.	Electric Power
		Residential & Commercial DSM Program	U.S.	Energy End Use
		Supply-Side Efficiency Improvements	U.S.	Electric Power
		Wind Power Project	U.S.	Electric Power
Lucent Technologies Inc.	EIA-1605	LRE - #2	U.S.	Other
		LRE - #1	U.S.	Energy End Use
		LU - #1 (US only)	U.S.	Other
		LU - #2 (International)	Foreign	Other
		ME - #1	U.S.	Energy End Use
		ME - #2	U.S.	Energy End Use
		ME - #3	U.S.	Energy End Use
		ME - #4	U.S.	Energy End Use
		ME - #5	U.S.	Energy End Use
		ME - #6	U.S.	Energy End Use
		ME - #7	U.S.	Energy End Use
		ME - #8	U.S.	Energy End Use
		OFS - #1	U.S.	Energy End Use
		OFS - #2	U.S.	Energy End Use
		OFS - #3	U.S.	Energy End Use
		OFS - #4	U.S.	Energy End Use
		ONG - #1	U.S.	Energy End Use
		ONG - #2	U.S.	Energy End Use
		WNG - #1	U.S.	Energy End Use
		WNG - #2	U.S.	Energy End Use
		WNG - #3	U.S.	Energy End Use
		WNG - #4	U.S.	Waste Methane
Lynchburg Gas Producers, LLC	EIA-1605	Lynchburg Landfill	U.S.	Waste Methane
Madison County Depart. of Solid Waste & Sanitation	EIA-1605	Landfill Gas Recovery & Flaring	U.S.	Waste Methane
		Recycling	U.S.	Other
		Refrigerant Recovery	U.S.	Halogenates
Majestic Metals, Inc.	EIA-1605EZ	Carpooling	U.S.	Transportation
		Lighting Replacement	U.S.	Energy End Use
		Mass Transit	U.S.	Transportation
Mead Johnson Nutls/Bristol-Meyers Squibb	EIA-1605	Coal-Fired Boilers Replaced with Natl Gas/Oil Fired Boilers	U.S.	Energy End Use
		Compressed Air System Renovated & Leak Survey/Repair	U.S.	Energy End Use
Mecklenburg Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.	Electric Power
Michigan CAT	EIA-1605	Lower Potomac	U.S.	Waste Methane
		Sacramento	U.S.	Waste Methane
Middlesex Generating Company, LLC	EIA-1605	MCUA Landfill Gas Utilization Project - Edison Landfill	U.S.	Waste Methane
		MCUA Landfill Gas Utilization Project - ILR Landfill	U.S.	Waste Methane
		MCUA Landfill Gas Utilization Project - MCUA Landfill	U.S.	Waste Methane
Minnesota Power	EIA-1605	Demand Side Mgmt., Conservation and Efficiency Improvements	U.S.	Energy End Use
		Electricity Substation, SF6 Breaker Replacement	U.S.	Halogenates
		Expanded Generation from Existing Hydro Electric Resources	U.S.	Electric Power
		Expanded Use of Renewable Biomass (wood waste)	U.S.	Energy End Use
		Heat Rate Improvements, Boswell Energy Center	U.S.	Electric Power
		Mud Lake Substation - Reduced Transmission Losses	U.S.	Electric Power
		Short Rotation Woody Crop Establishment	U.S.	Sequestration
		Waste Paper Recycling Development	U.S.	Other
Minnesota Resource Recovery Association	EIA-1605EZ	MSW Incineration	U.S.	Waste Methane
		Paper Recycling Carbon Dioxide Reductions	U.S.	Other
		Paper Recycling Methane Reductions	U.S.	Other

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Moorhead Public Service	EIA-1605EZ	Custom Rebate for Moorhead High School	U.S.	Energy End Use
		Custom Rebate for Roffe Container	U.S.	Energy End Use
		Insulation Improvement	U.S.	Energy End Use
		Lighting Retrofit Program	U.S.	Energy End Use
		Urban Forestry (sequestration only)	U.S.	Sequestration
		Wind Turbine Generator	U.S.	Electric Power
NC Muni Landfill Gas Partners, LLC	EIA-1605	Henderson County Landfill	U.S.	Waste Methane
NEO Corporation	EIA-1605	Acme Landfill Gas Utilization Project	U.S.	Waste Methane
		Albany Landfill Gas Utilization Project	U.S.	Waste Methane
		Balefill Landfill Gas Utilization Project	U.S.	Waste Methane
		Bordeaux Landfill Gas Utilization Project	U.S.	Waste Methane
		Corona Landfill Gas Utilization Project	U.S.	Waste Methane
		Cuyahoga Landfill Gas Utilization Project	U.S.	Waste Methane
		Denver Landfill Gas Utilization Project	U.S.	Waste Methane
		Edgeboro Landfill Gas Utilization Project	U.S.	Waste Methane
		Fitchburg Landfill Gas Utilization Project	U.S.	Waste Methane
		Flying Cloud Landfill Gas Utilization Project	U.S.	Waste Methane
		Fort Smith Landfill Gas Utilization Project	U.S.	Waste Methane
		Four Hills Landfill Gas Utilization Project	U.S.	Waste Methane
		Hartford Landfill Gas Utilization Project	U.S.	Waste Methane
		Kingsland Landfill Gas Utilization Project	U.S.	Waste Methane
		Kraemer Landfill Gas Utilization Project	U.S.	Waste Methane
		Lopez Landfill Gas Utilization Project	U.S.	Waste Methane
		Lowell Landfill Gas Utilization Project	U.S.	Waste Methane
		Mazzaro Landfill Gas Utilization Project	U.S.	Waste Methane
		Phoenix Landfill Gas Utilization Project	U.S.	Waste Methane
		Prima Deshecha Landfill Gas Utilization Project	U.S.	Waste Methane
		Prince William Landfill Gas Utilization Project	U.S.	Waste Methane
		Riverside Landfill Gas Utilization Project	U.S.	Waste Methane
		SKB Landfill Gas Utilization Project	U.S.	Waste Methane
		San Bernadino Landfill Gas Utilization Project	U.S.	Waste Methane
		San Diego Landfill Gas Utilization Project	U.S.	Waste Methane
		Spokane Landfill Gas Utilization Project	U.S.	Waste Methane
		Tacoma Landfill Gas Utilization Project	U.S.	Waste Methane
		Tajiguas Landfill Gas Utilization Project	U.S.	Waste Methane
		Taunton Landfill Gas Utilization Project	U.S.	Waste Methane
		Visalia Landfill Gas Utilization Project	U.S.	Waste Methane
		Volusia Landfill Gas Utilization Project	U.S.	Waste Methane
		West Covina Landfill Gas Utilization Project	U.S.	Waste Methane
		Woodville Landfill Gas Utilization Project	U.S.	Waste Methane
		Yolo Landfill Gas Utilization Project	U.S.	Waste Methane
NRG Energy Inc	EIA-1605	BCII Coal Ash Utilization	U.S.	Other
		Gladstone Coal Ash Utilization	Foreign	Other
		Waste steam extraction for other industrial processes	U.S.	Cogeneration
Nashville Electric Service	EIA-1605EZ	Urban Forestry/1999 Planting	U.S.	Sequestration
		Urban Forestry/2000 Planting	U.S.	Sequestration
		Distribution Voltage Upgrade	U.S.	Electric Power
		High-efficiency transformers	U.S.	Electric Power
		Urban Forestry/1995 Planting	U.S.	Sequestration
		Urban Forestry/1996 Planting	U.S.	Sequestration
		Urban Forestry/1997 Planting	U.S.	Sequestration
		Urban Forestry/1998 Planting	U.S.	Sequestration
National By-Products Inc	EIA-1605	Landfill gas-boiler fuel	U.S.	Waste Methane
National Grid USA	EIA-1605	Appliance Removal Program, Residential DSM Programs	U.S.	Halogenates
		Carpool	U.S.	Transportation
		Demand-Side Management Programs	U.S.	Energy End Use
		Distribution Reconductoring	U.S.	Electric Power
		Distribution Voltage Upgrade	U.S.	Electric Power
		Electric Vehicles	U.S.	Transportation
		Photovoltaic	U.S.	Electric Power
		Transmission Reconductoring	U.S.	Electric Power
Natural Power, Inc.	EIA-1605	Wilder's Grove Landfill Gas Project	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Nebraska Public Power District	EIA-1605EZ	1994-1996 Distribution Improvements	U.S.	Electric Power
		1994-1997 Transformer Changeouts	U.S.	Electric Power
		Coal Ash Reuse	U.S.	Other
		Electric Heat Pump Program, 1998-2000	U.S.	Energy End Use
		Materials Recycling	U.S.	Other
		Nuclear Plant Improved Utilization	U.S.	Electric Power
		Plant Efficiency Improvements	U.S.	Electric Power
		Tree planting	U.S.	Sequestration
		Wind Turbines	U.S.	Electric Power
Newton Landfill Gas, LLC	EIA-1605	Newton Landfill	U.S.	Waste Methane
NiSource/NIPSCO	EIA-1605	Biomass Initiative	U.S.	Electric Power
		Capacitor Additions	U.S.	Electric Power
		Coal Combustion Byproduct Utilization	U.S.	Other
		Electric Vehicles	U.S.	Transportation
		Employee Commute Options	U.S.	Transportation
		Employee Training	U.S.	Other
		Fuel Switching at Bynov Plant in Decin, Czech Republic	Foreign	Cogeneration
		Inland Steel -Northlake Energy	U.S.	Cogeneration
		Ispat/Inland - Coke Energy	U.S.	Cogeneration
		Landfill Methane Recovery - Deercroft	U.S.	Waste Methane
		Landfill Methane Recovery - Wheeler	U.S.	Waste Methane
		Landfill Methane Recovery-Prairie View	U.S.	Waste Methane
		Low Loss Transformers	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		NG STAR - NIPSCO	U.S.	Methane - Oil, Gas, & Coal
		NG Star Baystate	U.S.	Methane - Oil, Gas, & Coal
		National Steel- Portside Energy	U.S.	Cogeneration
		Natural Gas Vehicles	U.S.	Transportation
		North Trenton Pipeline Replacement	U.S.	Methane - Oil, Gas, & Coal
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Ozone Depleting Chemicals	U.S.	Halogenates
		Recycling program	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rural Tree Planting	U.S.	Sequestration
		SF6 Reductions	U.S.	Halogenates
		US Steel - Lakeside Energy	U.S.	Cogeneration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Urban Tree Planting	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Niagara Mohawk Power Corporation	EIA-1605	Alternative Fuel Vehicles	U.S.	Transportation
		Amorphous Metal Core Transformers	U.S.	Electric Power
		Coal Ash Utilization	U.S.	Other
		Cowley Ridge Windplant	Foreign	Electric Power
		Energy Efficiency and Conservation Programs (DSM)	U.S.	Energy End Use
		Identify & Rehabilitate Leaky Gas Distribution Pipe	U.S.	Methane - Oil, Gas, & Coal
		Installation and Operation of Photovoltaic Energy Systems	U.S.	Electric Power
		Installation and Operation of Wind Turbines	U.S.	Electric Power
		Investment Recovery Program (Recycling)	U.S.	Other
		Nuclear Generation Capacity Improvements	U.S.	Electric Power
		Nuclear Generation Performance Improvements	U.S.	Electric Power
		Partial Conversion of Oil-Fired Plant to Natural Gas	U.S.	Electric Power
		Refrigerator Roundup	U.S.	Halogenates
		SF6 emission reductions	U.S.	Halogenates
Noranda Aluminum Inc.	EIA-1605	PFC Emission Reduction via Reductions in Anode Effects	U.S.	Halogenates
North American Carbon, Inc.	EIA-1605	Glendale Hydroelectric Project	U.S.	Electric Power
		KMS Peel Energy Recovery Project	Foreign	Waste Methane
		Lower Saranac Hydroelectric Project	U.S.	Electric Power
		Star Lake Hydroelectric Project	Foreign	Electric Power
North Carolina Biomass Partners	EIA-1605EZ	Biomass Waste to Energy	U.S.	Electric Power
North Carolina Electric Membership Corporation	EIA-1605EZ	Switch Away from Fossil Fuel Generated Power Purchases	U.S.	Electric Power
Northern Neck Electric Cooperative	EIA-1605	Demand-Side Management Programs	U.S.	Energy End Use
		System Line Conversion and Reconductoring	U.S.	Electric Power
Northern Virginia Electric Cooperative	EIA-1605	Demand-side Management Load Control Programs	U.S.	Energy End Use
		System Line Conversions and Reconductoring	U.S.	Electric Power
Northwest Fuel Development, Inc.	EIA-1605	Utilization of Coal Mine Gas	U.S.	Methane - Oil, Gas, & Coal
Oak Creek Energy Systems Inc.	EIA-1605	OCES Tehachapi	U.S.	Electric Power

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Ocean County Landfill Corporation	EIA-1605	Flare Control of Landfill Gas	U.S.	Waste Methane
		Supplying Landfill Gas for Energy Recovery	U.S.	Waste Methane
Old Dominion Electric Cooperative	EIA-1605	Clover Power Station - Visual Screening	U.S.	Sequestration
		Green Lights	U.S.	Energy End Use
Omaha Public Power District	EIA-1605EZ	Coal Heat Rate Improvement	U.S.	Electric Power
		Commercial & Industrial Audits	U.S.	Energy End Use
		Heat Pump Program (RECP)	U.S.	Energy End Use
		Nuclear Capacity Factor Improvement	U.S.	Electric Power
		Recycling Fly Ash	U.S.	Other
		Recycling Programs	U.S.	Other
		Right Lights	U.S.	Energy End Use
		Street Lighting Replacement	U.S.	Energy End Use
		T&D Capacitor Installations	U.S.	Electric Power
		Tree Planting	U.S.	Sequestration
PECO Energy Company	EIA-1605	Fairless Hills LFG to Energy Operation	U.S.	Waste Methane
		Grays Ferry Cogeneration and Waste Heat Recovery	U.S.	Cogeneration
		Operation of CNG Vehicles	U.S.	Transportation
		Overhaul of Conowingo Unit 10	U.S.	Electric Power
		Overhaul of Conowingo Unit 5	U.S.	Electric Power
		Overhaul of Conowingo Unit 8	U.S.	Electric Power
		Overhaul of Conowingo Unit 9	U.S.	Electric Power
		Overhaul of Muddy Run Units 1-4	U.S.	Electric Power
		Overhaul of Muddy Run Units 5-8	U.S.	Electric Power
		Pennsbury LFG to Energy Operation	U.S.	Waste Methane
		Rerate of Peach Bottom Unit 2	U.S.	Electric Power
		Rerate of Limerick Unit 1	U.S.	Electric Power
		Rerate of Limerick Unit 2	U.S.	Electric Power
		Rerate of Peach Bottom Unit 3	U.S.	Electric Power
PEI Power Corp	EIA-1605	PEI Power	U.S.	Cogeneration
PG&E Corporation	EIA-1605	Barre Landfill Gas to Electricity Project	U.S.	Waste Methane
		Brayton Point Station Unit No. 4 Gas Conversion	U.S.	Electric Power
		Brayton Point Station Units No. 1, 2, 3 Natural Gas Usage	U.S.	Electric Power
		Coal Ash Recycling as Cement Replacement	U.S.	Other
		Electric Vehicles	U.S.	Transportation
		Electrical Energy Conservation Savings	U.S.	Energy End Use
		Johnston Landfill Gas to Electricity Project	U.S.	Waste Methane
		Manchester Street Repowering	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Nashua Landfill Gas To Electricity Project	U.S.	Waste Methane
		Natural Gas Energy Conservation Savings	U.S.	Energy End Use
		Natural Gas Star Program	U.S.	Other
		Natural Gas Substitution for Residual Oil	U.S.	Electric Power
		Natural Gas Vehicles	U.S.	Transportation
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Power Purchases from Natural Gas Generation	U.S.	Electric Power
		Reduced Impact Logging Project (NEP Pilot Project)	Foreign	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		SF6 Emission Reduction Partnership	U.S.	Halogenates
		Turnkey Landfill Gas to Electricity Project	U.S.	Waste Methane
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
PPL CORPORATION	EIA-1605	Ash Use in Cement Making	U.S.	Other
		Demand Side Management Project	U.S.	Energy End Use
		Electric Vehicles	U.S.	Transportation
		Fossil Plant Efficiency	U.S.	Electric Power
		Harrisburg (AWWTP) - Electricity Purchases	U.S.	Electric Power
		Harrisburg (AWWTP) - Methane Reductions	U.S.	Waste Methane
		Holtwood SES Closing	U.S.	Electric Power
		Keener Enterprises - Electricity Purchases	U.S.	Electric Power
		Keener Enterprises - Methane Reductions	U.S.	Agriculture Methane
		Keystone Landfill - Electricity Purchases	U.S.	Electric Power
		Keystone Landfill - Methane Reductions	U.S.	Waste Methane
		Lycoming Landfill - Electricity Purchases	U.S.	Electric Power
		Lycoming Landfill - Methane Reductions	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
PPL CORPORATION	EIA-1605	Martins Creek Gas	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Pheasant Habitat Restoration Program (PHRP)	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Susquehanna SES Strategy 2000	U.S.	Electric Power
		Susquehanna Steam Electric Station Re-Rate	U.S.	Electric Power
		Taylor/Amity Landfill - Electricity Purchases	U.S.	Electric Power
		Taylor/Amity Landfill - Methane Reductions	U.S.	Waste Methane
		Transformer Savings	U.S.	Electric Power
		Trees for the Future	U.S.	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
PacifiCorp	EIA-1605	Coal Ash Recycling	U.S.	Other
		Commercial Competitive Bid - EUA/Onsite	U.S.	Energy End Use
		Competitive Bid - CES/Way	U.S.	Energy End Use
		Energy FinAnswer	U.S.	Energy End Use
		Energy FinAnswer Prescriptive	U.S.	Energy End Use
		Energy FinAnswer Retrofit	U.S.	Energy End Use
		Ethanol Production Carbon Offset Project	U.S.	Other
		H_PRO: High Efficiency Heat Pumps	U.S.	Energy End Use
		Hassle-Free Program	U.S.	Energy End Use
		Home Comfort	U.S.	Energy End Use
		Industrial Energy FinAnswer	U.S.	Energy End Use
		Irrigation FinAnswer Program	U.S.	Energy End Use
		Low Income Weatherization and Conservation Programs	U.S.	Energy End Use
		Major Accounts Program	U.S.	Energy End Use
		Manufactured Housing Acquisition Program (MAP)	U.S.	Energy End Use
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Noel Kempff Mercado Climate Action Project	Foreign	Sequestration
		Northwest Energy Efficiency Alliance (NEEA)	U.S.	Energy End Use
		Northwest Fuels Methane Recovery From Coal Mines	U.S.	Methane - Oil, Gas, & Coal
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		PacifiCorp Facility DSM	U.S.	Energy End Use
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Reforestation in Eastern Washington	U.S.	Sequestration
		Reforestation of Private Lands in Oregon - Site Class II	U.S.	Sequestration
		Reforestation of Private Lands in Oregon - Site Class III	U.S.	Sequestration
		Residential Competitive Bid - ECONS	U.S.	Energy End Use
		Residential Weatherization Programs	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign	Sequestration
		Salt Lake City Urban Forestry Project	U.S.	Energy End Use
		Salt Lake City Urban Forestry Project	U.S.	Sequestration
		Showerhead Program	U.S.	Energy End Use
		Small Commercial Retrofit	U.S.	Energy End Use
		Super Efficiency Refrigerator Program (SERP)	U.S.	Energy End Use
		Super Good Cents	U.S.	Energy End Use
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Utah Water Smart Kits (Schedule 5)	U.S.	Energy End Use
		Water Heater / Solar	U.S.	Energy End Use
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Pacific Energy Operating Group, LP	EIA-1605	Gude Power Station	U.S.	Waste Methane
		Penrose Power Station	U.S.	Waste Methane
		Stockton Power Station	U.S.	Waste Methane
		Toyon Power Station	U.S.	Waste Methane
Pacific Natural Energy, LLC	EIA-1605	Acme Landfill Gas Recovery Plant	U.S.	Waste Methane
		Bowerman Landfill Gas Recovery Plant	U.S.	Waste Methane
		Bridgeton Landfill Gas Recovery Project	U.S.	Waste Methane
		Covel Gardens Landfill Gas Recovery Project	U.S.	Waste Methane
		Dade Landfill Gas Recovery Plant	U.S.	Waste Methane
		Dallas Landfill Gas Recovery Plant	U.S.	Waste Methane
		Davis Street Landfill Gas Recovery Plant	U.S.	Waste Methane
		Fresh Kills Landfill Gas Recovery Project	U.S.	Waste Methane
		Kearny Landfill Gas Recovery Plant	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Pacific Natural Energy, LLC	EIA-1605	McCarty Road Landfill Gas Recovery Plant	U.S.	Waste Methane
		Monmouth Landfill Gas Recovery Plant	U.S.	Waste Methane
		Mountaingate Landfill Gas Recovery Plant	U.S.	Waste Methane
		Olinda Landfill Gas Recovery Plant	U.S.	Waste Methane
		Rosenberg Landfill Gas Recovery Plant	U.S.	Waste Methane
		Rumpke Landfield Gas Recovery Plant	U.S.	Waste Methane
		San Antonio Landfill Gas Recovery Plant	U.S.	Waste Methane
		Skyline Landfill Gas Recovery Project	U.S.	Waste Methane
		Westside Landfill Gas Recovery Project	U.S.	Waste Methane
Pacific Recovery Corporation	EIA-1605	Bailard Landfill	U.S.	Waste Methane
		Crazy Horse Landfill	U.S.	Waste Methane
		Otay Landfill	U.S.	Waste Methane
		Santa Clara Landfill - City of Oxnard	U.S.	Waste Methane
		Santa Clara Landfill - City of Santa Clara	U.S.	Waste Methane
		Ventura Coastal Landfill	U.S.	Waste Methane
Palmer Capital Corporation	EIA-1605	Brookhaven Landfill Gas Limited Partnership	U.S.	Waste Methane
		Central Gas Limited Partnership	U.S.	Waste Methane
		Janesville Landfill Gas Corporation	U.S.	Waste Methane
		LKD Los Angeles L.P.	U.S.	Waste Methane
		Lancaster Landfill Gas Corporation	U.S.	Waste Methane
		Lebanon Landfill Gas Corporation	U.S.	Waste Methane
		Portland LFG Joint Venture	U.S.	Waste Methane
		Raleigh Landfill Gas Corporation	U.S.	Waste Methane
		Scholl Canyon LFG Limited Partnership	U.S.	Waste Methane
		Sun LFG Corporation	U.S.	Waste Methane
Pharmacia & Upjohn Caribe, Inc.	EIA-1605EZ	Boiler Replacement	U.S.	Methane - Oil, Gas, & Coal
		Chiller Retrofitting	U.S.	Halogenates
		Computers and Computer-Related Equipment' Replacement	U.S.	Energy End Use
		Lighting Replacement	U.S.	Energy End Use
		Replacement of Piping Insulation	U.S.	Energy End Use
Pitt Landfill Gas, LLC	EIA-1605	Pitt County Landfill	U.S.	Waste Methane
Platte River Power Authority & 4 owner cities	EIA-1605	Estes Park Low-Loss Transformers	U.S.	Electric Power
		Estes Park Recycling Program	U.S.	Other
		Estes Park Streetlight Conversions	U.S.	Energy End Use
		Fort Collins Building Codes	U.S.	Energy End Use
		Fort Collins City Lighting Upgrades	U.S.	Energy End Use
		Fort Collins Design Assistance	U.S.	Energy End Use
		Fort Collins Distribution System Improvements	U.S.	Electric Power
		Fort Collins LED Traffic Lights	U.S.	Energy End Use
		Fort Collins Recycling Program	U.S.	Other
		Fort Collins Transportation Demand Management	U.S.	Transportation
		Fort Collins Wastewater Methane Flare	U.S.	Waste Methane
		Fort Collins Zero Interest Loan for Conservation Help	U.S.	Energy End Use
		Longmont Distribution System Improvements	U.S.	Electric Power
		Longmont Efficient Lighting Projects	U.S.	Energy End Use
		Longmont Hydro Project Upgrades	U.S.	Electric Power
		Longmont LED Traffic Lights	U.S.	Energy End Use
		Longmont Wastewater Plant Waste Gas Flare	U.S.	Waste Methane
		Loveland Area Lighting Project	U.S.	Energy End Use
		Loveland Digester Gas Production and Use	U.S.	Waste Methane
		Loveland Hydroelectric Plant	U.S.	Electric Power
		Loveland Recycling Program	U.S.	Other
		Loveland Thrifty Light Project	U.S.	Energy End Use
		PRPA Heat Rate Improvements at Craig Powerplant	U.S.	Electric Power
		PRPA Paper Recycling Program	U.S.	Other
		PRPA Photovoltaic Project	U.S.	Electric Power
		PRPA Wind Power Project	U.S.	Electric Power
Portland General Electric Co.	EIA-1605	1995 Colstrip Units 3&4 Ruggedizing	U.S.	Electric Power
		Beaver Efficiency Improvements	U.S.	Electric Power
		Boardman Efficiency Improvements	U.S.	Electric Power
		Building Rooftop Photovoltaic Systems	U.S.	Electric Power
		Bull Run Turbine Runner Replacements	U.S.	Electric Power
		Coyote Springs Efficiency Improvements	U.S.	Electric Power
		Demand-Side Management Projects	U.S.	Energy End Use
		Electric Fleet Vehicles	U.S.	Transportation
		Energy Management Systems	U.S.	Energy End Use

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Portland General Electric Co.	EIA-1605	Faraday Units 4&5 1994	U.S.	Electric Power
		Fly Ash Reuse Program	U.S.	Other
		Friends of Trees	U.S.	Sequestration
		Gas Lawnmower Turn In Rebate	U.S.	Energy End Use
		Green Lights Programs	U.S.	Energy End Use
		Heat Pump Rebate	U.S.	Energy End Use
		Natural Gas Fleet Vehicles	U.S.	Transportation
		Oak Grove Turbine Runner Replacements - 1991 - Units 1&2	U.S.	Electric Power
		PGE Corporate Recycling Program	U.S.	Other
		Photoelectric Streetlight Controls	U.S.	Energy End Use
		River Mill Efficiency Improvements	U.S.	Electric Power
		Sullivan turbine rebuilds	U.S.	Electric Power
		T&D: Power Factor Correction Capacitors	U.S.	Electric Power
		Transformer Efficiency Improvements	U.S.	Electric Power
		Vansycle Ridge Wind Generation	U.S.	Electric Power
Pratt & Whitney North Berwick	EIA-1605	Conversion of the outside lighting fixtures in the IWTP	U.S.	Energy End Use
		Elimination of the Low Melt Alloy Process	U.S.	Energy End Use
		Elimination of the ventilation in the battery charging area	U.S.	Energy End Use
		Energy Management System (LIghting Initiatives)	U.S.	Energy End Use
		Industrial Waste Treatment facility lighting retrofit	U.S.	Energy End Use
		Installation of occupancy sensors at the V35 Mezzanine	U.S.	Energy End Use
		Installation of GE control panel to control lighitng	U.S.	Energy End Use
		Installation of occupancy sensors in the RCM area	U.S.	Energy End Use
		Lighting Retrofit in the restrooms at Department 8200	U.S.	Energy End Use
		Lighting retrofit at the 708 Crib	U.S.	Energy End Use
		Lighting retrofit in cafeterias, main conference room.....	U.S.	Energy End Use
		Lighting retrofit in medical and two restrooms	U.S.	Energy End Use
		Lighting retrofit in the Chemical Storage Building	U.S.	Energy End Use
		Lighting retrofit in the New Fabrication Shop	U.S.	Energy End Use
		Lighting retrofit in the Old Fabrication Shop	U.S.	Energy End Use
		Lighting retrofit in the janitors` closets	U.S.	Energy End Use
		Lighting retrofit in the old and new cafeteria serving lines	U.S.	Energy End Use
		Lighting retrofit in the pumping station for the #6 fuel oil	U.S.	Energy End Use
		Lighting retrofit of the lighting in the wet-well areas	U.S.	Energy End Use
		Lighting retrofit on exit lights	U.S.	Energy End Use
		Lighting retrofit on pull station marker lights	U.S.	Energy End Use
		Lighting retrofit on the 3rd floor west end	U.S.	Energy End Use
		Lighting retrofit on the front circle flagpole lights	U.S.	Energy End Use
		Lighting retrofit on the old carpentry shop	U.S.	Energy End Use
		Lighting retrofit on the outside lights adjacent to IWTP	U.S.	Energy End Use
		Lighting retrofit on the red pull station lamps	U.S.	Energy End Use
		Northeast Corner Plating Line Renovation	U.S.	Energy End Use
		Occupancy Sensors installed in all general office locations	U.S.	Energy End Use
		Occupancy sensor installation in the building serv. complex	U.S.	Energy End Use
		Occupancy sensors installed in the bathrooms in site towers	U.S.	Energy End Use
		Purchase of more energy efficient electric water heaters	U.S.	Energy End Use
		Purchase of occupancy sensors for the offices in site towers	U.S.	Energy End Use
		Recycling Efforts	U.S.	Other
		Reduced time on exhaust fans	U.S.	Energy End Use
		Reduction of the direct fired firm gas make-up air units	U.S.	Energy End Use
		Removal of 2 Varidyne motors, replaced by 2 speed drives	U.S.	Energy End Use
		Removal of the Hayes Hump Furnace	U.S.	Energy End Use
		Removal of twenty-three vapor degreasers	U.S.	Halogenates
		Replacement of teledyne unit with an air booster system	U.S.	Energy End Use
		Replacing windows for energy conservation purposes	U.S.	Energy End Use
		Upgrade of ventilations systems in the east end	U.S.	Energy End Use
		Upgrading of coating booths and dust collectors	U.S.	Energy End Use
		Upgrading process water systems serving compressed air units	U.S.	Energy End Use
Prince George Electric Cooperative	EIA-1605	Transmission and Dist. Efficiency Improvements	U.S.	Electric Power
Public Service Company of New Mexico	EIA-1605	CNG Vehicles	U.S.	Transportation
		Heat Rate Improvements at San Juan Generating Station	U.S.	Electric Power
		Natural Gas Leak Surveying and Replacement	U.S.	Methane - Oil, Gas, & Coal
		Palo Verde Generation Increase	U.S.	Electric Power

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Public Service Enterprise Group	EIA-1605	Demand Side Management	U.S.	Energy End Use
		Electric Generation from Landfill Gas	U.S.	Waste Methane
		Employee Trip Reduction	U.S.	Transportation
		Hydro Projects - United States	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Municipal Solid Waste Generators	U.S.	Waste Methane
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Resource Recovery Coal Ash Management Program	U.S.	Other
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		WasteWise	U.S.	Other
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Public Utility District No. 1 of Snohomish County	EIA-1605	Battery and Solar Powered Boat Races	U.S.	Transportation
		Bicycles for Meter Readers	U.S.	Transportation
		Commute Reduction Program	U.S.	Transportation
		Conservation Voltage Reduction	U.S.	Electric Power
		Demand Side Management	U.S.	Energy End Use
		Electric Car Race	U.S.	Transportation
		Scrap Metals Recycling	U.S.	Other
		Transmission Networking and Reconductoring	U.S.	Electric Power
		We-cycle Office Wastepaper (WOW) Program	U.S.	Other
Quad/Graphics, Inc.	EIA-1605	12 hour work shift	U.S.	Transportation
		Duplainville return load project	U.S.	Transportation
		Energy efficient installations	U.S.	Energy End Use
		New mass transit routes	U.S.	Transportation
		Waste paper reduction program	U.S.	Other
		West Allis plant brownfield site	U.S.	Other
Rangely Weber Sand Unit	EIA-1605	Rangely CO2 Injection Project	U.S.	Other
Rappahannock Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.	Energy End Use
		System Line Conversions and Reconductoring	U.S.	Electric Power
		Tree Planting	U.S.	Sequestration
Reliant Energy - HL&P	EIA-1605	San Jacinto Steam Electric Generating Station	U.S.	Cogeneration
		Coal Fly Ash Sales	U.S.	Other
		Demand Side Management	U.S.	Energy End Use
		GT PRIME	U.S.	Electric Power
		Rice Field Methane Reductions Study	U.S.	Agriculture Methane
Rolls-Royce Corporation	EIA-1605	Boiler Conversion from Coal to Landfill/Natural Gas	U.S.	Energy End Use
		Co-Gen	U.S.	Cogeneration
		Peak Saving Project	U.S.	Energy End Use
		Use of Landfill Gas	U.S.	Waste Methane
Sacramento Municipal Utility District	EIA-1605	Employee Commute Program	U.S.	Transportation
		Energy Efficiency Programs	U.S.	Energy End Use
		Meter Reading - Bicycles	U.S.	Transportation
		PV Pioneer	U.S.	Electric Power
		Ride Electric	U.S.	Transportation
		Shade Tree Program	U.S.	Sequestration
		Sulfur Hexaflouride Inventory	U.S.	Halogenates
Salt River Project	EIA-1605EZ	AC Photovoltaic Residential System	U.S.	Energy End Use
		Alternate Work Week Schedule	U.S.	Transportation
		Bike/Bus/Walk	U.S.	Transportation
		Carpooling/Vapooling	U.S.	Transportation
		Cooperative Photovoltaic Power Plant	U.S.	Electric Power
		Fly Ash Sales	U.S.	Other
		Heat Rate Improvements	U.S.	Electric Power
		Home with PV System for Demonstration (Chandler House)	U.S.	Energy End Use
		Landfill Gas Generation (solar dish/stirling system)	U.S.	Waste Methane
		Palo Verde Nuclear Station Capacity Factor Increase	U.S.	Electric Power
		Palo Verde Nuclear Station Capacity Increases	U.S.	Electric Power
		Recycling (CH4 Reductions)	U.S.	Other
		Recycling (CO2 Reduction)	U.S.	Other
		Replace Gasoline Lawnmowers with Electric Lawnmowers	U.S.	Energy End Use
		SF6 Emissions Reduction Partnership	U.S.	Halogenates

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Salt River Project	EIA-1605EZ	Scottsdale CC PV System	U.S.	Energy End Use
		South Mountain CC Solar	U.S.	Energy End Use
		SunDish solar dish/Stirling system (operation on sun)	U.S.	Energy End Use
		Telecommuting	U.S.	Transportation
Santee Cooper	EIA-1605	Cross Unit 1 Turbine Retrofit	U.S.	Electric Power
		Cross Unit 2 Retrofit	U.S.	Electric Power
		Demand Side Management Programs	U.S.	Energy End Use
		Fly Ash Used in Concrete Manufacture	U.S.	Other
		Forestation/Reforestation	U.S.	Sequestration
		Summer Nuclear Upgrade	U.S.	Electric Power
		Winyah Unit 1 Turbine Retrofit	U.S.	Electric Power
		Winyah Unit 2 Turbine Retrofit	U.S.	Electric Power
		Winyah Unit 3 Turbine Retrofit	U.S.	Electric Power
		Winyah Unit 4 Turbine Retrofit	U.S.	Electric Power
SeaWest Windpower, Inc.	EIA-1605	Altech Energy III	U.S.	Electric Power
		Foote Creek I, LLC	U.S.	Electric Power
		Foote Creek II, LLC	U.S.	Electric Power
		Foote Creek III, LLC	U.S.	Electric Power
		Foote Creek IV, LLC	U.S.	Electric Power
		San Gorgonio Westwinds II, LLC	U.S.	Electric Power
Seattle City Light	EIA-1605	4kV to 26kV Distribution System Conversion	U.S.	Electric Power
		Built Smart/Long-Term Super Good Cents Program	U.S.	Energy End Use
		Cedar Falls turbine runner replacement	U.S.	Electric Power
		Diablo Dam turbine runner replacement	U.S.	Electric Power
		Energy $avings Plan	U.S.	Energy End Use
		Energy Efficient Water Heater Rebate Program	U.S.	Energy End Use
		Energy Smart Design	U.S.	Energy End Use
		Gorge Dam turbine runner replacement	U.S.	Electric Power
		Home Water Savers Program	U.S.	Energy End Use
		Low-Income Electric Program	U.S.	Energy End Use
		Multifamily Common Area Lighting Program	U.S.	Energy End Use
		Multifamily Conservation Program: Low-Income	U.S.	Energy End Use
		Multifamily Conservation Program: Standard-Income	U.S.	Energy End Use
		Neighborhood Power Weatherization/Warm Home Program	U.S.	Energy End Use
		Retail-Wise Lighting and Appliances	U.S.	Energy End Use
		Ross Dam turbine runner replacement	U.S.	Electric Power
		Smart Business Rebates	U.S.	Energy End Use
		South Fork Tolt River hydroelectric project	U.S.	Electric Power
		Urban Tree Replacement Program	U.S.	Sequestration
Seminole Electric Cooperative, Inc.	EIA-1605EZ	Fly Ash & Bottom Ash Reuse	U.S.	Other
		Heat Rate Improvement	U.S.	Electric Power
		Lighting Replacement	U.S.	Energy End Use
		Transmission Conductor Optimization	U.S.	Electric Power
Seneca Energy, Inc.	EIA-1605	Seneca Energy - Stage I	U.S.	Waste Methane
		Seneca Energy - Stage II	U.S.	Waste Methane
Separation Technologies, Inc	EIA-1605EZ	STI Fly Ash processed at Carolina Power and Light Roxboro St	U.S.	Other
		STI fly ash processed at Constellation Brandon Shores St	U.S.	Other
		STI fly ash processed at U.S. Generating Brayton Point St.	U.S.	Other
Shenandoah Valley Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.	Energy End Use
		System Line Conversions and Reconductoring	U.S.	Electric Power
		Visual Screening-Tree Planting	U.S.	Sequestration
Sherry Manufacturing	EIA-1605	Add insulation to the HVAC duct system	U.S.	Energy End Use
		Improve air compressors efficiency	U.S.	Energy End Use
		Upgrade lighting to more efficient tubes and ballasts	U.S.	Energy End Use
Shrewsbury Electric Light Plant	EIA-1605EZ	High Efficiency Transformer	U.S.	Electric Power
		Lighting Replacement	U.S.	Energy End Use
South Carolina Electric & Gas Company	EIA-1605	Coal Ash Utilization Program	U.S.	Other
		Demand Side Management Technologies	U.S.	Energy End Use
		Forest Management Plan	U.S.	Sequestration
		Misc. Plant efficiency improvements	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Summer Nuclear Upgrade	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
South Carolina Electric & Gas Company	EIA-1605	Wateree Station heat rate improvement	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Williams Station improvements	U.S.	Electric Power
Southeastern Biomass Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.	Electric Power
Southern California Edison Co.	EIA-1605	Demand Side Management	U.S.	Energy End Use
		ENVEST SCE	U.S.	Energy End Use
		Electric Vehicle Program	U.S.	Transportation
		Fly Ash Sales for Concrete Production	U.S.	Other
		Internal Combustion Engine Replacement Program	U.S.	Energy End Use
		Mohave Power Project Heat Rate Improvement Program	U.S.	Electric Power
		Palo Verde Availability Improvement	U.S.	Electric Power
		Renewable Energy Purchases - Biomass	U.S.	Electric Power
		Renewable Energy Purchases - Geothermal	U.S.	Electric Power
		Renewable Energy Purchases - Wind	U.S.	Electric Power
		Repowering of Hydro Generation Units	U.S.	Electric Power
		San Onofre Availability Improvements	U.S.	Electric Power
Southern Company	EIA-1605	Barry Unit 6 Combined Cycle	U.S.	Electric Power
		Biomass	U.S.	Electric Power
		Bulk Power Transmission Improvements	U.S.	Electric Power
		Carbon Sequestration on Company Lands	U.S.	Sequestration
		Carbon Sequestration on Noncompany Lands	U.S.	Sequestration
		Chevron Cogenerating Plant - Unit 5	U.S.	Cogeneration
		Demand-Side Management	U.S.	Energy End Use
		EnviroTech Investments	U.S.	Other
		Farley Nuclear Plant Availability Improvements	U.S.	Electric Power
		Farley Nuclear Plant Uprate	U.S.	Electric Power
		Gas Capability at Watson 4 and 5	U.S.	Electric Power
		Gas Capability at Plant McDonough	U.S.	Electric Power
		Gas Capability at Plant Yates	U.S.	Electric Power
		Hatch Nuclear Plant Availability Improvements	U.S.	Electric Power
		Hatch Nuclear Plant Capacity Uprate	U.S.	Electric Power
		Heat Rate Improvement on Coal-Fired Capacity	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		New Combustion Turbines	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Sulfur Hexafluoride (SF6) Emissions Reductions	U.S.	Halogenates
		Transportation Research	U.S.	Transportation
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Vogtle Electric Generating Plant (Nuclear) Capacity Uprate	U.S.	Electric Power
		Vogtle Electric Generating Plant Availability Improvements	U.S.	Electric Power
		Washington County Cogeneration Plant	U.S.	Cogeneration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Southside Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.	Electric Power
Steuben Rural Electric Co-op	EIA-1605EZ	1994 Distribution Line Replacement	U.S.	Electric Power
		1994 Water Heater Control Program	U.S.	Energy End Use
		1995 Water Heater Control Program	U.S.	Energy End Use
		1995 Distribution Line Replacement	U.S.	Electric Power
		1996 Conductor Replacement	U.S.	Electric Power
		1996 Farm Energy Efficiency	U.S.	Energy End Use
		1996 Water Heater Control Program	U.S.	Energy End Use
		1997 Conductor Replacement	U.S.	Electric Power
		1997 Farm Energy Efficiency	U.S.	Energy End Use
		1997 Water Heater Control Program	U.S.	Energy End Use
TXU	EIA-1605	Alternative Fuel Vehicle Program	U.S.	Transportation
		Coal Ash Byproduct Use	U.S.	Other
		Demand-Side Management Program	U.S.	Energy End Use
		Employee Bus Pass Program	U.S.	Transportation
		Employee Carpool Program	U.S.	Transportation
		Increased Reforestation in Land Reclamation Program	U.S.	Sequestration
		Landfill Methane	U.S.	Waste Methane
		Lignite and Western Coal Blending	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Operation of Nuclear Generation Units	U.S.	Electric Power
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
TXU	EIA-1605	Paper and Aluminum Recycling	U.S.	Other
		Power Plant Heat Rate Improvement Projects	U.S.	Electric Power
		Ranger Exhaust Gas Project	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Renewable Energy Development Projects	U.S.	Electric Power
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		SF6 Reductions	U.S.	Halogenates
		Texas Reforestation Foundation	U.S.	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Vehicle Use Reductions	U.S.	Transportation
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Tampa Electric Company	EIA-1605	Fly Ash Reuse	U.S.	Other
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Tennessee Valley Authority	EIA-1605	Afforestation On TVA Lands	U.S.	Sequestration
		Alternate Fuel Vehicles	U.S.	Transportation
		CFC Management	U.S.	Halogenates
		Comfort Plus Homes	U.S.	Energy End Use
		Flyash Sales To Concrete Industry	U.S.	Other
		Heat Rate Improvements At TVA Coal Fired Generating Units	U.S.	Electric Power
		Hydro Unit Modernization	U.S.	Electric Power
		Landfill Methane Recovery and Power Generation	U.S.	Waste Methane
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Outdoor Lighting Replacements By Memphis Light, Gas And Wate	U.S.	Energy End Use
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Paper Recycling	U.S.	Other
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Residential Marketing Program	U.S.	Energy End Use
		Return Browns Ferry Nuclear Units 2 and 3 to Service	U.S.	Electric Power
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Start Watts Bar Nuclear Unit 1	U.S.	Electric Power
		Transmission System Efficiency Improvements	U.S.	Electric Power
		Transportation Fleet Fuel Efficiency Improvement	U.S.	Transportation
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Wood Waste Cofiring At Coal Fired Generating Plants	U.S.	Electric Power
Texaco, Inc.	EIA-1605EZ	Texaco Lower Mississippi River Valley Reforestation Project	U.S.	Sequestration
The Bentech Group of Delaware, Inc.	EIA-1605	Chautauqua County, Ellery Landfill	U.S.	Waste Methane
		Montgomery County, Oaks Landfill	U.S.	Waste Methane
		Pigeon Point Landfill	U.S.	Waste Methane
		Rolling Hills Landfill	U.S.	Waste Methane
The Dow Chemical Company	EIA-1605	CFC Refrigeration Systems Conversion	U.S.	Halogenates
		Replace CFC's as blowing agents to manufacture foams.	U.S.	Halogenates
		Replacing HCFCs & HFCs as Blowing Agents - U.S. Operations	U.S.	Halogenates
		Replacing HCFCs & HFCs as blowing agents - Foreign Operation	Foreign	Halogenates
The Empire District Electric Co.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Tucson Electric Power Company	EIA-1605	Commercial DSM Programs	U.S.	Energy End Use
		Landfill Gas (Fuel Switching) Project	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		R-11 Recycling	U.S.	Halogenates
		R-12 Emission Avoidance	U.S.	Halogenates
		R-22 Recycling	U.S.	Halogenates
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Residential DSM Programs	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		SF6 Recycling	U.S.	Halogenates

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Tucson Electric Power Company	EIA-1605	Solar Electric - Photovoltaic	U.S.	Electric Power
		Travel Reduction Program	U.S.	Transportation
		Trees for Tucson	U.S.	Sequestration
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
U. S. Steel Mining Company, LLC	EIA-1605	No. 50 Mine: Gas Recovery For Sale / Use	U.S.	Methane - Oil, Gas, & Coal
		Oak Grove Mine: Gas Recovery For Sale / Use	U.S.	Methane - Oil, Gas, & Coal
U.S. Department of Energy- Office of Solar	EIA-1605	Photovoltaics on DOE facilities in the DC metropolitan area	U.S.	Electric Power
Unocal Corporation	EIA-1605	Salak/Wayang Windu	Foreign	Electric Power
Utah Municipal Power Agency	EIA-1605EZ	Geothermal Power	U.S.	Electric Power
		In House Conservation	U.S.	Energy End Use
		Light Replacement Program	U.S.	Energy End Use
		Low Loss Transformers	U.S.	Electric Power
		Residential Audits	U.S.	Energy End Use
		Tree Planting Program	U.S.	Sequestration
		Wind Power	U.S.	Electric Power
Vermont Public Power Supply Authority	EIA-1605	Act 250 New Construction Program	U.S.	Energy End Use
		Equipment Replacement and Remodeling Program	U.S.	Energy End Use
		Farm Efficiency Program	U.S.	Energy End Use
		Large Commercial and Industrial Audit Program	U.S.	Energy End Use
		Residential Appliance Disposal Program	U.S.	Energy End Use
		Residential Low Income Weatherization Piggyback Program	U.S.	Energy End Use
		Residential Mail Order Lighting Program	U.S.	Energy End Use
		Residential Top Ten	U.S.	Energy End Use
		Residential Water Heating and Lighting Efficiency Program	U.S.	Energy End Use
		Small Commercial Retrofit Program	U.S.	Energy End Use
		Street and Area Lighting Efficiency Program	U.S.	Energy End Use
		Swanton Village Hydro Expansion	U.S.	Electric Power
		Transmission and Distribution System Efficiency Improvements	U.S.	Electric Power
Waverly Light & Power Company	EIA-1605	Distribution System Upgrade (Project 3)	U.S.	Electric Power
		Electric Vehicle (Project 4.1)	U.S.	Transportation
		Energy End-Use Programs (Project 3.1)	U.S.	Energy End Use
		Energy Savings Due to Trees Forever (Project 3.3)	U.S.	Energy End Use
		High-Pressure Sodium Lights (Project 3.2)	U.S.	Energy End Use
		Hydro (Project 2)	U.S.	Electric Power
		Low-Loss Transformers (Project 4)	U.S.	Electric Power
		Trees Forever (Project 8.1)	U.S.	Sequestration
		Wind Turbine (Project 1)	U.S.	Electric Power
Western Resources, Inc.	EIA-1605	Coal Fly Ash Recycling	U.S.	Other
		Conversion of Company Fleet Vehicles to Alternative Fuels	U.S.	Transportation
		Distribution Capacitor Additions	U.S.	Electric Power
		Electrotechnologies Marketing	U.S.	Energy End Use
		GEV1 Feedwater Heater Upgrade	U.S.	Electric Power
		GEV2 Feedwater Controls Upgrade	U.S.	Electric Power
		GEV2 Feedwater Heater Upgrade	U.S.	Electric Power
		HEC4 Cooling Tower Upgrade	U.S.	Electric Power
		JEC1 Boiler Controls Upgrade	U.S.	Electric Power
		JEC1 On-Line Performance Monitoring	U.S.	Electric Power
		JEC1 Precipitator Intermittent Energization	U.S.	Electric Power
		JEC1 Seal Steam Recovery	U.S.	Electric Power
		JEC1 Superheater Replacement	U.S.	Electric Power
		JEC1 Turbine Upgrade	U.S.	Electric Power
		JEC2 Boiler Controls Upgrade	U.S.	Electric Power
		JEC2 On-Line Performance Monitoring	U.S.	Electric Power
		JEC2 Precipitator Intermittent Energization	U.S.	Electric Power
		JEC2 Seal Steam Recovery	U.S.	Electric Power
		JEC2 Superheater Replacement	U.S.	Electric Power
		JEC2 Turbine Upgrade	U.S.	Electric Power
		JEC3 Boiler Controls Upgrade	U.S.	Electric Power
		JEC3 Boiler/Turbine Controls Upgrade	U.S.	Electric Power
		JEC3 On-Line Performance Monitoring	U.S.	Electric Power
		JEC3 Precipitator Intermittent Energization	U.S.	Electric Power
		JEC3 Seal Steam Recovery	U.S.	Electric Power
		JEC3 Superheater Replacement	U.S.	Electric Power
		JEC3 Turbine Upgrade	U.S.	Electric Power
		LAC2 Turbine Upgrade	U.S.	Electric Power

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Western Resources, Inc.	EIA-1605	LEC4 Controls Upgrade	U.S.	Electric Power
		LEC5 Circ Water Crosstie	U.S.	Electric Power
		LEC5 Controls Upgrade	U.S.	Electric Power
		LEC5 Replace Flyash Evaporator	U.S.	Electric Power
		LEC5 Sliding Pressure Operation	U.S.	Electric Power
		LEC5 Turbine Seals	U.S.	Electric Power
		LEC5 Upgrades	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Natural Gas Distribution System Replacement Program	U.S.	Methane - Oil, Gas, & Coal
		Natural Gas Transmission System Blowdown Reductions	U.S.	Methane - Oil, Gas, & Coal
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Photovoltaic Installations	U.S.	Electric Power
		Purchase of Aluminum Rail Cars	U.S.	Transportation
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Residential Conservation Use Rate DSM Program	U.S.	Energy End Use
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		TEC7 On-Line Performance Monitoring	U.S.	Electric Power
		TEC7 Precipitator Intermittent Energization	U.S.	Electric Power
		TEC8 Condenser Upgrade	U.S.	Electric Power
		TEC8 Precipitator Intermittent Energization	U.S.	Electric Power
		Transformer Replacements	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Westar Wind Turbines	U.S.	Electric Power
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
		Wolf Creek Increased Capacity Rating	U.S.	Electric Power
		Wolf Creek Turbine Modifications	U.S.	Electric Power
Wisconsin Electric Power Co.	EIA-1605	CFC-12 Recovery from Appliance Turn-In Program	U.S.	Halogenates
		Beneficial use of landfill methane	U.S.	Waste Methane
		Demand-side management energy efficiency programs	U.S.	Energy End Use
		Energy for Tomorrow(TM) Renewable Energy Program	U.S.	Electric Power
		Fly ash substitution program	U.S.	Other
		Fossil plant heat rate improvements	U.S.	Electric Power
		Fuel switching at Bynov Plant in Decin, Czech Republic	Foreign	Cogeneration
		Hydro plant improvements and additions	U.S.	Electric Power
		Increased Nuclear Capacity at Point Beach Nuclear Plant	U.S.	Electric Power
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.	Sequestration
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign	Sequestration
		Rio Bravo Carbon Sequestration Pilot Project Expansion	Foreign	Sequestration
		Transmission & distribution system loss reductions	U.S.	Electric Power
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.	Sequestration
		Vehicle conversion to dual fuel capability	U.S.	Transportation
		Western Oregon Carbon Sequestration Project	U.S.	Sequestration
Wisconsin Public Power Inc.	EIA-1605EZ	2000 Energy Education	U.S.	Other
		98 Energy Education	U.S.	Other
		99 Energy Education	U.S.	Other
		Boswell Heat Rate Reduction	U.S.	Electric Power
		Commercial Industrial Farm Program	U.S.	Other
		Dispatch Change - Menasha	U.S.	Electric Power
		Energy Star Appliances - Dishwashers	U.S.	Energy End Use
		Energy Star Appliances - Front-loading Clothes Washers	U.S.	Energy End Use
		Energy Star Appliances - Refrigerators	U.S.	Energy End Use
		Energy Star Lighting - Compact Fluorescent Lamp Fixtures	U.S.	Energy End Use
		Energy Star Lighting - Compact Fluorescent Lamp Torchieres	U.S.	Energy End Use
		Energy Star Lighting - Compact Fluorescent Lamps	U.S.	Energy End Use
		Kaukauna CT I&C Upgrade	U.S.	Electric Power
		Renewable Energy Projects - Photovoltaic	U.S.	Electric Power
		Residential Appliances	U.S.	Energy End Use
		Street Lighting	U.S.	Energy End Use
		Tree Power 1991 Plantings (10 year olds)	U.S.	Sequestration
		Tree Power 1992 Plantings (9 year olds)	U.S.	Sequestration
		Tree Power 1993 Planting (8 year olds)	U.S.	Sequestration
		Tree Power 1994 Plantings (7 year olds)	U.S.	Sequestration
		Tree Power 1995 Plantings (6 year olds)	U.S.	Sequestration

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Wisconsin Public Power Inc.	EIA-1605EZ	Tree Power 1996 Plantings (5 year olds)	U.S.	Sequestration
		Tree Power 1997 Planting (4 year olds)	U.S.	Sequestration
		Tree Power 1999 Plantings (2 year olds)	U.S.	Sequestration
		Tree Power 2000 Plantings (one year olds)	U.S.	Sequestration
Xcel Energy	EIA-1605	Appliance Recycling	U.S.	Halogenates
		Chippewa Falls Hydro expansion--NSP-WI	U.S.	Electric Power
		Coal Ash Utilization-PSCo	U.S.	Other
		Coal Ash Utilization-SPS	U.S.	Other
		Coal ash utilization-NSP	U.S.	Other
		Demand Side Management (electric)--PSCo	U.S.	Energy End Use
		Demand side management (electric)--NSP	U.S.	Energy End Use
		Foot Creek Wyoming (Wind Project)--PSCo	U.S.	Electric Power
		Green Lights	U.S.	Energy End Use
		Lake Benton Power Partners (Wind Power)--NSP	U.S.	Electric Power
		Lake Benton Power Partners II (Wind Power)--NSP	U.S.	Electric Power
		Lakota Ridge (Wind Power)-- NSP	U.S.	Electric Power
		Landfill Gas Purchase--NSP	U.S.	Electric Power
		Low Income Refrigerator Replacement	U.S.	Halogenates
		New Mexico (Wind Power)--SPS	U.S.	Electric Power
		Nuclear Capacity Increase - Rerated--NMC	U.S.	Electric Power
		Nuclear Capacity Increase 3--NMC	U.S.	Electric Power
		Nuclear capacity increase 2--NMC	U.S.	Electric Power
		Nuclear capacity increase--NMC	U.S.	Electric Power
		Nuclear capacity restoration--NMC	U.S.	Electric Power
		Ponnequin (Wind Power)--PSCo	U.S.	Electric Power
		Recycling Program--PSCo	U.S.	Other
		Recycling Program--SPS	U.S.	Other
		Recycling program	U.S.	Other
		Refuse-derived fuel-NSP	U.S.	Waste Methane
		Shaokatan Hills (Wind Power)--NSP	U.S.	Electric Power
		Sioux Falls area transmission upgrades--NSP	U.S.	Electric Power
		Transmission upgrade 2--NSP	U.S.	Electric Power
		Transmission upgrade--NSP	U.S.	Electric Power
		Upgrade for hydro capacity--NSP	U.S.	Electric Power
		Wheaton Plant conversion--NSP-WI	U.S.	Electric Power
		Wind Power Partners 1993--NSP	U.S.	Electric Power
		Wind power--NSP	U.S.	Electric Power
		Woodstock Windfarms (Wind Power)--NSP	U.S.	Electric Power
Zahren Alternative Power Corporation	EIA-1605EZ	Barre	U.S.	Waste Methane
		Brickyard	U.S.	Waste Methane
		Burlington	U.S.	Waste Methane
		Dolton	U.S.	Waste Methane
		Onondaga	U.S.	Waste Methane
		Oyster Bay	U.S.	Waste Methane
		Romeoville	U.S.	Waste Methane
		Streator	U.S.	Waste Methane
		122nd Street	U.S.	Waste Methane
		122nd Street Flare	U.S.	Waste Methane
		Amity	U.S.	Waste Methane
		Barre Flare	U.S.	Waste Methane
		Brickyard Flare	U.S.	Waste Methane
		Cape May	U.S.	Waste Methane
		Cape May Flare	U.S.	Waste Methane
		Dixon	U.S.	Waste Methane
		Dixon Flare	U.S.	Waste Methane
		Dolton Flare	U.S.	Waste Methane
		Garland	U.S.	Waste Methane
		Garland Flare	U.S.	Waste Methane
		Hamm / Sussex	U.S.	Waste Methane
		Harrison Flare	U.S.	Waste Methane
		Manchester	U.S.	Waste Methane
		Manchester Flare	U.S.	Waste Methane
		Marina	U.S.	Waste Methane
		Marina Flare	U.S.	Waste Methane
		Oceanside	U.S.	Waste Methane
		Oyster Bay Flare	U.S.	Waste Methane

Table B5. Emission Reduction Projects Reported by Entity, Data Year 2000

Reporter	Form Type	Project	Location	Project Type
Zahren Alternative Power Corporation	EIA-1605EZ	Romeoville Flare	U.S.	Waste Methane
		Roxanna	U.S.	Waste Methane
		SPSA	U.S.	Waste Methane
		SPSA Flare	U.S.	Waste Methane
		Smithtown	U.S.	Waste Methane
		Smithtown Flare	U.S.	Waste Methane
		Springfield	U.S.	Waste Methane
		Springfield Flare	U.S.	Waste Methane
		Tucson	U.S.	Waste Methane
		Tucson Flare	U.S.	Waste Methane
		Upper Rock	U.S.	Waste Methane
		Upper Rock Flare	U.S.	Waste Methane
Zeeland Board of Public Works	EIA-1605EZ	General Tranmission & Distribution	U.S.	Electric Power
		Other Transmission and Distribution Improvements	U.S.	Electric Power
		Urban Forestry	U.S.	Sequestration

Note: "Electric Power" includes electric power generation, transmission, and distribution. "Methane - Oil, Gas, & Coal" refers to projects in Section 7 "Oil and Natural Gas Systems and Coal Mining - Methane."

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605b.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Electricity Generation, Transmission, and Distribution			
A&N Electric Cooperative	EIA-1605	Transmission and Distribution Efficiency Improvements	U.S.
Alabama Biomass Partners, Ltd	EIA-1605EZ	Biomass Waste to Energy	U.S.
Allegheny Energy, Inc.	EIA-1605	Adjustable Speed Drives for PA Fans - Hatfield's Ferry P.S.	U.S.
		Application of Capacitors	U.S.
		Armstrong Boiler No. 1 Emissions Reduction Project	U.S.
		Armstrong Boiler No. 2 Emissions Reduction Project	U.S.
		Armstrong Unit 1 - Boiler Controls Replacement	U.S.
		Armstrong Unit 2 - Boiler Controls Replacement	U.S.
		Auxiliary Fuel Switching	U.S.
		Conversion to Higher Voltage Distribution	U.S.
		Economic Conductor Selection	U.S.
		Efficient Distribution Transformers	U.S.
		Energy Star Transformer Program	U.S.
		Hatfield's Ferry Unit 1 - HP/IP Turbine Rotor Replacement	U.S.
		Hatfield's Ferry Unit 1 - LP Turbine Rotor Replacement	U.S.
		Hatfield's Ferry Unit 2 - HP/IP Turbine Rotor Replacement	U.S.
		Hatfield's Ferry Unit 2 LP Turbine Rotor Replacement	U.S.
		Hatfield's Ferry Unit 2 Natural Gas Reburn Demonstration	U.S.
		Hatfield's Ferry Unit 3 - LP Turbine Rotor Replacement	U.S.
		Lake Lynn Hydro Electric Station Relicensing	U.S.
		Performance Monitoring Systems	U.S.
		Potomac Edison 138/500 kV System Split	U.S.
		R. P. Smith Unit 4 - Boiler Controls Replacement	U.S.
		Replace Small Primary Conductors	U.S.
		Rivesville Unit 6 - High Pressure Turbine Rotor Replacement	U.S.
		Rivesville Unit No. 6 - Boiler Controls Replacement	U.S.
		Small Hydroelectric Station Relicensing	U.S.
		Willow Island Unit 1- Low Pressure Turbine Rotor Replacement	U.S.
		Willow Island Unit 2 Boiler Controls Replacement	U.S.
		Wire Replacement on Transmission Lines	U.S.
Alliant Energy	EIA-1605	Cedar Rapids Landfill Methane IES	U.S.
		Columbia 1 turbine blade Efficiency improvements	U.S.
		Columbia 1&2 Excess Air Efficiency improvements	U.S.
		Columbia 2 economizer Efficiency improvements	U.S.
		Columbia 2 turbine blade Heat rate improvement	U.S.
		Edge 5 Excess Air Efficiency improvements	U.S.
		Fuel Switching	U.S.
		Mallard Ridge Landfill Methane	U.S.
		Minergy Waste Generation	U.S.
		Switchgrass Cofiring	U.S.
		Tire Derived Fuel Generation	U.S.
		Transmission line improvements	U.S.
		Verona Landfill Methane	U.S.
		Wind Power	U.S.
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Conversion to a dry flyash handling system.	U.S.
		Increased Nuclear generation	U.S.
		Install adjustible speed fan drives replacing fixed speed	U.S.
		Meramec Power Plant Control Upgrade	U.S.
		Replaced motor-generator exciters with static exciter system	U.S.
		Sioux Plant Control Upgrade	U.S.
		Subtransmission Reconductoring	U.S.
		Transformer Replacement	U.S.
		Waste Oil Heat Recovery	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
American Electric Power, Inc.	EIA-1605	ClearChoice(sm) Green Pricing Initiative: AEP-West	U.S.
		Distribution System Equipment Improvements	U.S.
		Fuel Switch Coal to Natural Gas (Conesville Unit 1-3)	U.S.
		Heat Rate Improvement (Due to improved load optimization)	U.S.
		Heat Rate Improvement Projects (Oper. and Equip. Changes)	U.S.
		Hydroelectric Facility Improvements: AEP-East	U.S.
		Nuclear Plant Improved Utilization	U.S.
		Open-Loop Transmission Groundwire Resistive Loss Reduction	U.S.
		Renewable Generation - Solar	U.S.
		Renewable Generation - Wind: AEP-East	U.S.
		Renewable Generation - Wind: AEP-West	U.S.
		Southwest Mesa Wind Farm	U.S.
		Transmission Efficiency Improvements: AEP-West	U.S.
		Transmission System Reinforcements	U.S.
		Watts on Schools	U.S.
American Municipal Power - Ohio	EIA-1605	AMP-OHIO: NYPA Hydro Purchases	U.S.
		City of Columbus: O'Shaughnessy Hydro	U.S.
		City of Hamilton Hydro Electric Plant	U.S.
		City of Hamilton: Greenup Hydro	U.S.
		City of Painesville: Heat Rate Improvement	U.S.
		City of Piqua: Plant Derating	U.S.
		Line Loss Reduction	U.S.
		Newton Falls Reconductoring Project	U.S.
		OMEGA JV5 Belleville Hydro Plant	U.S.
		Wadsworth Distribution Upgrade	U.S.
Anoka Municipal Utility	EIA-1605EZ	Wind Generation	U.S.
Austin Energy	EIA-1605EZ	General Transmission/Distribution Efficiency Improvements	U.S.
		Landfill Gas Generation (Power Purchase)	U.S.
		Photovoltaic Generation	U.S.
		South Texas Project	U.S.
		West Texas Wind Turbine Power Purchase	U.S.
Baltimore Gas & Electric Company	EIA-1605	Baltimore RESCO Waste-to-Energy MWh Purchases	U.S.
		Brandon Shores Generating Station Heat Rate Improvement	U.S.
		C.P. Crane Generating Station Heat Rate Improvements	U.S.
		Calvert Cliffs Nuclear Power Plant Generation Increases	U.S.
		H.A. Wagner Generating Station Heat Rate Improvements	U.S.
		Hydroelectric Generation Improvements	U.S.
		Transmission / Distribution Improvements	U.S.
BARC Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.
Biomass Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.
Carolina Power & Light Company	EIA-1605	Nuclear Capacity Improvement	U.S.
		Council Bluffs #3 ESP Hot-Side Conversion	U.S.
		High-Effciency Distribution Transformers	U.S.
		Neal 4 Hot-Side ESP Conversion	U.S.
		Streeter Air-Cooled Condenser (ACC)	U.S.
		Streeter Unit 6 Controls Upgrade	U.S.
		Streeter Unit 6 Fuel-Switching Project	U.S.
		Windfarm	U.S.
Central Hudson Gas & Electric Corporation	EIA-1605	Danskammer Heat Pipe Air Heater	U.S.
		Danskammer Unit 4 Main Step-Up Transformer Replacement	U.S.
		Roseton Gas Co-Firing	U.S.
		Roseton Unit 2 Main Step-Up Transformer Replacement	U.S.
Choptank Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Cinergy Corp.	EIA-1605	Cayuga Heat Rate Improvements	U.S.
		Gibson Performance Maximization Program	U.S.
		Merger Dispatch Savings	U.S.
		Wabash River Heat Rate Improvement	U.S.
		Wabash River Unit 1 Repowering Project	U.S.
City of Edmond, Oklahoma, Electric Department	EIA-1605EZ	High Efficiency Transformers	U.S.
CMS Energy	EIA-1605	Increased Nuclear Availibility (Consumers)	U.S.
		Karn 3 and Aux Boiler Fuel Switch	U.S.
		Karn 4 Fuel Switch (Consumers)	U.S.
		Toledo Power Efficiency Improvements	Foreign
Commonwealth Edison Company (ComEd)	EIA-1605	Chicago Public School Solar Partnership	U.S.
		Collins Station 12345-Fuel Switch	U.S.
		ComEd North Commercial Center - Solar Panels	U.S.
		High Efficiency Transformers	U.S.
		Illinois Brotherhood of Electrical Workers - Solar Panels	U.S.
		Wind and Photovoltaic Generation Pricing Experiment	U.S.
		Windmill	U.S.
Community Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.
Conectiv Atlantic Generation (CAG)	EIA-1605	Deepwater Natural Gas Usage	U.S.
		Peach Bottom Nuclear Units #2 & 3 Uprate Program	U.S.
Conectiv Delmarva Generation	EIA-1605	Edge Moor Fuel Substitution	U.S.
		Hay Road Combined Cycle	U.S.
		Peach Bottom Nuclear Units #2 & #3 Uprate Program	U.S.
		T&D Loss Reduction	U.S.
Consolidated Edison Company of New York, Inc.	EIA-1605	Arthur Kill - Fuel Switching to Natural Gas	U.S.
Delaware Electric Cooperative	EIA-1605	System Line Conversions & Reconductoring	U.S.
Delta Electric Power Association	EIA-1605EZ	High Efficiency Transformers	U.S.
		Load Control Interruptible Rate	U.S.
		Reconductoring	U.S.
Dominion Generation	EIA-1605	Increased Nuclear Generation at North Anna Nuclear Power St.	U.S.
		Increased Nuclear Generation at Surry Power Station	U.S.
DTE Energy/ Detroit Edison	EIA-1605	Distribution Improvements	U.S.
		Greenwood Energy Center Fuel Switching	U.S.
		Increased Nuclear Utilization	U.S.
		Plant Efficiency Improvements	U.S.
		Solar Power - California	U.S.
		Solar Power - Michigan	U.S.
Duke Energy Corporation	EIA-1605	Improved Hydro Efficiency at Dearborn Hydro	U.S.
		Improved Hydro Efficiency at Lookout Shoals Hydro	U.S.
		Improved Hydro Efficiency at Oxford Hydro	U.S.
		Improved Hydro Efficiency at Wylie Hydro	U.S.
		Increased Nuclear Generation at Catawba Nuclear Station	U.S.
		Increased Nuclear Generation at McGuire Nuclear Station	U.S.
		Increased Nuclear Generation at Oconee Nuclear Station	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Dynegy Midwest Generation Inc.	EIA-1605	Add Turbine Shell Heaters on Wood River 4	U.S.
		Baldwin 2 Turbine H.E.L.P. Blades Installation	U.S.
		Baldwin 3 Heat Rate Improvement	U.S.
		Burn Waste Oil at Baldwin 3	U.S.
		Cofire Plastic at Baldwin	U.S.
		Combustion of used lubricating oil	U.S.
		Convert Vermilion Units 1 And 2 To Natural Gas	U.S.
		Fuel Switch To Natural Gas at Hennepin	U.S.
		Fuel Switch To Natural Gas at Wood River	U.S.
		Havana 6 Cooling Tower Upgrade	U.S.
		Hennepin Gas Reburn Project	U.S.
		Hennepin I Turbine Steam Path Upgrade	U.S.
		Hennepin Orimulsion Reburn	U.S.
		Install Natural Gas Fired Aux. Boiler at Havana	U.S.
		New Boiler Controls at Hennepin	U.S.
		Reduce Numberof Plant Start-ups	U.S.
		Tire-Derived Fuel Cofiring at Baldwin	U.S.
		Vermilion 1 Heat Rate Improvements	U.S.
		Vermilion 2 Heat Rate Improvements	U.S.
		Wood River 4 Turbine Rotor Replacement	U.S.
Energy Management Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.
		Biomass Waste to Energy (Corn Products)	U.S.
Energy Northwest	EIA-1605EZ	Columbia Generating Station	U.S.
Entergy Services, Inc.	EIA-1605	Grand Gulf Nuclear Station Turbine Upgrade	U.S.
		Independence Unit 1 Feedwater Heater Replacement	U.S.
		Lake Catherine Unit 4 Efficiency Improvement Project	U.S.
		Lewis Creek Combustion Control	U.S.
		Little Gypsy Unit 3 #6LP Feedwater Heater Replacement	U.S.
		Louisiana Station 1 Repowering and Unit Upgrade	U.S.
		Michoud Unit 3 Efficiency Improvement Project	U.S.
		Ninemile Turbine Retrofit	U.S.
		Raise Nuclear Unit Targets on Annual Capacity Factor	U.S.
		Sabine Unit 2 Feedwater Heater Replacement	U.S.
		Transmission and Distribution Efficiency	U.S.
		Vidalia Hydroelectric Station	U.S.
		White Bluff Unit 1 Feedwater Heater Replacement	U.S.
		White Bluff Unit 2 Feedwater Heaters Replacement	U.S.
		Willow Glen Unit 3 #2B Feedwater Heater Replacment	U.S.
		Willow Glen Unit 5 Air Heater Replacement Project	U.S.
		Willow Glen Unit 5 Kidney Trap Replacement	U.S.
FirstEnergy Corporation	EIA-1605	Fuel Switching	U.S.
		Heat Rate Improvement	U.S.
		Increased Generation at Beaver Valley Nuclear Power Station	U.S.
		Increased Generation at Davis-Besse Nuclear Power Station	U.S.
		Increased Generation at Perry Nuclear Power Plant	U.S.
FPL Group	EIA-1605	Multitrade Power Plant	U.S.
Golden Valley Electric Association, Inc	EIA-1605EZ	Use of Hydropower	U.S.
		Wind Turbine	U.S.
GPU, Inc.	EIA-1605	Biomass Co-firing R & D Program	U.S.
		Front Street Generating Station Retirement	U.S.
		Photovoltaics Project-User Scale Applications-(USAPV)	U.S.
		Shunt Capacitor Program	U.S.
		T & D System Improvements	U.S.
		Transformer Loss Evaluation Program	U.S.
		Yards Creek Pumped Storage Upgrade	U.S.
JEA	EIA-1605EZ	Fuel Switching - Natural Gas	U.S.
		Photovoltaic Systems	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Los Angeles Department of Water and Power	EIA-1605	Energy Efficient Transformers	U.S.
		Fuel Switching (Fuel Oil #6 to Natural Gas)	U.S.
		Solar Power	U.S.
Lower Colorado River Authority	EIA-1605	Hydroelectric Dam Modernization	U.S.
		Neural-Network Technology	U.S.
		Supply-Side Efficiency Improvements	U.S.
		Wind Power Project	U.S.
Mecklenburg Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.
Minnesota Power	EIA-1605	Expanded Generation from Existing Hydro Electric Resources	U.S.
		Heat Rate Improvements, Boswell Energy Center	U.S.
		Mud Lake Substation - Reduced Transmission Losses	U.S.
Moorhead Public Service	EIA-1605EZ	Wind Turbine Generator	U.S.
Nashville Electric Service	EIA-1605EZ	Distribution Voltage Upgrade	U.S.
		High-efficiency transformers	U.S.
National Grid USA	EIA-1605	Distribution Reconductoring	U.S.
		Distribution Voltage Upgrade	U.S.
		Photovoltaic	U.S.
		Transmission Reconductoring	U.S.
Nebraska Public Power District	EIA-1605EZ	1994-1996 Distribution Improvements	U.S.
		1994-1997 Transformer Changeouts	U.S.
		Nuclear Plant Improved Utilization	U.S.
		Plant Efficiency Improvements	U.S.
		Wind Turbines	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Amorphous Metal Core Transformers	U.S.
		Cowley Ridge Windplant	Foreign
		Installation and Operation of Photovoltaic Energy Systems	U.S.
		Installation and Operation of Wind Turbines	U.S.
		Nuclear Generation Capacity Improvements	U.S.
		Nuclear Generation Performance Improvements	U.S.
		Partial Conversion of Oil-Fired Plant to Natural Gas	U.S.
NiSource/NIPSCO	EIA-1605	Biomass Initiative	U.S.
		Capacitor Additions	U.S.
		Low Loss Transformers	U.S.
North American Carbon, Inc.	EIA-1605	Glendale Hydroelectric Project	U.S.
		Lower Saranac Hydroelectric Project	U.S.
		Star Lake Hydroelectric Project	Foreign
North Carolina Biomass Partners	EIA-1605EZ	Biomass Waste to Energy	U.S.
North Carolina Electric Membership Corporation	EIA-1605EZ	Switch Away from Fossil Fuel Generated Power Purchases	U.S.
Northern Neck Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.
Northern Virginia Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.
Oak Creek Energy Systems Inc.	EIA-1605	OCES Tehachapi	U.S.
Omaha Public Power District	EIA-1605EZ	Coal Heat Rate Improvement	U.S.
		Nuclear Capacity Factor Improvement	U.S.
		T&D Capacitor Installations	U.S.
PECO Energy Company	EIA-1605	Overhaul of Conowingo Unit 10	U.S.
		Overhaul of Conowingo Unit 5	U.S.
		Overhaul of Conowingo Unit 8	U.S.
		Overhaul of Conowingo Unit 9	U.S.
		Overhaul of Muddy Run Units 1-4	U.S.
		Overhaul of Muddy Run Units 5-8	U.S.
		Rerate of Peach Bottom Unit 2	U.S.
		Rerate of Limerick Unit 1	U.S.
		Rerate of Limerick Unit 2	U.S.
		Rerate of Peach Bottom Unit 3	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
PG&E Corporation	EIA-1605	Brayton Point Station Unit No. 4 Gas Conversion	U.S.
		Brayton Point Station Units No. 1, 2, 3 Natural Gas Usage	U.S.
		Manchester Street Repowering	U.S.
		Natural Gas Substitution for Residual Oil	U.S.
		Power Purchases from Natural Gas Generation	U.S.
Platte River Power Authority & 4 owner cities	EIA-1605	Estes Park Low-Loss Transformers	U.S.
		Fort Collins Distribution System Improvements	U.S.
		Longmont Distribution System Improvements	U.S.
		Longmont Hydro Project Upgrades	U.S.
		Loveland Hydroelectric Plant	U.S.
		PRPA Heat Rate Improvements at Craig Powerplant	U.S.
		PRPA Photovoltaic Project	U.S.
		PRPA Wind Power Project	U.S.
Portland General Electric Co.	EIA-1605	1995 Colstrip Units 3&4 Ruggedizing	U.S.
		Beaver Efficiency Improvements	U.S.
		Boardman Efficiency Improvements	U.S.
		Building Rooftop Photovoltaic Systems	U.S.
		Bull Run Turbine Runner Replacements	U.S.
		Coyote Springs Efficiency Improvements	U.S.
		Faraday Units 4&5 1994	U.S.
		Oak Grove Turbine Runner Replacements - 1991 - Units 1&2	U.S.
		River Mill Efficiency Improvements	U.S.
		Sullivan turbine rebuilds	U.S.
		T&D: Power Factor Correction Capacitors	U.S.
		Transformer Efficiency Improvements	U.S.
		Vansycle Ridge Wind Generation	U.S.
PPL CORPORATION	EIA-1605	Fossil Plant Efficiency	U.S.
		Harrisburg (AWWTP) - Electricity Purchases	U.S.
		Holtwood SES Closing	U.S.
		Keener Enterprises - Electricity Purchases	U.S.
		Keystone Landfill - Electricity Purchases	U.S.
		Lycoming Landfill - Electricity Purchases	U.S.
		Martins Creek Gas	U.S.
		Susquehanna SES Strategy 2000	U.S.
		Susquehanna Steam Electric Station Re-Rate	U.S.
		Taylor/Amity Landfill - Electricity Purchases	U.S.
		Transformer Savings	U.S.
Prince George Electric Cooperative	EIA-1605	Transmission and Dist. Efficiency Improvements	U.S.
Public Service Company of New Mexico	EIA-1605	Heat Rate Improvements at San Juan Generating Station	U.S.
		Palo Verde Generation Increase	U.S.
Public Service Enterprise Group	EIA-1605	Hydro Projects - United States	U.S.
Public Utility District No. 1 of Snohomish County	EIA-1605	Conservation Voltage Reduction	U.S.
		Transmission Networking and Reconductoring	U.S.
Rappahannock Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.
Reliant Energy - HL&P	EIA-1605	GT PRIME	U.S.
Sacramento Municipal Utility District	EIA-1605	PV Pioneer	U.S.
Salt River Project	EIA-1605EZ	Cooperative Photovoltaic Power Plant	U.S.
		Heat Rate Improvements	U.S.
		Palo Verde Nuclear Station Capacity Factor Increase	U.S.
		Palo Verde Nuclear Station Capacity Increases	U.S.
Santee Cooper	EIA-1605	Cross Unit 1 Turbine Retrofit	U.S.
		Cross Unit 2 Retrofit	U.S.
		Summer Nuclear Upgrade	U.S.
		Winyah Unit 1 Turbine Retrofit	U.S.
		Winyah Unit 2 Turbine Retrofit	U.S.
		Winyah Unit 3 Turbine Retrofit	U.S.
		Winyah Unit 4 Turbine Retrofit	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Seattle City Light	EIA-1605	4kV to 26kV Distribution System Conversion	U.S.
		Cedar Falls turbine runner replacement	U.S.
		Diablo Dam turbine runner replacement	U.S.
		Gorge Dam turbine runner replacement	U.S.
		Ross Dam turbine runner replacement	U.S.
		South Fork Tolt River hydroelectric project	U.S.
SeaWest Windpower, Inc.	EIA-1605	Altech Energy III	U.S.
		Foote Creek I, LLC	U.S.
		Foote Creek II, LLC	U.S.
		Foote Creek III, LLC	U.S.
		Foote Creek IV, LLC	U.S.
		San Gorgonio Westwinds II, LLC	U.S.
Seminole Electric Cooperative, Inc.	EIA-1605EZ	Heat Rate Improvement	U.S.
Seminole Electric Cooperative, Inc.	EIA-1605EZ	Transmission Conductor Optimization	U.S.
Shenandoah Valley Electric Cooperative	EIA-1605	System Line Conversions and Reconductoring	U.S.
Shrewsbury Electric Light Plant	EIA-1605EZ	High Efficiency Transformer	U.S.
South Carolina Electric & Gas Company	EIA-1605	Misc. Plant efficiency improvements	U.S.
		Summer Nuclear Upgrade	U.S.
		Wateree Station heat rate improvement	U.S.
		Williams Station improvements	U.S.
Southeastern Biomass Partners, LP	EIA-1605EZ	Biomass Waste to Energy	U.S.
Southern California Edison Co.	EIA-1605	Mohave Power Project Heat Rate Improvement Program	U.S.
		Palo Verde Availability Improvement	U.S.
		Renewable Energy Purchases - Biomass	U.S.
		Renewable Energy Purchases - Geothermal	U.S.
		Renewable Energy Purchases - Wind	U.S.
		Repowering of Hydro Generation Units	U.S.
		San Onofre Availability Improvements	U.S.
Southern Company	EIA-1605	Barry Unit 6 Combined Cycle	U.S.
		Biomass	U.S.
		Bulk Power Transmission Improvements	U.S.
		Farley Nuclear Plant Availability Improvements	U.S.
		Farley Nuclear Plant Uprate	U.S.
		Gas Capability at Watson 4 and 5	U.S.
		Gas Capability at Plant McDonough	U.S.
		Gas Capability at Plant Yates	U.S.
		Hatch Nuclear Plant Availability Improvements	U.S.
		Hatch Nuclear Plant Capacity Uprate	U.S.
		Heat Rate Improvement on Coal-Fired Capacity	U.S.
		New Combustion Turbines	U.S.
		Vogtle Electric Generating Plant (Nuclear) Capacity Uprate	U.S.
		Vogtle Electric Generating Plant Availability Improvements	U.S.
Southside Electric Cooperative	EIA-1605	System Line Conversion and Reconductoring	U.S.
Steuben Rural Electric Co-op	EIA-1605EZ	1994 Distribution Line Replacement	U.S.
		1995 Distribution Line Replacement	U.S.
		1996 Conductor Replacement	U.S.
		1997 Conductor Replacement	U.S.
Tennessee Valley Authority	EIA-1605	Heat Rate Improvements At TVA Coal Fired Generating Units	U.S.
		Hydro Unit Modernization	U.S.
		Return Browns Ferry Nuclear Units 2 and 3 to Service	U.S.
		Start Watts Bar Nuclear Unit 1	U.S.
		Transmission System Efficiency Improvements	U.S.
		Wood Waste Cofiring At Coal Fired Generating Plants	U.S.
Tucson Electric Power Company	EIA-1605	Landfill Gas (Fuel Switching) Project	U.S.
		Solar Electric - Photovoltaic	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
TXU	EIA-1605	Lignite and Western Coal Blending	U.S.
		Operation of Nuclear Generation Units	U.S.
		Power Plant Heat Rate Improvement Projects	U.S.
		Renewable Energy Development Projects	U.S.
U.S. Department of Energy- Office of Solar	EIA-1605	Photovoltaics on DOE facilities in the DC metropolitan area	U.S.
Unocal Corporation	EIA-1605	Salak/Wayang Windu	Foreign
Utah Municipal Power Agency	EIA-1605EZ	Geothermal Power	U.S.
		Low Loss Transformers	U.S.
		Wind Power	U.S.
Vermont Public Power Supply Authority	EIA-1605	Swanton Village Hydro Expansion	U.S.
		Transmission and Distribution System Efficiency Improvements	U.S.
Waverly Light & Power Company	EIA-1605	Distribution System Upgrade (Project 3)	U.S.
		Hydro (Project 2)	U.S.
		Low-Loss Transformers (Project 4)	U.S.
		Wind Turbine (Project 1)	U.S.
Western Resources, Inc.	EIA-1605	Distribution Capacitor Additions	U.S.
		GEV1 Feedwater Heater Upgrade	U.S.
		GEV2 Feedwater Controls Upgrade	U.S.
		GEV2 Feedwater Heater Upgrade	U.S.
		HEC4 Cooling Tower Upgrade	U.S.
		JEC1 Boiler Controls Upgrade	U.S.
		JEC1 On-Line Performance Monitoring	U.S.
		JEC1 Precipitator Intermittent Energization	U.S.
		JEC1 Seal Steam Recovery	U.S.
		JEC1 Superheater Replacement	U.S.
		JEC1 Turbine Upgrade	U.S.
		JEC2 Boiler Controls Upgrade	U.S.
		JEC2 On-Line Performance Monitoring	U.S.
		JEC2 Precipitator Intermittent Energization	U.S.
		JEC2 Seal Steam Recovery	U.S.
		JEC2 Superheater Replacement	U.S.
		JEC2 Turbine Upgrade	U.S.
		JEC3 Boiler Controls Upgrade	U.S.
		JEC3 Boiler/Turbine Controls Upgrade	U.S.
		JEC3 On-Line Performance Monitoring	U.S.
		JEC3 Precipitator Intermittent Energization	U.S.
		JEC3 Seal Steam Recovery	U.S.
		JEC3 Superheater Replacement	U.S.
		JEC3 Turbine Upgrade	U.S.
		LAC2 Turbine Upgrade	U.S.
		LEC4 Controls Upgrade	U.S.
		LEC5 Circ Water Crosstie	U.S.
		LEC5 Controls Upgrade	U.S.
		LEC5 Replace Flyash Evaporator	U.S.
		LEC5 Sliding Pressure Operation	U.S.
		LEC5 Turbine Seals	U.S.
		LEC5 Upgrades	U.S.
		Photovoltaic Installations	U.S.
		TEC7 On-Line Performance Monitoring	U.S.
		TEC7 Precipitator Intermittent Energization	U.S.
		TEC8 Condenser Upgrade	U.S.
		TEC8 Precipitator Intermittent Energization	U.S.
		Transformer Replacements	U.S.
		Westar Wind Turbines	U.S.
		Wolf Creek Increased Capacity Rating	U.S.
		Wolf Creek Turbine Modifications	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Wisconsin Electric Power Co.	EIA-1605	Energy for Tomorrow(TM) Renewable Energy Program	U.S.
		Fossil plant heat rate improvements	U.S.
		Hydro plant improvements and additions	U.S.
		Increased Nuclear Capacity at Point Beach Nuclear Plant	U.S.
		Transmission & distribution system loss reductions	U.S.
Wisconsin Public Power Inc.	EIA-1605EZ	Boswell Heat Rate Reduction	U.S.
		Dispatch Change - Menasha	U.S.
		Kaukauna CT I&C Upgrade	U.S.
		Renewable Energy Projects - Photovoltaic	U.S.
Xcel Energy	EIA-1605	Chippewa Falls Hydro expansion--NSP-WI	U.S.
		Foot Creek Wyoming (Wind Project)--PSCo	U.S.
		Lake Benton Power Partners (Wind Power)--NSP	U.S.
		Lake Benton Power Partners II (Wind Power)--NSP	U.S.
		Lakota Ridge (Wind Power)-- NSP	U.S.
		Landfill Gas Purchase--NSP	U.S.
		New Mexico (Wind Power)--SPS	U.S.
		Nuclear Capacity Increase - Rerated--NMC	U.S.
		Nuclear capacity increase 2--NMC	U.S.
		Nuclear Capacity Increase 3--NMC	U.S.
		Nuclear capacity increase--NMC	U.S.
		Nuclear capacity restoration--NMC	U.S.
		Ponnequin (Wind Power)--PSCo	U.S.
		Shaokatan Hills (Wind Power)--NSP	U.S.
		Sioux Falls area transmission upgrades--NSP	U.S.
		Transmission upgrade 2--NSP	U.S.
		Transmission upgrade--NSP	U.S.
		Upgrade for hydro capacity--NSP	U.S.
		Wheaton Plant conversion--NSP-WI	U.S.
		Wind Power Partners 1993--NSP	U.S.
		Wind power--NSP	U.S.
		Woodstock Windfarms (Wind Power)--NSP	U.S.
Zeeland Board of Public Works	EIA-1605EZ	General Tranmission & Distribution	U.S.
		Other Transmission and Distribution Improvements	U.S.
Cogeneration			
BP	EIA-1605	Thermal Process Efficiency Improvements	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	Fuel Switching at Bynov Plant in Decin, Czech Republic	Foreign
Conectiv Atlantic Generation (CAG)	EIA-1605	AGI - Pedricktown Cogeneration Limited Partnership	U.S.
		AGI - Vineland Cogeneration Facility	U.S.
GPU, Inc.	EIA-1605	JCP&L Fuel Cell-Crawford Hill	U.S.
NiSource/NIPSCO	EIA-1605	Fuel Switching at Bynov Plant in Decin, Czech Republic	Foreign
		Inland Steel -Northlake Energy	U.S.
		Ispat/Inland - Coke Energy	U.S.
		National Steel- Portside Energy	U.S.
		US Steel - Lakeside Energy	U.S.
NRG Energy Inc	EIA-1605	Waste steam extraction for other industrial processes	U.S.
PECO Energy Company	EIA-1605	Grays Ferry Cogeneration and Waste Heat Recovery	U.S.
PEI Power Corp	EIA-1605	PEI Power	U.S.
Reliant Energy - HL&P	EIA-1605	San Jacinto Steam Electric Generating Station	U.S.
Rolls-Royce Corporation	EIA-1605	Co-Gen	U.S.
Southern Company	EIA-1605	Chevron Cogenerating Plant - Unit 5	U.S.
		Washington County Cogeneration Plant	U.S.
Wisconsin Electric Power Co.	EIA-1605	Fuel switching at Bynov Plant in Decin, Czech Republic	Foreign

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Energy End Use			
A&N Electric Cooperative	EIA-1605	Demand-side Management Load Control Program	U.S.
Advanced Micro Devices	EIA-1605EZ	Centralization of Boilers	U.S.
		HEPA Filter Air Flow Reduction	U.S.
		Humidification Control Relocation	U.S.
		Humidification Control Relocation	U.S.
		Utility Cross-Connect of Chillers, Compressors, and Driers	U.S.
		Variable Frequency Drive Installation for Eqpt. Exhaust	U.S.
Allegheny Energy, Inc.	EIA-1605	Adjustable Speed Drives-Plastic Injection Molding Machines	U.S.
		Demand-Side Management Programs	U.S.
		Green Lights Utility Ally Program	U.S.
Allergan, Inc.	EIA-1605	Air Compressor System Upgrade	U.S.
		Allergan Brazil Building Management System Installation	Foreign
		Allergan Facility Divestiture	U.S.
		Allergan Italy Facility Closure	Foreign
		Allergan LOK Brazil Operation Consolidation	Foreign
		Allergan Medical Plastics Energy Managment System Upgrade	U.S.
		AMO Facility Closure	U.S.
		Chilled Water Decouple Loop	U.S.
		Chiller Replacement	U.S.
		Compressed Air Leak Repair	Foreign
		Compressor Replacement	U.S.
		Curtail Weekend Energy Usage	Foreign
		Direct Expansion Cooler Unit Redesign	U.S.
		Elimination of Catalytic Thermal Oxidizer	U.S.
		Floor Fan Elimination	U.S.
		Insulate Process Lines	Foreign
		Lighting Retrofits and Upgrades	U.S.
		Reduction in Operating Time for Blowmolding Equipment	Foreign
		Replace Mercury Vapor Lamps with Fluorescent Lamps	Foreign
Alliant Energy	EIA-1605	Energy End Use - Electric IES	U.S.
		Energy End Use - Electric IPC	U.S.
		Energy End Use - Gas IES	U.S.
		Energy End Use - Gas IPC	U.S.
		Energy end use projects-Electric	U.S.
		Energy end use-Gas	U.S.
		Urban Forestry IES	U.S.
		Urban Forestry IPC	U.S.
		WP&L Green Lights Projects	U.S.
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Demand Side Management Projects	U.S.
		EnviroTech Fund - Foreign	Foreign
		EnviroTech Fund - US	U.S.
		Meramec Power Plant Lighting Upgrade	U.S.
		Street Light Conversion	U.S.
American Electric Power, Inc.	EIA-1605	Commercial/Industrial DSM Programs: AEP-East	U.S.
		Demand Side Management Activities: AEP-West	U.S.
		Green Lights	U.S.
		Residential Demand Side Management Programs: AEP-East	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
American Municipal Power - Ohio	EIA-1605	City of Bowling Green Lighting Improvement	U.S.
		City of Niles: Lighting Improvement	U.S.
		City of Shelby: Lighting Improvement	U.S.
		City of St. Clairsville: Lighting Improvement	U.S.
		City of Wadsworth: Lighting Improvement	U.S.
		Ohio City: Lighting Improvement	U.S.
		Village of Arcadia Lighting Upgrade	U.S.
		Village of Custar: Lighting Improvement	U.S.
		Village of Eldorado: Lighting Improvement	U.S.
		Village of Lucas: Lighting Improvement	U.S.
		Village of New Knoxville: Lighting Improvement	U.S.
		Water Furnace	U.S.
Anoka Municipal Utility	EIA-1605EZ	Central A/C Replacement	U.S.
		Demand Management	U.S.
Arizona Electric Power Cooperative, Inc.	EIA-1605EZ	Lighting & Exit Sign Replacemnt	U.S.
Arizona Portland Cement Co.	EIA-1605	Bulk Load Bin Filling	U.S.
		CM7 High Efficiency Separator	U.S.
		D3 Finish Grind System Improvements	U.S.
		Lighting Program	U.S.
		New Vertical Roller Mill	U.S.
		Optimize AC Raw Mill Systems	U.S.
		Optimize Compressed Air System	U.S.
		PGNA Analyzer	U.S.
		Rimod 3000	U.S.
		Upgrade the D2 Raw Mill System	U.S.
Arthur Rypinski & Jacquelyn Porth	EIA-1605	Compact Flourescent Lightbulbs	U.S.
		High Efficiency Central Air Conditioning System	U.S.
		High Efficiency Water Heater	U.S.
		Super Efficient Refrigerator	U.S.
Atlas Paper Mills	EIA-1605	Increase dryers efficiency	U.S.
		Install an automatic combustion control for 2 boilers	U.S.
		Lighting retrofit	U.S.
		Replace motors with efficient models	U.S.
Austin Energy	EIA-1605EZ	Demand Side Management Programs	U.S.
Avista Utilities	EIA-1605	Customer Energy Efficiency	U.S.
Baltimore Gas & Electric Company	EIA-1605	Brandon Shores Station Auxiliary-Load Reductions	U.S.
		Demand Side Management Programs	U.S.
		Energy Star Buildings/Green Lights Program Participation	U.S.
BARC Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.
BP	EIA-1605	Crude production and exploration process improvements	U.S.
		Petroleum Refining and Chemicals process modifications	U.S.
Calaveras Cement Company	EIA-1605	Project 1. Plant Modernization	U.S.
California Portland Cement Co. - Colton Plant	EIA-1605	Energy Conservation in Office, Lab, Garage and Shop Areas	U.S.
		Finish Mill System Optimization	U.S.
		Install New Gravity Blend Homogenizing Silo	U.S.
		Install New Raw Material Transport System	U.S.
		Kiln Systems Optimization	U.S.
		Optimize High Pressure Air System	U.S.
		Raw Grinding System Improvements	U.S.
		Reduce Plant Water Consumption	U.S.
California Portland Cement Co. - Mojave Plant	EIA-1605	Finish Grinding Process Addition	U.S.
		New D3-1/FM6 Finish Mill System	U.S.
		Optimize the D3-1 Finish Mill System	U.S.
		Plant High Pressure Air System Improvements	U.S.
		Pyro System Optimization	U.S.
		Raw Mill Energy Efficiency Improvements	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Cedar Falls Utilities	EIA-1605	Cooling Effect of Trees	U.S.
		Good Cents Improved Home	U.S.
		Good Cents New Home	U.S.
		Home Energy Survey	U.S.
		Small Commercial High-Efficiency Lighting	U.S.
		Streetlight Conversion	U.S.
		Water Heater Retrofits	U.S.
Central Hudson Gas & Electric Corporation	EIA-1605	Demand-Side Management	U.S.
Cinergy Corp.	EIA-1605	Commercial Audit/Incentive Program	U.S.
		Commercial Direct Lighting	U.S.
		Commercial/Industrial Adjustable Speed Drive Plan	U.S.
		Commercial/Industrial High Efficiency Motors Plan	U.S.
		Commercial/Industrial Lighting Rebate Program	U.S.
		Commercial/Industrial Peak Reduction Program	U.S.
		Green Lights Program	U.S.
		Industrial Efficiency Improvement & Energy Awareness Program	U.S.
		Planergy	U.S.
		Residential Energy Efficient Lighting Program	U.S.
		Residential Seal-Up & Low-Income Efficiency Program	U.S.
		Residential Smart $aver & Heat Pump Savings Programs	U.S.
		Residential Wrap-Up Program	U.S.
		Thermal Energy (Cool) Storage Program	U.S.
City of Edmond, Oklahoma, Electric Department	EIA-1605EZ	High Efficiency Heat Pumps	U.S.
City of Palo Alto	EIA-1605EZ	DSM - Industrial Comprehensive Audit Program '99	U.S.
		DSM - Residential Appliances '99	U.S.
		DSM-Commercial AC, motor	U.S.
		DSM-Commercial Lighting	U.S.
		DSM-Refrigerator Replacement	U.S.
		DSM-Residential CFL	U.S.
		Residential Appliances, CFL's & A/C "Efficiency Advantage"	U.S.
		Utility Street Light conversion	U.S.
CLE Resources	EIA-1605	Active Power	U.S.
		Electronic Lighting (OK Industries)	U.S.
		Industrial Devices Corporation (IDC)	U.S.
		Lightware	U.S.
		Revolve Technologies - Magnetic Bearings	U.S.
CMS Energy	EIA-1605	CMS VIRON	U.S.
Columbia Falls Aluminum Company, LLC	EIA-1605	1996 Lighting Replacement	U.S.
		2000 Lighting Replacement	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	ComEd Thermal Cooling Plant	U.S.
		Energy Cooperative & Demand Side Management Activities	U.S.
Conectiv Delmarva Generation	EIA-1605	Demand Side Management	U.S.
		DP&L Facility Energy Saving	U.S.
Delta Electric Power Association	EIA-1605EZ	MV conversion to HPS	U.S.
		Off Peak Pumping and Aeration	U.S.
DTE Energy/ Detroit Edison	EIA-1605	Energy Partnerships	U.S.
		Geothermal Projects	U.S.
Entergy Services, Inc.	EIA-1605	Entergy Integrated Solutions, Inc. (Entergy SASI Lighting)	U.S.
		Texas Eastern Gas Compressor Replacement	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
FirstEnergy Corporation	EIA-1605	Audit/Infiltration Single and Multi-Family	U.S.
		Efficient Lighting (Industrial and Commercial)	U.S.
		Efficient Lighting (Residential)	U.S.
		Efficient Motors	U.S.
		Energy Efficient Geothermal System	U.S.
		Energy Star	U.S.
		Food Service Conservation	U.S.
		Good Cents New Home Program	U.S.
		Heat Pump Maintenance Check	U.S.
		High Efficiency Heat Pump Rebates	U.S.
		Hot Water Conservation	U.S.
		Refrigerator Recycling Program	U.S.
		Thermal Energy Storage - Cooling	U.S.
		Water Heater Efficiency Improvements	U.S.
		Water Heating - Conservation	U.S.
Florida Transport 82	EIA-1605	Collect condensate to preheat boiler	U.S.
		Install a small back up air compressor	U.S.
		Lighting retrofit	U.S.
		Operate on a continuous cycle	U.S.
		Preventive maintenance for boiler	U.S.
		Upgrade shaft for main cooker to double efficiency	U.S.
General Motors Corporation	EIA-1605	1991-2000 GM Annual Energy Competition & Projects	U.S.
		1991-2000 Powerhouse Conversions	U.S.
		1993 - 1997 Mich. Demand Side Mgt and Energy Partner Program	U.S.
Golden Valley Electric Association, Inc	EIA-1605EZ	Energy Sense DSM Program	U.S.
GPU, Inc.	EIA-1605	Building Energy Consumption Reduction Program	U.S.
		GPU Service Lighting & Building Energy Efficiency Project	U.S.
		Information Services - Green Computers	U.S.
		JCP & L Green Lights Program	U.S.
		JCP&L DSM, Efficiency & Electrotechnology Program	U.S.
		Met-Ed Lighting & Building Energy Consumption Reduction Prog	U.S.
		Met-Ed/Penelec DSM, Efficiency & Electrotechnology Program	U.S.
Hawaiian Electric Company, Inc.	EIA-1605	Commercial & Industrial Custom Rebate Program	U.S.
		Commercial & Industrial Energy Efficiency Program	U.S.
		Commercial & Industrial New Construction Program	U.S.
		Residential Eff. Water Heating Program (Existing Customers)	U.S.
		Residential Efficient Water Heating (New Construction)	U.S.
		Showerhead Distribution	U.S.
Johnson & Johnson	EIA-1605	Building Shell	U.S.
		Equipment & Appliances	U.S.
		Fuel Switching	U.S.
		HVAC	U.S.
		Installation of Energy Efficient Systems	U.S.
		Installation of Timer Controls and Shutdowns	U.S.
		Lighting & Lighting Controls	U.S.
		Load Control	U.S.
		Motor & Motor Drives	U.S.
		Process Improvements	U.S.
Lehigh Portland Cement Company	EIA-1605	Project 1: Plant Shutdown	U.S.
		Project 2: Waste Tire Burning	U.S.
		Project 3: Waste Tire Burning	U.S.
		Project 4: Plant Modernization	U.S.
		Project 5: Lighting retrofit	U.S.
		Project 6: Motor retrofit	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Los Angeles Department of Water and Power	EIA-1605	Chiller Replacement / Efficiency Program	U.S.
		Cool Schools Urban Forestry - Energy Efficiency Effects	U.S.
		Energy Star Office Equipment	U.S.
		High Efficiency Clothes Washers	U.S.
		HVAC Replacement Program	U.S.
		HVAC Tune-up	U.S.
		JFB (aka "GOB") Lighting Retrofit	U.S.
		Lighting Program - Small Commercial	U.S.
		NBRS ("Neighborhood Bill Reduction Service") Program	U.S.
		Refrigeration Tune-Up Program	U.S.
		Refrigerator Replacement Program	U.S.
		Water Conservation Program	U.S.
Lower Colorado River Authority	EIA-1605	Residential & Commercial DSM Program	U.S.
		LRE - #1	U.S.
		ME - #1	U.S.
		ME - #2	U.S.
		ME - #3	U.S.
		ME - #4	U.S.
		ME - #5	U.S.
		ME - #6	U.S.
		ME - #7	U.S.
		ME - #8	U.S.
		OFS - #1	U.S.
		OFS - #2	U.S.
		OFS - #3	U.S.
		OFS - #4	U.S.
		ONG - #1	U.S.
		ONG - #2	U.S.
		WNG - #1	U.S.
		WNG - #2	U.S.
		WNG - #3	U.S.
Majestic Metals, Inc.	EIA-1605EZ	Lighting Replacement	U.S.
Mead Johnson Nutls/Bristol-Meyers Squibb	EIA-1605	Coal-Fired Boilers Replaced with Natl Gas/Oil Fired Boilers	U.S.
		Compressed Air System Renovated & Leak Survey/Repair	U.S.
Minnesota Power	EIA-1605	Demand Side Mgmt., Conservation and Efficiency Improvements	U.S.
		Expanded Use of Renewable Biomass (wood waste)	U.S.
Moorhead Public Service	EIA-1605EZ	Custom Rebate for Moorhead High School	U.S.
		Custom Rebate for Roffe Container	U.S.
		Insulation Improvement	U.S.
		Lighting Retrofit Program	U.S.
National Grid USA	EIA-1605	Demand-Side Management Programs	U.S.
Nebraska Public Power District	EIA-1605EZ	Electric Heat Pump Program, 1998-2000	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Energy Efficiency and Conservation Programs (DSM)	U.S.
Northern Neck Electric Cooperative	EIA-1605	Demand-Side Management Programs	U.S.
Northern Virginia Electric Cooperative	EIA-1605	Demand-side Management Load Control Programs	U.S.
Old Dominion Electric Cooperative	EIA-1605	Green Lights	U.S.
Omaha Public Power District	EIA-1605EZ	Commercial & Industrial Audits	U.S.
		Heat Pump Program (RECP)	U.S.
		Right Lights	U.S.
		Street Lighting Replacement	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
PacifiCorp	EIA-1605	Commercial Competitive Bid - EUA/Onsite	U.S.
		Competitive Bid - CES/Way	U.S.
		Energy FinAnswer	U.S.
		Energy FinAnswer Prescriptive	U.S.
		Energy FinAnswer Retrofit	U.S.
		H_PRO: High Efficiency Heat Pumps	U.S.
		Hassle-Free Program	U.S.
		Home Comfort	U.S.
		Industrial Energy FinAnswer	U.S.
		Irrigation FinAnswer Program	U.S.
		Low Income Weatherization and Conservation Programs	U.S.
		Major Accounts Program	U.S.
		Manufactured Housing Acquisition Program (MAP)	U.S.
		Northwest Energy Efficiency Alliance (NEEA)	U.S.
		PacifiCorp Facility DSM	U.S.
		Residential Competitive Bid - ECONS	U.S.
		Residential Weatherization Programs	U.S.
		Salt Lake City Urban Forestry Project	U.S.
		Showerhead Program	U.S.
		Small Commercial Retrofit	U.S.
		Super Efficiency Refrigerator Program (SERP)	U.S.
		Super Good Cents	U.S.
		Utah Water Smart Kits (Schedule 5)	U.S.
		Water Heater / Solar	U.S.
PG&E Corporation	EIA-1605	Electrical Energy Conservation Savings	U.S.
		Natural Gas Energy Conservation Savings	U.S.
Pharmacia & Upjohn Caribe, Inc.	EIA-1605EZ	Computers and Computer-Related Equipment' Replacement	U.S.
		Lighting Replacement	U.S.
		Replacement of Piping Insulation	U.S.
Platte River Power Authority & 4 owner cities	EIA-1605	Estes Park Streetlight Conversions	U.S.
		Fort Collins Building Codes	U.S.
		Fort Collins City Lighting Upgrades	U.S.
		Fort Collins Design Assistance	U.S.
		Fort Collins LED Traffic Lights	U.S.
		Fort Collins Zero Interest Loan for Conservation Help	U.S.
		Longmont Efficient Lighting Projects	U.S.
		Longmont LED Traffic Lights	U.S.
		Loveland Area Lighting Project	U.S.
		Loveland Thrifty Light Project	U.S.
Portland General Electric Co.	EIA-1605	Demand-Side Management Projects	U.S.
		Energy Management Systems	U.S.
		Gas Lawnmower Turn In Rebate	U.S.
		Green Lights Programs	U.S.
		Heat Pump Rebate	U.S.
		Photoelectric Streetlight Controls	U.S.
PPL CORPORATION	EIA-1605	Demand Side Management Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Pratt & Whitney North Berwick	EIA-1605	Conversion of the outside lighting fixtures in the IWTP	U.S.
		Elimination of the Low Melt Alloy Process	U.S.
		Elimination of the ventilation in the battery charging area	U.S.
		Energy Management System (LIghting Initiatives)	U.S.
		Industrial Waste Treatment facility lighting retrofit	U.S.
		Installation of occupancy sensors at the V35 Mezzanine	U.S.
		Installation of GE control panel to control lighitng	U.S.
		Installation of occupancy sensors in the RCM area	U.S.
		Lighting retrofit at the 708 Crib	U.S.
		Lighting retrofit in cafeterias, main conference room.....	U.S.
		Lighting retrofit in medical and two restrooms	U.S.
		Lighting retrofit in the Chemical Storage Building	U.S.
		Lighting retrofit in the janitors` closets	U.S.
		Lighting retrofit in the New Fabrication Shop	U.S.
		Lighting retrofit in the old and new cafeteria serving lines	U.S.
		Lighting retrofit in the Old Fabrication Shop	U.S.
		Lighting retrofit in the pumping station for the #6 fuel oil	U.S.
		Lighting Retrofit in the restrooms at Department 8200	U.S.
		Lighting retrofit of the lighting in the wet-well areas	U.S.
		Lighting retrofit on exit lights	U.S.
		Lighting retrofit on pull station marker lights	U.S.
		Lighting retrofit on the 3rd floor west end	U.S.
		Lighting retrofit on the front circle flagpole lights	U.S.
		Lighting retrofit on the old carpentry shop	U.S.
		Lighting retrofit on the outside lights adjacent to IWTP	U.S.
		Lighting retrofit on the red pull station lamps	U.S.
		Northeast Corner Plating Line Renovation	U.S.
		Occupancy sensor installation in the building serv. complex	U.S.
		Occupancy Sensors installed in all general office locations	U.S.
		Occupancy sensors installed in the bathrooms in site towers	U.S.
		Purchase of more energy efficient electric water heaters	U.S.
		Purchase of occupancy sensors for the offices in site towers	U.S.
		Reduced time on exhaust fans	U.S.
		Reduction of the direct fired firm gas make-up air units	U.S.
		Removal of 2 Varidyne motors, replaced by 2 speed drives	U.S.
		Removal of the Hayes Hump Furnace	U.S.
		Replacement of teledyne unit with an air booster system	U.S.
		Replacing windows for energy conservation purposes	U.S.
		Upgrade of ventilations systems in the east end	U.S.
		Upgrading of coating booths and dust collectors	U.S.
		Upgrading process water systems serving compressed air units	U.S.
Public Service Enterprise Group	EIA-1605	Demand Side Management	U.S.
Public Utility District No. 1 of Snohomish County	EIA-1605	Demand Side Management	U.S.
Quad/Graphics, Inc.	EIA-1605	Energy efficient installations	U.S.
Rappahannock Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.
Reliant Energy - HL&P	EIA-1605	Demand Side Management	U.S.
Rolls-Royce Corporation	EIA-1605	Boiler Conversion from Coal to Landfill/Natural Gas	U.S.
		Peak Saving Project	U.S.
Sacramento Municipal Utility District	EIA-1605	Energy Efficiency Programs	U.S.
Salt River Project	EIA-1605EZ	AC Photovoltaic Residential System	U.S.
		Home with PV System for Demonstration (Chandler House)	U.S.
		Replace Gasoline Lawnmowers with Electric Lawnmowers	U.S.
		Scottsdale CC PV System	U.S.
		South Mountain CC Solar	U.S.
		SunDish solar dish/Stirling system (operation on sun)	U.S.
Santee Cooper	EIA-1605	Demand Side Management Programs	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Seattle City Light	EIA-1605	Built Smart/Long-Term Super Good Cents Program	U.S.
		Energy $avings Plan	U.S.
		Energy Efficient Water Heater Rebate Program	U.S.
		Energy Smart Design	U.S.
		Home Water Savers Program	U.S.
		Low-Income Electric Program	U.S.
		Multifamily Common Area Lighting Program	U.S.
		Multifamily Conservation Program: Low-Income	U.S.
		Multifamily Conservation Program: Standard-Income	U.S.
		Neighborhood Power Weatherization/Warm Home Program	U.S.
		Retail-Wise Lighting and Appliances	U.S.
		Smart Business Rebates	U.S.
Seminole Electric Cooperative, Inc.	EIA-1605EZ	Lighting Replacement	U.S.
Shenandoah Valley Electric Cooperative	EIA-1605	Demand-Side Management Load Control Programs	U.S.
Sherry Manufacturing	EIA-1605	Add insulation to the HVAC duct system	U.S.
		Improve air compressors efficiency	U.S.
		Upgrade lighting to more efficient tubes and ballasts	U.S.
Shrewsbury Electric Light Plant	EIA-1605EZ	Lighting Replacement	U.S.
South Carolina Electric & Gas Company	EIA-1605	Demand Side Management Technologies	U.S.
Southern California Edison Co.	EIA-1605	Demand Side Management	U.S.
		ENVEST SCE	U.S.
		Internal Combustion Engine Replacement Program	U.S.
Southern Company	EIA-1605	Demand-Side Management	U.S.
Steuben Rural Electric Co-op	EIA-1605EZ	1994 Water Heater Control Program	U.S.
		1995 Water Heater Control Program	U.S.
		1996 Farm Energy Efficiency	U.S.
		1996 Water Heater Control Program	U.S.
		1997 Farm Energy Efficiency	U.S.
		1997 Water Heater Control Program	U.S.
Tennessee Valley Authority	EIA-1605	Comfort Plus Homes	U.S.
		Outdoor Lighting Replacements By Memphis Light, Gas And Wate	U.S.
		Residential Marketing Program	U.S.
Tucson Electric Power Company	EIA-1605	Commercial DSM Programs	U.S.
		Residential DSM Programs	U.S.
TXU	EIA-1605	Demand-Side Management Program	U.S.
Utah Municipal Power Agency	EIA-1605EZ	In House Conservation	U.S.
		Light Replacement Program	U.S.
		Residential Audits	U.S.
Vermont Public Power Supply Authority	EIA-1605	Act 250 New Construction Program	U.S.
		Equipment Replacement and Remodeling Program	U.S.
		Farm Efficiency Program	U.S.
		Large Commercial and Industrial Audit Program	U.S.
		Residential Appliance Disposal Program	U.S.
		Residential Low Income Weatherization Piggyback Program	U.S.
		Residential Mail Order Lighting Program	U.S.
		Residential Top Ten	U.S.
		Residential Water Heating and Lighting Efficiency Program	U.S.
		Small Commercial Retrofit Program	U.S.
		Street and Area Lighting Efficiency Program	U.S.
Waverly Light & Power Company	EIA-1605	Energy End-Use Programs (Project 3.1)	U.S.
		Energy Savings Due to Trees Forever (Project 3.3)	U.S.
		High-Pressure Sodium Lights (Project 3.2)	U.S.
Western Resources, Inc.	EIA-1605	Electrotechnologies Marketing	U.S.
		Residential Conservation Use Rate DSM Program	U.S.
Wisconsin Electric Power Co.	EIA-1605	Demand-side management energy efficiency programs	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Wisconsin Public Power Inc.	EIA-1605EZ	Energy Star Appliances - Dishwashers	U.S.
		Energy Star Appliances - Front-loading Clothes Washers	U.S.
		Energy Star Appliances - Refrigerators	U.S.
		Energy Star Lighting - Compact Fluorescent Lamp Fixtures	U.S.
		Energy Star Lighting - Compact Fluorescent Lamp Torchieres	U.S.
		Energy Star Lighting - Compact Fluorescent Lamps	U.S.
		Residential Appliances	U.S.
		Street Lighting	U.S.
Xcel Energy	EIA-1605	Demand side management (electric)--NSP	U.S.
		Demand Side Management (electric)--PSCo	U.S.
		Green Lights	U.S.
Transportation			
Allegheny Energy, Inc.	EIA-1605	Carryall Vehicle Program	U.S.
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Carpooling	U.S.
		Purchase of Light Weight Rail Cars	U.S.
Arizona Electric Power Cooperative, Inc.	EIA-1605EZ	Carpool	U.S.
Arizona Portland Cement Co.	EIA-1605	100 Ton Haul Trucks	U.S.
Arthur Rypinski & Jacquelyn Porth	EIA-1605	Mass Transit Commuting	U.S.
Avista Utilities	EIA-1605	Commute Trip Reduction	U.S.
Baltimore Gas & Electric Company	EIA-1605	Alternatively Fueled Vehicles	U.S.
		Employee Commute Options	U.S.
Central Hudson Gas & Electric Corporation	EIA-1605	Natural Gas Vehicles	U.S.
Cinergy Corp.	EIA-1605	Fleet Alternative Fuels	U.S.
City of Palo Alto	EIA-1605EZ	City employee carpooling	U.S.
		City employee mass transit	U.S.
		City fleet conversion to CNG	U.S.
		City fleet conversion to EV	U.S.
CLE Resources	EIA-1605	Cycloid	U.S.
		McHugh Software	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	Alternative Fuel Vehicles	U.S.
		Aluminum Railroad Cars	U.S.
Conectiv Atlantic Generation (CAG)	EIA-1605	Employee Telecommuting	U.S.
		Employee Van Pooling	U.S.
Conectiv Delmarva Generation	EIA-1605	CNG Vehicles	U.S.
DTE Energy/ Detroit Edison	EIA-1605	Electric Vehicle Demonstration Project	U.S.
Entergy Services, Inc.	EIA-1605	Natural Gas Vehicle Program	U.S.
GPU, Inc.	EIA-1605	Electric Vehicles and Employee Trip Reduction Program	U.S.
		Video - Conferencing	U.S.
Los Angeles Department of Water and Power	EIA-1605	DWP Rideshare Program	U.S.
		Electric Vehicles	U.S.
Majestic Metals, Inc.	EIA-1605EZ	Carpooling	U.S.
		Mass Transit	U.S.
National Grid USA	EIA-1605	Carpool	U.S.
		Electric Vehicles	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Alternative Fuel Vehicles	U.S.
NiSource/NIPSCO	EIA-1605	Electric Vehicles	U.S.
		Employee Commute Options	U.S.
		Natural Gas Vehicles	U.S.
PECO Energy Company	EIA-1605	Operation of CNG Vehicles	U.S.
PG&E Corporation	EIA-1605	Electric Vehicles	U.S.
		Natural Gas Vehicles	U.S.
Platte River Power Authority & 4 owner cities	EIA-1605	Fort Collins Transportation Demand Management	U.S.
Portland General Electric Co.	EIA-1605	Electric Fleet Vehicles	U.S.
		Natural Gas Fleet Vehicles	U.S.
PPL CORPORATION	EIA-1605	Electric Vehicles	U.S.
Public Service Company of New Mexico	EIA-1605	CNG Vehicles	U.S.
Public Service Enterprise Group	EIA-1605	Employee Trip Reduction	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Public Utility District No. 1 of Snohomish County	EIA-1605	Battery and Solar Powered Boat Races	U.S.
		Bicycles for Meter Readers	U.S.
		Commute Reduction Program	U.S.
		Electric Car Race	U.S.
Quad/Graphics, Inc.	EIA-1605	12 hour work shift	U.S.
		Duplainville return load project	U.S.
		New mass transit routes	U.S.
Sacramento Municipal Utility District	EIA-1605	Employee Commute Program	U.S.
		Meter Reading - Bicycles	U.S.
		Ride Electric	U.S.
Salt River Project	EIA-1605EZ	Alternate Work Week Schedule	U.S.
		Bike/Bus/Walk	U.S.
		Carpooling/Vapooling	U.S.
		Telecommuting	U.S.
Southern California Edison Co.	EIA-1605	Electric Vehicle Program	U.S.
Southern Company	EIA-1605	Transportation Research	U.S.
Tennessee Valley Authority	EIA-1605	Alternate Fuel Vehicles	U.S.
		Transportation Fleet Fuel Efficiency Improvement	U.S.
Tucson Electric Power Company	EIA-1605	Travel Reduction Program	U.S.
TXU	EIA-1605	Alternative Fuel Vehicle Program	U.S.
		Employee Bus Pass Program	U.S.
		Employee Carpool Program	U.S.
		Vehicle Use Reductions	U.S.
Waverly Light & Power Company	EIA-1605	Electric Vehicle (Project 4.1)	U.S.
Western Resources, Inc.	EIA-1605	Conversion of Company Fleet Vehicles to Alternative Fuels	U.S.
		Purchase of Aluminum Rail Cars	U.S.
Wisconsin Electric Power Co.	EIA-1605	Vehicle conversion to dual fuel capability	U.S.
Waste Treatment and Disposal - Methane			
8309 Tujunga Avenue Corporation	EIA-1605	Austin Road Landfill	U.S.
		Gude Southlawn Sanitary Landfill	U.S.
		Penrose Sanitary Landfill	U.S.
		Sheldon Arleta Landfill	U.S.
		Toyon Canyon Sanitary Landfill	U.S.
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Milam Landfill Methane Recovery	U.S.
Asheville Landfill Gas, LLC	EIA-1605	Buncombe County Landfill	U.S.
Burlington County Board of Chosen Freeholders	EIA-1605	Landfill Gas Flaring	U.S.
Catawba Landfill Gas, LLC	EIA-1605	Blackburn Landfill	U.S.
Cinergy Corp.	EIA-1605	Danville, IN Electric Generation	U.S.
		Rumpke Landfill Gas Recovery	U.S.
CommonWealth Bethlehem Energy, LLC	EIA-1605	North Country Landfill Gas Utilization Facility	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	Methane Gas Landfill Recovery	U.S.
Conectiv Delmarva Generation	EIA-1605	Edge Moor Landfill Gas Use	U.S.
County Sanitation Districts of Los Angeles County	EIA-1605	Recovery of Methane at Landfills	U.S.
		Recovery of Methane from Wastewater Treatment	U.S.
Delaware Solid Waste Authority	EIA-1605	Central Solid Waste Management Center (CSWMC)	U.S.
		Cherry Island Landfill (CIL)	U.S.
		Pigeon Point Landfill (PPLF)	U.S.
		Southern Solid Waste Management Center (SSWMC)	U.S.
Deptford Electric Company, LLC	EIA-1605	Kinsley Landfill Gas Utilization Project	U.S.
DTE Energy/ Detroit Edison	EIA-1605	Landfill Energy Purchases, non-DTE Projects	U.S.
		Landfill Gas Recovery Projects	U.S.
		LFG Recovery & Energy Gen - DTE Proj outside Service Area	U.S.
		LFG Recovery & Energy Gen - DTE Projects in Service Area	U.S.
Duke Energy Corporation	EIA-1605	White Street Landfill Gas Recovery Project	U.S.
FPL Group	EIA-1605	Aroostook Valley Electric Company	U.S.
FPL Group	EIA-1605	Montenay Power Plant	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Generating Resource Recovery Partners, LP	EIA-1605	Otay Power Station	U.S.
		Oxnard Power Station	U.S.
		Salinas Power Station	U.S.
		Santa Clara Power Station	U.S.
GPU, Inc.	EIA-1605	Corry	U.S.
		FR & S Landfill NUG	U.S.
		Hamm's Landfill NUG	U.S.
		L & D Landfill NUG	U.S.
		Lake View Landfill	U.S.
		Lebanon Methane NUG	U.S.
		Manchester Renewable	U.S.
		Modern Landfill NUG	U.S.
		Monmouth County Reclamation Center NUG	U.S.
Granger Electric Company	EIA-1605	Brent Run Landfill Generating Station	U.S.
		Grand Blanc Landfill Generating Station	U.S.
		Granger #1 Generating Station - Wood Road Landfill	U.S.
		Granger #2 Generating Station - Grand River Avenue Landfill	U.S.
		Granger MotorWheel Facility	U.S.
		Indianapolis/South Side Landfill Gas Project	U.S.
		Lake County Landfill Gas Project	U.S.
		Ottawa County Farms Landfill Generating Station	U.S.
		Seymour Road Landfill Generating Station	U.S.
Greater New Bedford Regional Refuse Mgt District	EIA-1605	Crapo Hill Landfill Gas Control Project	U.S.
Hackensack Meadowlands Development Com.	EIA-1605	HMDC 1-A Landfill	U.S.
		HMDC 1-C Landfill	U.S.
		HMDC Balefill	U.S.
		Kingsland Landfill	U.S.
		MSLA 1-D Landfill	U.S.
Integrated Waste Services Association	EIA-1605	Waste-to-Energy - Waste Diversion	U.S.
Iredell Landfill Gas, LLC	EIA-1605	Iredell County Landfil	U.S.
JEA	EIA-1605EZ	Fuel Switching	U.S.
Landfill Energy Systems	EIA-1605	Adrian	U.S.
		Ann Arbor	U.S.
		Carleton Farms	U.S.
		I-95 Phase I	U.S.
		I-95 Phase II	U.S.
		MRPC	U.S.
		MRPC Flare	U.S.
		Pine Tree	U.S.
		Riverview	U.S.
		Salem	U.S.
		Salem Flare	U.S.
		Sumpter	U.S.
		Wichita	U.S.
LFG Energy, Inc.	EIA-1605	LFG Energy - Phases I & II	U.S.
		LFG Energy Upgrade Facility	U.S.
Los Angeles Department of Water and Power	EIA-1605	Scattergood Digester Gas Displacement of Natural Gas as Fuel	U.S.
Lucent Technologies Inc.	EIA-1605	WNG - #4	U.S.
Lynchburg Gas Producers, LLC	EIA-1605	Lynchburg Landfill	U.S.
Madison County Depart. of Solid Waste & Sanitation	EIA-1605	Landfill Gas Recovery & Flaring	U.S.
Michigan CAT	EIA-1605	Lower Potomac	U.S.
		Sacramento	U.S.
Middlesex Generating Company, LLC	EIA-1605	MCUA Landfill Gas Utilization Project - Edison Landfill	U.S.
		MCUA Landfill Gas Utilization Project - ILR Landfill	U.S.
		MCUA Landfill Gas Utilization Project - MCUA Landfill	U.S.
Minnesota Resource Recovery Association	EIA-1605EZ	MSW Incineration	U.S.
National By-Products Inc	EIA-1605	Landfill gas-boiler fuel	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Natural Power, Inc.	EIA-1605	Wilder's Grove Landfill Gas Project	U.S.
NC Muni Landfill Gas Partners, LLC	EIA-1605	Henderson County Landfill	U.S.
NEO Corporation	EIA-1605	Acme Landfill Gas Utilization Project	U.S.
		Albany Landfill Gas Utilization Project	U.S.
		Balefill Landfill Gas Utilization Project	U.S.
		Bordeaux Landfill Gas Utilization Project	U.S.
		Corona Landfill Gas Utilization Project	U.S.
		Cuyahoga Landfill Gas Utilization Project	U.S.
		Denver Landfill Gas Utilization Project	U.S.
		Edgeboro Landfill Gas Utilization Project	U.S.
		Fitchburg Landfill Gas Utilization Project	U.S.
		Flying Cloud Landfill Gas Utilization Project	U.S.
		Fort Smith Landfill Gas Utilization Project	U.S.
		Four Hills Landfill Gas Utilization Project	U.S.
		Hartford Landfill Gas Utilization Project	U.S.
		Kingsland Landfill Gas Utilization Project	U.S.
		Kraemer Landfill Gas Utilization Project	U.S.
		Lopez Landfill Gas Utilization Project	U.S.
		Lowell Landfill Gas Utilization Project	U.S.
		Mazzaro Landfill Gas Utilization Project	U.S.
		Phoenix Landfill Gas Utilization Project	U.S.
		Prima Deshecha Landfill Gas Utilization Project	U.S.
		Prince William Landfill Gas Utilization Project	U.S.
		Riverside Landfill Gas Utilization Project	U.S.
		San Bernadino Landfill Gas Utilization Project	U.S.
		San Diego Landfill Gas Utilization Project	U.S.
		SKB Landfill Gas Utilization Project	U.S.
		Spokane Landfill Gas Utilization Project	U.S.
		Tacoma Landfill Gas Utilization Project	U.S.
		Tajiguas Landfill Gas Utilization Project	U.S.
		Taunton Landfill Gas Utilization Project	U.S.
		Visalia Landfill Gas Utilization Project	U.S.
		Volusia Landfill Gas Utilization Project	U.S.
		West Covina Landfill Gas Utilization Project	U.S.
		Woodville Landfill Gas Utilization Project	U.S.
		Yolo Landfill Gas Utilization Project	U.S.
Newton Landfill Gas, LLC	EIA-1605	Newton Landfill	U.S.
NiSource/NIPSCO	EIA-1605	Landfill Methane Recovery - Deercroft	U.S.
		Landfill Methane Recovery - Wheeler	U.S.
		Landfill Methane Recovery-Prairie View	U.S.
North American Carbon, Inc.	EIA-1605	KMS Peel Energy Recovery Project	Foreign
Ocean County Landfill Corporation	EIA-1605	Flare Control of Landfill Gas	U.S.
		Supplying Landfill Gas for Energy Recovery	U.S.
Pacific Energy Operating Group, LP	EIA-1605	Gude Power Station	U.S.
		Penrose Power Station	U.S.
		Stockton Power Station	U.S.
		Toyon Power Station	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Pacific Natural Energy, LLC	EIA-1605	Acme Landfill Gas Recovery Plant	U.S.
		Bowerman Landfill Gas Recovery Plant	U.S.
		Bridgeton Landfill Gas Recovery Project	U.S.
		Covel Gardens Landfill Gas Recovery Project	U.S.
		Dade Landfill Gas Recovery Plant	U.S.
		Dallas Landfill Gas Recovery Plant	U.S.
		Davis Street Landfill Gas Recovery Plant	U.S.
		Fresh Kills Landfill Gas Recovery Project	U.S.
		Kearny Landfill Gas Recovery Plant	U.S.
		McCarty Road Landfill Gas Recovery Plant	U.S.
		Monmouth Landfill Gas Recovery Plant	U.S.
		Mountaingate Landfill Gas Recovery Plant	U.S.
		Olinda Landfill Gas Recovery Plant	U.S.
		Rosenberg Landfill Gas Recovery Plant	U.S.
		Rumpke Landfield Gas Recovery Plant	U.S.
		San Antonio Landfill Gas Recovery Plant	U.S.
		Skyline Landfill Gas Recovery Project	U.S.
		Westside Landfill Gas Recovery Project	U.S.
Pacific Recovery Corporation	EIA-1605	Bailard Landfill	U.S.
		Crazy Horse Landfill	U.S.
		Otay Landfill	U.S.
		Santa Clara Landfill - City of Oxnard	U.S.
		Santa Clara Landfill - City of Santa Clara	U.S.
		Ventura Coastal Landfill	U.S.
Palmer Capital Corporation	EIA-1605	Brookhaven Landfill Gas Limited Partnership	U.S.
		Central Gas Limited Partnership	U.S.
		Janesville Landfill Gas Corporation	U.S.
		Lancaster Landfill Gas Corporation	U.S.
		Lebanon Landfill Gas Corporation	U.S.
		LKD Los Angeles L.P.	U.S.
		Portland LFG Joint Venture	U.S.
		Raleigh Landfill Gas Corporation	U.S.
		Scholl Canyon LFG Limited Partnership	U.S.
		Sun LFG Corporation	U.S.
PECO Energy Company	EIA-1605	Fairless Hills LFG to Energy Operation	U.S.
		Pennsbury LFG to Energy Operation	U.S.
PG&E Corporation	EIA-1605	Barre Landfill Gas to Electricity Project	U.S.
		Johnston Landfill Gas to Electricity Project	U.S.
		Nashua Landfill Gas To Electricity Project	U.S.
		Turnkey Landfill Gas to Electricity Project	U.S.
Pitt Landfill Gas, LLC	EIA-1605	Pitt County Landfill	U.S.
Platte River Power Authority & 4 owner cities	EIA-1605	Fort Collins Wastewater Methane Flare	U.S.
		Longmont Wastewater Plant Waste Gas Flare	U.S.
		Loveland Digester Gas Production and Use	U.S.
PPL CORPORATION	EIA-1605	Harrisburg (AWWTP) - Methane Reductions	U.S.
		Keystone Landfill - Methane Reductions	U.S.
		Lycoming Landfill - Methane Reductions	U.S.
		Taylor/Amity Landfill - Methane Reductions	U.S.
Public Service Enterprise Group	EIA-1605	Electric Generation from Landfill Gas	U.S.
		Municipal Solid Waste Generators	U.S.
Rolls-Royce Corporation	EIA-1605	Use of Landfill Gas	U.S.
Salt River Project	EIA-1605EZ	Landfill Gas Generation (solar dish/stirling system)	U.S.
Seneca Energy, Inc.	EIA-1605	Seneca Energy - Stage I	U.S.
Seneca Energy, Inc.	EIA-1605	Seneca Energy - Stage II	U.S.
Tennessee Valley Authority	EIA-1605	Landfill Methane Recovery and Power Generation	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
The Bentech Group of Delaware, Inc.	EIA-1605	Chautauqua County, Ellery Landfill	U.S.
		Montgomery County, Oaks Landfill	U.S.
		Pigeon Point Landfill	U.S.
		Rolling Hills Landfill	U.S.
TXU	EIA-1605	Landfill Methane	U.S.
Wisconsin Electric Power Co.	EIA-1605	Beneficial use of landfill methane	U.S.
Xcel Energy	EIA-1605	Refuse-derived fuel-NSP	U.S.
Zahren Alternative Power Corporation	EIA-1605EZ	Barre	U.S.
		Brickyard	U.S.
		Burlington	U.S.
		Dolton	U.S.
		Onondaga	U.S.
		Oyster Bay	U.S.
		Romeoville	U.S.
		Streator	U.S.
		122nd Street	U.S.
		122nd Street Flare	U.S.
		Amity	U.S.
		Barre Flare	U.S.
		Brickyard Flare	U.S.
		Cape May	U.S.
		Cape May Flare	U.S.
		Dixon	U.S.
		Dixon Flare	U.S.
		Dolton Flare	U.S.
		Garland	U.S.
		Garland Flare	U.S.
		Hamm / Sussex	U.S.
		Harrison Flare	U.S.
		Manchester	U.S.
		Manchester Flare	U.S.
		Marina	U.S.
		Marina Flare	U.S.
		Oceanside	U.S.
		Oyster Bay Flare	U.S.
		Romeoville Flare	U.S.
		Roxanna	U.S.
		Smithtown	U.S.
		Smithtown Flare	U.S.
		Springfield	U.S.
		Springfield Flare	U.S.
		SPSA	U.S.
		SPSA Flare	U.S.
		Tucson	U.S.
		Tucson Flare	U.S.
		Upper Rock	U.S.
		Upper Rock Flare	U.S.
Agriculture - Methane and Nitrous Oxide			
AES Warrior Run, Inc.	EIA-1605	Indian Dairy Project	Foreign
GPU, Inc.	EIA-1605	Mason Dixon Farms, Inc.	U.S.
		Valley Pork	U.S.
PPL CORPORATION	EIA-1605	Keener Enterprises - Methane Reductions	U.S.
Reliant Energy - HL&P	EIA-1605	Rice Field Methane Reductions Study	U.S.

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Project Type and Reporter	Form Type	Project	Location
Oil and Natural Gas Systems and Coal Mining - Methane			
Baltimore Gas & Electric Company	EIA-1605	Gas Systems O & M (Natural Gas Star Partnership)	U.S.
Black Warrior Methane Corp.	EIA-1605	Gobwell Degasification Program	U.S.
		Horizontal Degasification Program	U.S.
		Nitrogen Rejection Plant Program (LQG)	U.S.
		Standard Degasification Well Program	U.S.
Central Hudson Gas & Electric Corporation	EIA-1605	EPA Natural Gas Star Program	U.S.
Cinergy Corp.	EIA-1605	AFC Electric Generation	U.S.
CLE Resources	EIA-1605	Revolve Technologies - Dry Gas Seals	U.S.
CMS Energy	EIA-1605	Natural Gas Star Program (Consumers)	U.S.
Consolidated Edison Company of New York, Inc.	EIA-1605	Natural Gas STAR Best Management Practices	U.S.
Drummond Company, Inc.	EIA-1605	C Panel Gob Wells	U.S.
El Paso Production Company	EIA-1605	White Oak Creek Coalbed Methane Recovery	U.S.
Entergy Services, Inc.	EIA-1605	Natural Gas Pipeline Leak Repairs	U.S.
Fidelity Exploration & Production Company	EIA-1605	Tongue River	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Identify & Rehabilitate Leaky Gas Distribution Pipe	U.S.
NiSource/NIPSCO	EIA-1605	NG STAR - NIPSCO	U.S.
		NG Star Baystate	U.S.
		North Trenton Pipeline Replacement	U.S.
Northwest Fuel Development, Inc.	EIA-1605	Utilization of Coal Mine Gas	U.S.
PacifiCorp	EIA-1605	Northwest Fuels Methane Recovery From Coal Mines	U.S.
Pharmacia & Upjohn Caribe, Inc.	EIA-1605EZ	Boiler Replacement	U.S.
Public Service Company of New Mexico	EIA-1605	Natural Gas Leak Surveying and Replacement	U.S.
U. S. Steel Mining Company, LLC	EIA-1605	No. 50 Mine: Gas Recovery For Sale / Use	U.S.
		Oak Grove Mine: Gas Recovery For Sale / Use	U.S.
Western Resources, Inc.	EIA-1605	Natural Gas Distribution System Replacement Program	U.S.
		Natural Gas Transmission System Blowdown Reductions	U.S.
Carbon Sequestration			
Advanced Micro Devices	EIA-1605EZ	Tree Planting	U.S.
AES Hawaii, Inc.	EIA-1605	Mbaracayu Conservation	Foreign
AES Shady Point	EIA-1605	OXFAM America Amazon	Foreign
AES Thames	EIA-1605	CARE Agroforestry	Foreign
Allegheny Energy, Inc.	EIA-1605	Black Oak Property Tree Planting	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Alliant Energy	EIA-1605	Afforestation	U.S.
		Conservation tillage	U.S.
		Forest preservation	U.S.
		Habitat Restoration	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Urban Forestry IES	U.S.
		Urban Forestry IPC	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Green Leaf Project	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
American Electric Power, Inc.	EIA-1605	AEP-AGSPOIL-1992	U.S.
		AEP-AGSPOIL-1993	U.S.
		AEP-AGSPOIL-1994	U.S.
		AEP-AGSPOIL-1995	U.S.
		AEP-AGSPOIL-1996	U.S.
		AEP-AGSPOIL-1997	U.S.
		AEP-AGSPOIL-1998	U.S.
		AEP-AGSPOIL-1999	U.S.
		AEP-AGSPOIL-2000	U.S.
		AEP-FM-1991	U.S.
		AEP-FM-1992	U.S.
		AEP-FM-1993	U.S.
		AEP-FM-1994	U.S.
		AEP-FM-1995	U.S.
		AEP-FM-1996	U.S.
		AEP-FM-1997	U.S.
		AEP-FM-1998	U.S.
		AEP-FM-1999	U.S.
		AEP-FM-2000	U.S.
		AEP-MARAG- 1992	U.S.
		AEP-MARAG-1991	U.S.
		AEP-MARAG-1993	U.S.
		AEP-MARAG-1993-2	U.S.
		AEP-MARAG-1994	U.S.
		AEP-MARAG-1994-2	U.S.
		AEP-MARAG-1995	U.S.
		AEP-MARAG-1996	U.S.
		AEP-MARAG-1997	U.S.
		AEP-MARAG-1998	U.S.
		AEP-MARAG-1999	U.S.
		AEP-MARAG-2000	U.S.
		AEP-West Land Management	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Noel Kempff Mercado Climate Action Project	Foreign
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
American Forests	EIA-1605	Global ReLeaf -- Alazan Bayou WMA, TX	U.S.
		Global ReLeaf -- Green`n New Jersey, NJ	U.S.
		Global ReLeaf -- Hens Peak Fire, Fishlake NF, UT	U.S.
		Global ReLeaf -- Lake Sammamish Watershed, WA	U.S.
		Global ReLeaf -- Lake Superior Watershed, WI	U.S.
		Global ReLeaf -- Otsego Creek, NY	U.S.
		Global ReLeaf -- Re-Greening Logging Roads, WA	U.S.
		Global ReLeaf -- Skagit Wild & Scenic River System, WA	U.S.
		Global ReLeaf -- Wicker Park, North Carolina	U.S.
		Global ReLeaf Forests -- 3 Sisters Eagle Roost, CA	U.S.
		Global ReLeaf Forests -- Afton Canyon, CA	U.S.
		Global ReLeaf Forests -- Allegheny, Pennsylvania	U.S.
		Global ReLeaf Forests -- Apalacicola, Florida	U.S.
		Global ReLeaf Forests -- Applegate River, Oregon	U.S.
		Global ReLeaf Forests -- Appomattox, Virginia	U.S.
		Global ReLeaf Forests -- Aqua Fria, Arizona	U.S.
		Global ReLeaf Forests -- ASCM Preserve, Maryland	U.S.
		Global ReLeaf Forests -- AuSable, Michigan	U.S.
		Global ReLeaf Forests -- Bass River, New Jersey	U.S.
		Global ReLeaf Forests -- Bayou Cocodrie NWR, LA	U.S.
		Global ReLeaf Forests -- Beaver Creek, Ohio	U.S.
		Global ReLeaf Forests -- Bell Farm, Kentucky	U.S.
		Global ReLeaf Forests -- Belleplain, New Jersey	U.S.
		Global ReLeaf Forests -- Beltrami, Minnesota	U.S.
		Global ReLeaf Forests -- Betsie River, Michigan	U.S.
		Global ReLeaf Forests -- Big Walnut Nature Preserve, Indiana	U.S.
		Global ReLeaf Forests -- Big Woods, Minnesota	U.S.
		Global ReLeaf Forests -- Black Ridge, Colorado	U.S.
		Global ReLeaf Forests -- Black River, Wisconsin	U.S.
		Global ReLeaf Forests -- Blackfoot-Clearwater, Montana	U.S.
		Global ReLeaf Forests -- Blackwater, Florida	U.S.
		Global ReLeaf Forests -- Boise, Idaho	U.S.
		Global ReLeaf Forests -- Brokenback Diversity, Wyoming	U.S.
		Global ReLeaf Forests -- Buffalo Creek, CO	U.S.
		Global ReLeaf Forests -- Cache River Bioreserve, Illinois	U.S.
		Global ReLeaf Forests -- Cache River, Arkansas	U.S.
		Global ReLeaf Forests -- Caddo Parish, Louisiana	U.S.
		Global ReLeaf Forests -- Carson, New Mexico	U.S.
		Global ReLeaf Forests -- Casper, Wyoming	U.S.
		Global ReLeaf Forests -- Chittenden, Michigan	U.S.
		Global ReLeaf Forests -- Choccolocco, Alabama	U.S.
		Global ReLeaf Forests -- Conecuh, Alabama	U.S.
		Global ReLeaf Forests -- Coshocton, Ohio	U.S.
		Global ReLeaf Forests -- Cossatot, Arkansas	U.S.
		Global ReLeaf Forests -- Croatan, North Carolina	U.S.
		Global ReLeaf Forests -- Cuba, New Mexico	U.S.
		Global ReLeaf Forests -- Darton College, Georgia	U.S.
		Global ReLeaf Forests -- Dawson Demo Forest, Georgia	U.S.
		Global ReLeaf Forests -- DeSoto, Mississippi	U.S.
		Global ReLeaf Forests -- Double Trouble, New Jersey	U.S.
		Global ReLeaf Forests -- Duck Creek, Ohio	U.S.
		Global ReLeaf Forests -- Eastern Neck NWR, Maryland	U.S.
		Global ReLeaf Forests -- Econofina, Florida	U.S.
		Global ReLeaf Forests -- Ellis, Texas	U.S.
		Global ReLeaf Forests -- Fairfax, Virginia	U.S.
		Global ReLeaf Forests -- Farragut, Idaho	U.S.
		Global ReLeaf Forests -- Francis Marion, South Carolina	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
American Forests	EIA-1605	Global ReLeaf Forests -- Glades Preserve, Maryland	U.S.
		Global ReLeaf Forests -- Grailville, Ohio	U.S.
		Global ReLeaf Forests -- Great Plains RC & D, Oklahoma	U.S.
		Global ReLeaf Forests -- Greater Grand Forks, North Dakota	U.S.
		Global ReLeaf Forests -- Greenwood WMA, New Jersey	U.S.
		Global ReLeaf Forests - Gunpowder Falls, Maryland	U.S.
		Global ReLeaf Forests -- Hakalau, Hawaii	U.S.
		Global ReLeaf Forests -- Harrison, Ohio	U.S.
		Global ReLeaf Forests - Hart Miller Island, MD	U.S.
		Global ReLeaf Forests -- Holly Springs, Mississippi	U.S.
		Global ReLeaf Forests -- Homer, Alaska	U.S.
		Global ReLeaf Forests -- Indian Creek, California	U.S.
		Global ReLeaf Forests -- Indian Lake, Ohio	U.S.
		Global ReLeaf Forests -- Indian Mounds, Texas	U.S.
		Global ReLeaf Forests --- Island Park Caldera, ID	U.S.
		Global ReLeaf Forests -- Janes Island State Park, Maryland	U.S.
		Global ReLeaf Forests -- Jordon River, Utah	U.S.
		Global ReLeaf Forests -- Kenosha Pass, Colorado	U.S.
		Global ReLeaf Forests -- Kettle Moraine, Wisconsin	U.S.
		Global ReLeaf Forests -- King Range, California	U.S.
		Global ReLeaf Forests -- Kisatchie, Louisiana	U.S.
		Global ReLeaf Forests -- Kula Forest Preserve, Hawaii	U.S.
		Global ReLeaf Forests -- Lake George, Florida	U.S.
		Global ReLeaf Forests -- Lake Monroe, FL	U.S.
		Global ReLeaf Forests -- Ledge View Co. Park, Wisconsin	U.S.
		Global ReLeaf Forests -- Lindsay, Oklahoma	U.S.
		Global ReLeaf Forests -- Little River, Arkansas	U.S.
		Global ReLeaf Forests -- Long Island, Illinois	U.S.
		Global ReLeaf Forests -- Lower MI Riparian Corridors, MI	U.S.
		Global ReLeaf Forests - Marais des Cygnes, Kansas	U.S.
		Global ReLeaf Forests -- Marys River, Nevada	U.S.
		Global ReLeaf Forests -- Mattole River, California	U.S.
		Global ReLeaf Forests -- Mescalero Apache, New Mexico	U.S.
		Global ReLeaf Forests -- Michaux, Pennsylvania	U.S.
		Global ReLeaf Forests -- Milford Neck Preserve, DE	U.S.
		Global ReLeaf Forests -- Monocacy NRMA, Maryland	U.S.
		Global ReLeaf Forests - Moraine Hills, IL	U.S.
		Global ReLeaf Forests -- Moxley Farm, Maryland	U.S.
		Global ReLeaf Forests -- Mt. Baldy Demo, CA	U.S.
		Global ReLeaf Forests -- Nanticoke WMA, Maryland	U.S.
		Global ReLeaf Forests -- Nooksack, Washington	U.S.
		Global ReLeaf Forests -- Oklawaha, Florida	U.S.
		Global ReLeaf Forests -- Oneida County, New York	U.S.
		Global ReLeaf Forests -- Oneida Nation, Wisconsin	U.S.
		Global ReLeaf Forests - P/P/P Riparian, Maryland	U.S.
		Global ReLeaf Forests -- Patapsco River, Maryland	U.S.
		Global ReLeaf Forests -- Perry State Forest, Ohio	U.S.
		Global ReLeaf Forests -- Pike, Colorado	U.S.
		Global ReLeaf Forests -- Pillsbury, Minnesota	U.S.
		Global ReLeaf Forests -- Pine Barrens, New York	U.S.
		Global ReLeaf Forests -- Pine Creek, Idaho	U.S.
		Global ReLeaf Forests -- Point Remove NWR, AR	U.S.
		Global ReLeaf Forests -- Rio Grande NWR, Texas	U.S.
		Global ReLeaf Forests -- Rio Salada, New Mexico	U.S.
		Global ReLeaf Forests -- Rockland Forest, Florida	U.S.
		Global ReLeaf Forests -- Sam Houston, Texas	U.S.
		Global ReLeaf Forests --- San Luis NWR, CA	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
American Forests	EIA-1605	Global ReLeaf Forests -- San Pedro, Arizona	U.S.
		Global ReLeaf Forests -- Sanborn, South Dakota	U.S.
		Global ReLeaf Forests -- Sands Ponds, Missouri	U.S.
		Global ReLeaf Forests -- Savage River, Maryland	U.S.
		Global ReLeaf Forests -- Spokane, Washington	U.S.
		Global ReLeaf Forests -- St. Catherine, Mississippi	U.S.
		Global ReLeaf Forests -- Starr Hill, New York	U.S.
		Global ReLeaf Forests -- Stephens Forest, Iowa	U.S.
		Global ReLeaf Forests -- SW OK Riparian Forest, Oklahoma	U.S.
		Global ReLeaf Forests -- Tangipahoa, Louisiana	U.S.
		Global ReLeaf Forests -- Telfair, Georgia	U.S.
		Global ReLeaf Forests -- Temple, Michigan	U.S.
		Global ReLeaf Forests -- Three Mile Lake, Iowa	U.S.
		Global ReLeaf Forests -- Two Rocks, Pennsylvania	U.S.
		Global ReLeaf Forests -- Voyagers, Minnesota	U.S.
		Global ReLeaf Forests-- African American Reforestation, TN	U.S.
		Global ReLeaf Forests-- Barron County, WI	U.S.
		Global ReLeaf Forests- Bayou Bartholomew, AR	U.S.
		Global ReLeaf Forests-- Beaverkill/Willowemoc, NY	U.S.
		Global ReLeaf Forests-- Big Creek Fisheries, WI	U.S.
		Global ReLeaf Forests-- Calvert County, MD	U.S.
		Global ReLeaf Forests-- Cherokee Indian Res., NC	U.S.
		Global ReLeaf Forests-- Chesapeake Bay, MD	U.S.
		Global ReLeaf Forests-- Elm Fork, Denton, TX	U.S.
		Global ReLeaf Forests-- Fernwood SF, OH	U.S.
		Global ReLeaf Forests-- Flint River, GA	U.S.
		Global ReLeaf Forests-- Great Dismal Swamp NWR, VA	U.S.
		Global ReLeaf Forests-- Hancock County, IN	U.S.
		Global ReLeaf Forests-- Horicon Service Center, WI	U.S.
		Global ReLeaf Forests-- Illinois River Watershed, OR	U.S.
		Global ReLeaf Forests-- Mission Trails, TX	U.S.
		Global ReLeaf Forests-- Mountains to Sounds, WA	U.S.
		Global ReLeaf Forests-- Natchitoches Parish, LA	U.S.
		Global ReLeaf Forests-- New Michigan SF, NY	U.S.
		Global ReLeaf Forests-- Oak Foundation, CA	U.S.
		Global ReLeaf Forests-- Okefenokee NWR, GA	U.S.
		Global ReLeaf Forests-- Potawot Health Village, CA	U.S.
		Global ReLeaf Forests-- Salina Canyon, UT	U.S.
		Global ReLeaf Forests-- Sandy River Delta, OR	U.S.
		Global ReLeaf Forests-- Schoolcraft County, MI	U.S.
		Global ReLeaf Forests-- Seneca Creek SP, MD	U.S.
		Global ReLeaf Forests-- Sorefoot Creek, OR	U.S.
		Global ReLeaf Forests- St. Marks NWR, FL	U.S.
		Global ReLeaf Forests-- St. Sebastian, FL	U.S.
		Global ReLeaf Forests-- Sterling Nature Center, NY	U.S.
		Global ReLeaf Forests-- Stewardship Forests, MN	U.S.
		Global ReLeaf Forests-- West Ox Rd, VA	U.S.
		Global ReLeaf Forests-- Whatcom Land Trust	U.S.
		Global ReLeaf Forests- Wye Island Riparian, MD	U.S.
		Global ReLeaf Forests--Sunrise Fire-Long Island, NY	U.S.
American Municipal Power - Ohio	EIA-1605	Urban Forestry - Tree City USA	U.S.
Anoka Municipal Utility	EIA-1605EZ	Urban Forestry	U.S.
Austin Parks & Rec. Dept.- Urban Forestry Program	EIA-1605	Urban Forestry Program	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Baltimore Gas & Electric Company	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
BP	EIA-1605	Noel Kempff Mercado Climate Action Project	Foreign
Cedar Falls Utilities	EIA-1605	Cedar Falls Trees	U.S.
Cinergy Corp.	EIA-1605	Cinergy Corp. Ducks Unlimited Bottomland Hardwood Reforest.	U.S.
		Cinergy Corp. The Nature Conservancy Reforestation and Bio.	U.S.
		Cinergy Corp. Wild Turkey Federation Operation Big Sky.	U.S.
		Facility Tree Planting Program	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
		WRP Tree Planting Program	U.S.
City of Edmond, Oklahoma, Electric Department	EIA-1605EZ	Tree/Shrub Planting	U.S.
Cleco Corporation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	Afforestation	U.S.
		Illinois Prairie Grass Plantings	U.S.
		Urban Tree Planting	U.S.
		Utility Pole Reuse	U.S.
Conectiv Atlantic Generation (CAG)	EIA-1605	Urban Tree Planting	U.S.
		Wetlands Reclamation Project	U.S.
Conectiv Delmarva Generation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Urban Tree Planting	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
DTE Energy/ Detroit Edison	EIA-1605	Forest Land Management	U.S.
		Miscellaneous Tree Plantings - 1999	U.S.
		Miscellaneous Tree Plantings - 1995	U.S.
		Miscellaneous Tree Plantings - 1996	U.S.
		Miscellaneous Tree Plantings - 1997	U.S.
		Miscellaneous Tree Plantings - 1998	U.S.
		Miscellaneous Tree Plantings - 2000	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign
		Southeast Michigan Afforestation - 1996	U.S.
		Southeast Michigan Afforestation - 1997	U.S.
		Southeastern Michigan Afforestation - 1995	U.S.
		State Forest Land Afforestation - 1996	U.S.
		State Forest Land Afforestation - 1997	U.S.
		State Forest Land Afforestation - 1998	U.S.
		State Forest Land Afforestation - 1999	U.S.
		State Forest Land Afforestation - 2000	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Duke Energy Corporation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Dynegy Midwest Generation Inc.	EIA-1605	Dynegy Mississippi River Valley Refoestation Project	U.S.
		IDNR Tree Planting Partnership	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Entergy Services, Inc.	EIA-1605	Entergy Forestry Projects	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
		Wetlands and Carbon Sequestration - Southeast LA & TX	U.S.
Environmental Synergy, Inc.	EIA-1605EZ	St. Catherine Creek National Wildlife Refuge Afforestation	U.S.
FirstEnergy Corporation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Tree Source	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
FPL Group	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Golden Valley Electric Association, Inc	EIA-1605EZ	Tree Give-Away for planting under power lines	U.S.
GPU, Inc.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Municipal Tree Replacement	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Greater Caribbean Energy & Environment Foundation	EIA-1605EZ	Coral Planting	U.S.
		Coralline & Calcareous algae planting	U.S.
		Marsh Planting Jacksonville (FL)	U.S.
		Seagrass Planting Broward City (FL)	U.S.
		Seagrass Planting Dade County (FL)	U.S.
		Seagrass Planting Jacksonville (FL)	U.S.
Hawaiian Electric Company, Inc.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
J.M. Gilmer and Company, Inc.	EIA-1605	Flatwoods Tract Afforestation Project	U.S.
		Smith Place Short Rotation Woody Crop Project	U.S.
		Smith Place Tract Afforestation Project	U.S.
JEA	EIA-1605EZ	Urban Forestry	U.S.
Los Angeles Department of Water and Power	EIA-1605	Cool Schools Urban Forestry Project	U.S.
		Mountain Reforestation Project	U.S.
Minnesota Power	EIA-1605	Short Rotation Woody Crop Establishment	U.S.
Moorhead Public Service	EIA-1605EZ	Urban Forestry (sequestration only)	U.S.
Nashville Electric Service	EIA-1605EZ	Urban Forestry/1999 Planting	U.S.
		Urban Forestry/2000 Planting	U.S.
		Urban Forestry/1995 Planting	U.S.
		Urban Forestry/1996 Planting	U.S.
		Urban Forestry/1997 Planting	U.S.
		Urban Forestry/1998 Planting	U.S.
Nebraska Public Power District	EIA-1605EZ	Tree planting	U.S.
NiSource/NIPSCO	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Rural Tree Planting	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Urban Tree Planting	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Old Dominion Electric Cooperative	EIA-1605	Clover Power Station - Visual Screening	U.S.
Omaha Public Power District	EIA-1605EZ	Tree Planting	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
PacifiCorp	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Noel Kempff Mercado Climate Action Project	Foreign
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Reforestation in Eastern Washington	U.S.
		Reforestation of Private Lands in Oregon - Site Class II	U.S.
		Reforestation of Private Lands in Oregon - Site Class III	U.S.
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign
		Salt Lake City Urban Forestry Project	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
PG&E Corporation	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Reduced Impact Logging Project (NEP Pilot Project)	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Portland General Electric Co.	EIA-1605	Friends of Trees	U.S.
PPL CORPORATION	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Pheasant Habitat Restoration Program (PHRP)	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Trees for the Future	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Public Service Enterprise Group	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Rappahannock Electric Cooperative	EIA-1605	Tree Planting	U.S.
Sacramento Municipal Utility District	EIA-1605	Shade Tree Program	U.S.
Santee Cooper	EIA-1605	Forestation/Reforestation	U.S.
Seattle City Light	EIA-1605	Urban Tree Replacement Program	U.S.
Shenandoah Valley Electric Cooperative	EIA-1605	Visual Screening-Tree Planting	U.S.
South Carolina Electric & Gas Company	EIA-1605	Forest Management Plan	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Southern Company	EIA-1605	Carbon Sequestration on Company Lands	U.S.
		Carbon Sequestration on Noncompany Lands	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Tampa Electric Company	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Tennessee Valley Authority	EIA-1605	Afforestation On TVA Lands	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Texaco, Inc.	EIA-1605EZ	Texaco Lower Mississippi River Valley Reforestation Project	U.S.
The Empire District Electric Co.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Tucson Electric Power Company	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Trees for Tucson	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
TXU	EIA-1605	Increased Reforestation in Land Reclamation Program	U.S.
		Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Texas Reforestation Foundation	U.S.
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Utah Municipal Power Agency	EIA-1605EZ	Tree Planting Program	U.S.
Waverly Light & Power Company	EIA-1605	Trees Forever (Project 8.1)	U.S.
Western Resources, Inc.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.
Wisconsin Electric Power Co.	EIA-1605	Mississippi River Valley Bottomland Hardwood Restoration	U.S.
		Overflow Bottomland Hardwood Forest Restoration Project	U.S.
		Reduced Impact Logging of Natural Forest in Malaysia	Foreign
		Rio Bravo Carbon Sequestration Pilot Project	Foreign
		Rio Bravo Carbon Sequestration Pilot Project (Full Share)	Foreign
		Rio Bravo Carbon Sequestration Pilot Project Expansion	Foreign
		Upper Ouachita River Valley Bottomland Hardwood Restoration	U.S.
		Western Oregon Carbon Sequestration Project	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Wisconsin Public Power Inc.	EIA-1605EZ	Tree Power 1991 Plantings (10 year olds)	U.S.
		Tree Power 1992 Plantings (9 year olds)	U.S.
		Tree Power 1993 Planting (8 year olds)	U.S.
		Tree Power 1994 Plantings (7 year olds)	U.S.
		Tree Power 1995 Plantings (6 year olds)	U.S.
		Tree Power 1996 Plantings (5 year olds)	U.S.
		Tree Power 1997 Planting (4 year olds)	U.S.
		Tree Power 1999 Plantings (2 year olds)	U.S.
		Tree Power 2000 Plantings (one year olds)	U.S.
Zeeland Board of Public Works	EIA-1605EZ	Urban Forestry	U.S.
Halogenated Substances			
Alcan Ingot, Sebree Aluminum Plant	EIA-1605	PFC Emissions Reductions	U.S.
Allegheny Energy, Inc.	EIA-1605	SF6 Breaker Replacement	U.S.
Allergan, Inc.	EIA-1605	CFC Substitution with Chiller Replacement	U.S.
		Elimination of CFCs at Farnborough, UK	Foreign
		Elimination of CFCs at U.S. Plants	U.S.
American Electric Power, Inc.	EIA-1605	Sulfur Hexafluoride Gas Reduction	U.S.
Baltimore Gas & Electric Company	EIA-1605	Refrigerant/Solvent Recycling and Reduction	U.S.
		SF6 Handling Procedures in Electric Distribution	U.S.
CLE Resources	EIA-1605	Valdor	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	ComEd Thermal Cooling Plant	U.S.
Consolidated Edison Company of New York, Inc.	EIA-1605	SF6 Best Management Practices	U.S.
Entergy Services, Inc.	EIA-1605	SF6 Reductions	U.S.
FirstEnergy Corporation	EIA-1605	Refrigerator Recycling	U.S.
		SF6 Emissions Reduction	U.S.
		Various CFC Replacements	U.S.
GPU, Inc.	EIA-1605	JCP&L Appliance Turn-In Service Program	U.S.
		Transmission & Distribution Facility Maintenance - JCP&L	U.S.
Madison County Depart. of Solid Waste & Sanitation	EIA-1605	Refrigerant Recovery	U.S.
Minnesota Power	EIA-1605	Electricity Substation, SF6 Breaker Replacement	U.S.
National Grid USA	EIA-1605	Appliance Removal Program, Residential DSM Programs	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Refrigerator Roundup	U.S.
		SF6 emission reductions	U.S.
NiSource/NIPSCO	EIA-1605	Ozone Depleting Chemicals	U.S.
		SF6 Reductions	U.S.
Noranda Aluminum Inc.	EIA-1605	PFC Emission Reduction via Reductions in Anode Effects	U.S.
PG&E Corporation	EIA-1605	SF6 Emission Reduction Partnership	U.S.
Pharmacia & Upjohn Caribe, Inc.	EIA-1605EZ	Chiller Retrofitting	U.S.
Pratt & Whitney North Berwick	EIA-1605	Removal of twenty-three vapor degreasers	U.S.
Sacramento Municipal Utility District	EIA-1605	Sulfur Hexaflouride Inventory	U.S.
Salt River Project	EIA-1605EZ	SF6 Emissions Reduction Partnership	U.S.
Southern Company	EIA-1605	Sulfur Hexafluoride (SF6) Emissions Reductions	U.S.
Tennessee Valley Authority	EIA-1605	CFC Management	U.S.
The Dow Chemical Company	EIA-1605	CFC Refrigeration Systems Conversion	U.S.
		Replace CFC's as blowing agents to manufacture foams.	U.S.
		Replacing HCFCs & HFCs as blowing agents - Foreign Operation	Foreign
		Replacing HCFCs & HFCs as Blowing Agents - U.S. Operations	U.S.
Tucson Electric Power Company	EIA-1605	R-11 Recycling	U.S.
		R-12 Emission Avoidance	U.S.
		R-22 Recycling	U.S.
		SF6 Recycling	U.S.
TXU	EIA-1605	SF6 Reductions	U.S.
Wisconsin Electric Power Co.	EIA-1605	CFC-12 Recovery from Appliance Turn-In Program	U.S.
Xcel Energy	EIA-1605	Appliance Recycling	U.S.
		Low Income Refrigerator Replacement	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
Other Emission Reduction Projects			
Allegheny Energy, Inc.	EIA-1605	EnviroTech Fund - Domestic Activities	U.S.
		EnviroTech Fund - Foreign Activities	Foreign
		Fly Ash use as replacement for cement	U.S.
Alliant Energy	EIA-1605	Fly Ash Utilization	U.S.
Ameren Corporation (formerly UE and CIPS)	EIA-1605	Flyash substitution for cement.	U.S.
American Electric Power, Inc.	EIA-1605	Enviro Tech Investment Fund I Limited Partnership - US	U.S.
		Enviro Tech Investment Funds - Foreign	Foreign
		Fly Ash Utilization Program (Cement Replacement)	U.S.
American Municipal Power - Ohio	EIA-1605	Main Office Recycling Program	U.S.
Arizona Electric Power Cooperative, Inc.	EIA-1605EZ	Fly Ash Sales	U.S.
		Utility Photo Voltaic -- Group Membership	U.S.
Austin Energy	EIA-1605EZ	Coal Combustion ByProduct Reutilization	U.S.
Avista Utilities	EIA-1605	Investment Recovery Recycling	U.S.
		Office Recycling	U.S.
Baltimore Gas & Electric Company	EIA-1605	Coal Ash Substitution for Portland Cement	U.S.
		Solid Waste Recycling and Source Reduction	U.S.
BP	EIA-1605	Crude Production Emission Reduction	U.S.
		Petroleum refining + Chemical plant emission control project	U.S.
		Petroleum refining and Chemical Plant VOC control projects	U.S.
Burlington County Board of Chosen Freeholders	EIA-1605	Burlington County Regional Recycling Program	U.S.
Central Hudson Gas & Electric Corporation	EIA-1605	Coal Ash Utilization	U.S.
Cinergy Corp.	EIA-1605	Benificial Use of Coal Fly Ash	U.S.
		Recycled Paper and Aluminum	U.S.
Commonwealth Edison Company (ComEd)	EIA-1605	Coal Combustion By-product utilization	U.S.
		Freon Recycling	U.S.
		Investment Recovery/Life Cycle Management/Recycling	U.S.
Conectiv Delmarva Generation	EIA-1605	Ash Reuse	U.S.
DTE Energy/ Detroit Edison	EIA-1605	Coal Ash Reuse - Canada	Foreign
		Coal Ash Reuse - U.S.	U.S.
Duke Energy Corporation	EIA-1605	Recycling Flyash	U.S.
Dynegy Midwest Generation Inc.	EIA-1605	Flyash Sales (Baldwin, Havana, Hennepin, Vermilion, Wd Rvr)	U.S.
Entergy Services, Inc.	EIA-1605	Fly Ash use as replacement for cement	U.S.
FirstEnergy Corporation	EIA-1605	Substitution of Fly Ash for Portland Cement in Concrete	U.S.
GPU, Inc.	EIA-1605	Recycling Program	U.S.
Los Angeles Department of Water and Power	EIA-1605	LADWP Recycling Program	U.S.
Lower Colorado River Authority	EIA-1605	Coal Combustion By-Product Recycling	U.S.
Lucent Technologies Inc.	EIA-1605	LRE - #2	U.S.
		LU - #1 (US only)	U.S.
		LU - #2 (International)	Foreign
Madison County Depart. of Solid Waste & Sanitation	EIA-1605	Recycling	U.S.
Minnesota Power	EIA-1605	Waste Paper Recycling Development	U.S.
Minnesota Resource Recovery Association	EIA-1605EZ	Paper Recycling Carbon Dioxide Reductions	U.S.
		Paper Recycling Methane Reductions	U.S.
Nebraska Public Power District	EIA-1605EZ	Coal Ash Reuse	U.S.
		Materials Recycling	U.S.
Niagara Mohawk Power Corporation	EIA-1605	Coal Ash Utilization	U.S.
		Investment Recovery Program (Recycling)	U.S.
NiSource/NIPSCO	EIA-1605	Coal Combustion Byproduct Utilization	U.S.
		Employee Training	U.S.
		Recycling program	U.S.
NRG Energy Inc	EIA-1605	BCII Coal Ash Utilization	U.S.
		Gladstone Coal Ash Utilization	Foreign
Omaha Public Power District	EIA-1605EZ	Recycling Fly Ash	U.S.
		Recycling Programs	U.S.

Table B6. Emission Reduction Projects Reported by Project Type, Data Year 2000

Project Type and Reporter	Form Type	Project	Location
PacifiCorp	EIA-1605	Coal Ash Recycling	U.S.
		Ethanol Production Carbon Offset Project	U.S.
PG&E Corporation	EIA-1605	Coal Ash Recycling as Cement Replacement	U.S.
		Natural Gas Star Program	U.S.
Platte River Power Authority & 4 owner cities	EIA-1605	Estes Park Recycling Program	U.S.
		Fort Collins Recycling Program	U.S.
		Loveland Recycling Program	U.S.
		PRPA Paper Recycling Program	U.S.
Portland General Electric Co.	EIA-1605	Fly Ash Reuse Program	U.S.
		PGE Corporate Recycling Program	U.S.
PPL CORPORATION	EIA-1605	Ash Use in Cement Making	U.S.
Pratt & Whitney North Berwick	EIA-1605	Recycling Efforts	U.S.
Public Service Enterprise Group	EIA-1605	Resource Recovery Coal Ash Management Program	U.S.
		WasteWise	U.S.
Public Utility District No. 1 of Snohomish County	EIA-1605	Scrap Metals Recycling	U.S.
		We-cycle Office Wastepaper (WOW) Program	U.S.
Quad/Graphics, Inc.	EIA-1605	Waste paper reduction program	U.S.
		West Allis plant brownfield site	U.S.
Rangely Weber Sand Unit	EIA-1605	Rangely CO2 Injection Project	U.S.
Reliant Energy - HL&P	EIA-1605	Coal Fly Ash Sales	U.S.
Salt River Project	EIA-1605EZ	Fly Ash Sales	U.S.
		Recycling (CH4 Reductions)	U.S.
		Recycling (CO2 Reduction)	U.S.
Santee Cooper	EIA-1605	Fly Ash Used in Concrete Manufacture	U.S.
Seminole Electric Cooperative, Inc.	EIA-1605EZ	Fly Ash & Bottom Ash Reuse	U.S.
Separation Technologies, Inc	EIA-1605EZ	STI Fly Ash processed at Carolina Power and Light Roxboro St	U.S.
		STI fly ash processed at Constellation Brandon Shores St	U.S.
		STI fly ash processed at U.S. Generating Brayton Point St.	U.S.
South Carolina Electric & Gas Company	EIA-1605	Coal Ash Utilization Program	U.S.
Southern California Edison Co.	EIA-1605	Fly Ash Sales for Concrete Production	U.S.
Southern Company	EIA-1605	EnviroTech Investments	U.S.
Tampa Electric Company	EIA-1605	Fly Ash Reuse	U.S.
Tennessee Valley Authority	EIA-1605	Flyash Sales To Concrete Industry	U.S.
		Paper Recycling	U.S.
TXU	EIA-1605	Coal Ash Byproduct Use	U.S.
		Paper and Aluminum Recycling	U.S.
		Ranger Exhaust Gas Project	U.S.
Western Resources, Inc.	EIA-1605	Coal Fly Ash Recycling	U.S.
Wisconsin Electric Power Co.	EIA-1605	Fly ash substitution program	U.S.
Wisconsin Public Power Inc.	EIA-1605EZ	2000 Energy Education	U.S.
		98 Energy Education	U.S.
		99 Energy Education	U.S.
		Commercial Industrial Farm Program	U.S.
Xcel Energy	EIA-1605	Coal ash utilization-NSP	U.S.
		Coal Ash Utilization-PSCo	U.S.
		Coal Ash Utilization-SPS	U.S.
		Recycling program	U.S.
		Recycling Program--PSCo	U.S.
		Recycling Program--SPS	U.S.

Note: This table excludes confidential reporters.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B7. Distribution of Projects Reported by Project Type and Reporting Form, Data Year 2000

Project Type	Form EIA-1605		Form EIA-1605EZ		Total	
	Number of Reporters	Number of Projects	Number of Reporters	Number of Projects	Number of Reporters	Number of Projects
Electricity Generation, Transmission and Distribution	69	409	24	53	93	462
Cogeneration	12	18	0	0	13	18
Energy End Use	72	364	19	60	92	424
Transportation	37	61	4	11	41	72
Waste Treatment and Disposal (Methane)	55	191	4	43	59	234
Agriculture (Methane and Nitrous Oxide)	4	5	0	0	4	5
Oil and Natural Gas Systems and Coal Mining (Methane)	18	25	1	1	19	26
Carbon Sequestration	51	461	15	33	66	494
Halogenated Substances	27	42	2	2	29	44
Other Emission Reductions	48	83	9	20	57	103
Entity Reporting Only (No Projects)	38	NA	NA	NA	38	NA
Total (All Project Types)	**148**	**1659**	**36**	**223**	**222**	**1882**

Note: The total number of reporters is smaller than the sums of the numbers of reporters for each project type, because most reporters provided information on more than one project. This table includes reporters classified as confidential, but excludes projects reported as confidential.

Source: Energy Information Administration, Form EIA-1605 and EIA-1605EZ.

Table B8. Distribution of Emission Reductions Reported by Project Type, Data Year 2000
(Metric Tons Carbon Dioxide Equivalent)

Project Type	Direct	Indirect	Unspecified (EZ)	Sequestration
Electricity Generation, Transmission and Distribution	130,547,715	7,393,082	7,836,749	--
Cogeneration	2,116,344	1,211,308	--	--
Energy End Use	19,633,680	8,137,090	358,568	--
Transportation	21,911	115,857	2,064	--
Waste Treatment and Disposal (Methane)	18,707,133	36,910,867	3,085,240	--
Agriculture (Methane and Nitrous Oxide)	269	23,993	--	--
Oil and Natural Gas Systems and Coal Mining (Methane)	10,771,552	137,046	1,041	--
Carbon Sequestration	1,041	0	5,081	9,010,021
Halogenated Substances	4,637,909	81	20,744	--
Other Emission Reductions	900,175	7,069,279	962,253	--
Total (All Project Types)	**187,337,729**	**60,998,603**	**12,271,740**	**9,010,021**

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605b.

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Agriculture & Forestry				
08 (Forestry)				
American Forests	1605	164	No	No
65 (Real Estate)				
J.M. Gilmer and Company, Inc.	1605	3	No	No
89 (Services, not elsewhere classified)				
Environmental Synergy, Inc.	1605EZ	1	N/A	N/A
Greater Caribbean Energy & Environment Foundation	1605EZ	6	N/A	N/A
Total Number of Projects Reported by Entities in Sector		**174**		
Total Number of Entities in Sector Reporting on Schedule		**4**	**0**	**0**
Alternative Energy Providers				
12 (Coal Mining)				
Black Warrior Methane Corp.	1605	4	Yes	No
U. S. Steel Mining Company, LLC	1605	2	No	No
29 (Petroleum Refining and Other Related Industries)				
El Paso Production Company	1605	1	No	No
49 (Electric, Gas, and Sanitary Services)				
8309 Tujunga Avenue Corporation	1605	5	Yes	No
Alabama Biomass Partners, Ltd	1605EZ	1	N/A	N/A
Asheville Landfill Gas, LLC	1605	1	No	No
The Bentech Group of Delaware, Inc.	1605	4	No	No
Biomass Partners, LP	1605EZ	1	N/A	N/A
Catawba Landfill Gas, LLC	1605	1	No	No
CommonWealth Bethlehem Energy, LLC	1605	1	Yes	No
County Sanitation Districts of Los Angeles County	1605	2	No	No
Delaware Solid Waste Authority	1605	4	No	No
Deptford Electric Company, LLC	1605	1	Yes	No
Dominion Generation	1605	2	No	No
Energy Management Partners, LP	1605EZ	2	N/A	N/A
Fidelity Exploration & Production Company	1605	1	No	Yes
Granger Electric Company	1605	9	No	No
Greater New Bedford Regional Refuse Mgt District	1605	1	Yes	Yes
Hackensack Meadowlands Development Com.	1605	5	Yes	No
Integrated Waste Services Association	1605	1	Yes	No
Iredell Landfill Gas, LLC	1605	1	No	No
Landfill Energy Systems	1605	13	No	No
LFG Energy, Inc.	1605	2	No	No
Lynchburg Gas Producers, LLC	1605	1	No	No
Madison County Depart. of Solid Waste & Sanitation	1605	3	No	No
Middlesex Generating Company, LLC	1605	3	Yes	Yes
Natural Power, Inc.	1605	1	No	No
NC Muni Landfill Gas Partners, LLC	1605	1	No	No
NEO Corporation	1605	34	No	No
Newton Landfill Gas, LLC	1605	1	No	No
North American Carbon, Inc.	1605	4	No	Yes
North Carolina Biomass Partners	1605EZ	1	N/A	N/A
Northwest Fuel Development, Inc.	1605	1	No	No
Oak Creek Energy Systems Inc.	1605	1	No	No
Ocean County Landfill Corporation	1605	2	No	No
Pacific Natural Energy, LLC	1605	18	Yes	Yes
Pacific Recovery Corporation	1605	6	No	No

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Alternative Energy Providers				
Palmer Capital Corporation	1605	10	Yes	No
PEI Power Corp	1605	1	Yes	No
Pitt Landfill Gas, LLC	1605	1	No	No
SeaWest Windpower, Inc.	1605	6	No	No
Seneca Energy, Inc.	1605	2	No	No
Southeastern Biomass Partners, LP	1605EZ	1	N/A	N/A
Zahren Alternative Power Corporation	1605EZ	40	N/A	N/A
Total Number of Projects Reported by Entities in Sector		**203**		
Total Number of Entities in Sector Reporting on Schedule		**44**	**11**	**5**
Electric Power				
49 (Electric, Gas, and Sanitary Services)				
A&N Electric Cooperative	1605	2	No	Yes
AES Hawaii, Inc.	1605	1	Yes	No
AES Shady Point	1605	1	Yes	No
AES Thames	1605	1	Yes	Yes
AES Warrior Run, Inc.	1605	1	Yes	No
Allegheny Energy, Inc.	1605	43	Yes	Yes
Alliant Energy	1605	36	Yes	Yes
Ameren Corporation (formerly UE and CIPS)	1605	25	No	Yes
American Electric Power, Inc.	1605	62	No	No
American Municipal Power - Ohio	1605	24	No	Yes
Anoka Municipal Utility	1605EZ	4	N/A	N/A
Arizona Electric Power Cooperative, Inc.	1605EZ	4	N/A	N/A
Arizona Public Service Company	1605		Yes	Yes
Austin Energy	1605EZ	7	N/A	N/A
Avista Utilities	1605	4	No	No
Baltimore Gas & Electric Company	1605	23	Yes	Yes
BARC Electric Cooperative	1605	2	No	No
Carolina Power & Light Company	1605	1	No	No
Cedar Falls Utilities	1605	15	No	No
Central Hudson Gas & Electric Corporation	1605	8	Yes	Yes
Choptank Electric Cooperative	1605	1	No	No
Cinergy Corp.	1605	37	Yes	No
City of Edmond, Oklahoma, Electric Department	1605EZ	3	N/A	N/A
City of Palo Alto	1605EZ	12	N/A	N/A
Cleco Corporation	1605	6	No	Yes
CMS Energy	1605	6	Yes	Yes
Commonwealth Edison Company (ComEd)	1605	21	No	Yes
Community Electric Cooperative	1605	1	No	No
Conectiv Atlantic Generation (CAG)	1605	8	No	No
Conectiv Delmarva Generation	1605	16	No	Yes
Consolidated Edison Company of New York, Inc.	1605	3	Yes	Yes
Delaware Electric Cooperative	1605	1	No	No
Delta Electric Power Association	1605EZ	5	N/A	N/A
DTE Energy/ Detroit Edison	1605	37	Yes	No
Duke Energy Corporation	1605	15	Yes	Yes
Dynegy Midwest Generation Inc.	1605	29	Yes	Yes
The Empire District Electric Co.	1605	6	No	No
Energy Northwest	1605EZ	1	N/A	N/A
Entergy Services, Inc.	1605	31	Yes	Yes

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Electric Power				
FirstEnergy Corporation	1605	31	Yes	Yes
Florida Power Corporation	1605		Yes	No
FPL Group	1605	9	Yes	Yes
Generating Resource Recovery Partners, LP	1605	4	No	No
Golden Valley Electric Association, Inc	1605EZ	4	N/A	N/A
GPU, Inc.	1605	38	No	No
Hawaiian Electric Company, Inc.	1605	12	Yes	Yes
JEA	1605EZ	4	N/A	N/A
KeySpan Energy Corporation	1605		Yes	No
Los Angeles Department of Water and Power	1605	21	Yes	Yes
Lower Colorado River Authority	1605	6	Yes	Yes
McNeil Generating Station	1605		Yes	No
Mecklenburg Electric Cooperative	1605	1	No	No
Minnesota Power	1605	8	No	Yes
Moorhead Public Service	1605EZ	6	N/A	N/A
Nashville Electric Service	1605EZ	8	N/A	N/A
National Grid USA	1605	8	No	No
Nebraska Public Power District	1605EZ	9	N/A	N/A
New York Power Authority	1605		Yes	Yes
Niagara Mohawk Power Corporation	1605	14	Yes	Yes
NiSource/NIPSCO	1605	30	Yes	Yes
North Carolina Electric Membership Corporation	1605EZ	1	N/A	N/A
Northern Neck Electric Cooperative	1605	2	No	No
Northern Virginia Electric Cooperative	1605	2	No	No
NRG Energy Inc	1605	3	No	No
Old Dominion Electric Cooperative	1605	2	No	No
Omaha Public Power District	1605EZ	10	N/A	N/A
Pacific Energy Operating Group, LP	1605	4	No	No
PacifiCorp	1605	39	Yes	Yes
PECO Energy Company	1605	14	Yes	Yes
PG&E Corporation	1605	23	Yes	No
Platte River Power Authority & 4 owner cities	1605	26	No	No
Portland General Electric Co.	1605	24	Yes	No
PPL CORPORATION	1605	27	Yes	Yes
Prince George Electric Cooperative	1605	1	No	No
Public Service Company of New Mexico	1605	4	No	Yes
Public Service Enterprise Group	1605	13	Yes	No
Public Utility District No. 1 of Snohomish County	1605	9	No	No
Rappahannock Electric Cooperative	1605	3	No	No
Reliant Energy - HL&P	1605	5	Yes	Yes
Sacramento Municipal Utility District	1605	7	Yes	No
Salt River Project	1605EZ	19	N/A	N/A
Santee Cooper	1605	10	Yes	Yes
Seattle City Light	1605	19	Yes	No
Seminole Electric Cooperative, Inc.	1605EZ	4	N/A	N/A
Shenandoah Valley Electric Cooperative	1605	3	No	No
Shrewsbury Electric Light Plant	1605EZ	2	N/A	N/A
South Carolina Electric & Gas Company	1605	13	No	Yes
Southern California Edison Co.	1605	12	No	No
Southern Company	1605	28	Yes	Yes

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Electric Power				
Southside Electric Cooperative	1605	1	No	No
Steuben Rural Electric Co-op	1605EZ	10	N/A	N/A
Tampa Electric Company	1605	7	Yes	Yes
Tennessee Valley Authority	1605	22	Yes	Yes
Tucson Electric Power Company	1605	16	No	Yes
TXU	1605	22	No	Yes
Utah Municipal Power Agency	1605EZ	7	N/A	N/A
Vermont Public Power Supply Authority	1605	13	No	No
Waverly Light & Power Company	1605	9	Yes	Yes
Western Resources, Inc.	1605	54	No	Yes
Wisconsin Electric Power Co.	1605	19	No	Yes
Wisconsin Public Power Inc.	1605EZ	25	N/A	N/A
Xcel Energy	1605	34	No	Yes
Zeeland Board of Public Works	1605EZ	3	N/A	N/A
Total Number of Projects Reported by Entities in Sector		**1287**		
Total Number of Entities in Sector Reporting on Schedule		**98**	**41**	**42**
Industry				
12 (Coal Mining)				
Consol Coal Group	1605		Yes	No
Drummond Company, Inc.	1605	1	No	No
20 (Food and Kindred Products)				
Austin Quality Foods, Inc.	1605		Yes	No
Cargill, Inc. - Oil Seeds Division	1605		Yes	No
Florida Transport 82	1605	6	No	Yes
Mead Johnson Nutls/Bristol-Meyers Squibb	1605	2	No	No
Miller Brewing Company	1605		Yes	No
National By-Products Inc	1605	1	No	No
22 (Textile Mill Products)				
Hanes Dye and Finishing	1605		Yes	No
Highland Industries, Inc.	1605		Yes	No
National Spinning Co., Inc.	1605		Yes	No
Sherry Manufacturing	1605	3	No	Yes
Valdese Manufacturing Company	1605		Yes	No
23 (Apparel and Other Textile Products)				
M.J. SOFFE COMPANY	1605		Yes	No
24 (Lumber and Wood Products)				
World Wood Co.	1605		Yes	No
25 (Furniture and Fixtures)				
Doxey Furniture Corporation	1605		Yes	No
26 (Paper and Allied Products)				
Atlas Paper Mills	1605	4	No	Yes
27 (Printing and Publishing)				
Quad/Graphics, Inc.	1605	6	No	No
28 (Chemicals and Allied Products)				
Ajinomoto USA, Inc.	1605		Yes	No
Allergan, Inc.	1605	22	Yes	Yes
Baxter Healthcare Inc.	1605		Yes	No
The Dow Chemical Company	1605	4	Yes	Yes
Johnson & Johnson	1605	10	Yes	No
L'ORÉAL USA - Florence Manufacturing	1605		Yes	Yes

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Industry				
Mallinckrodt, Inc.	1605		Yes	No
Pharmacia & Upjohn Caribe, Inc.	1605EZ	5	N/A	N/A
The Virkler Company	1605		Yes	No
Wyeth-Lederle Vaccines	1605		Yes	No
29 (Petroleum Refining and Other Related Industries)				
BP	1605	7	Yes	Yes
Rangely Weber Sand Unit	1605	1	No	No
Sunoco, Inc.	1605		Yes	Yes
Texaco, Inc.	1605EZ	1	N/A	N/A
Unocal Corporation	1605	1	No	No
30 (Rubber and Miscellaneous Plastic Products)				
Azdel, Inc	1605		Yes	No
Pak-Lite, Inc. - Mebane Plant	1605		Yes	No
32 (Stone, Clay, Glass, and Concrete Products)				
Arizona Portland Cement Co.	1605	11	Yes	Yes
Calaveras Cement Company	1605	1	Yes	No
California Portland Cement Co. - Colton Plant	1605	8	Yes	Yes
California Portland Cement Co. - Mojave Plant	1605	6	Yes	Yes
Lafarge U.S. Cementitious	1605		Yes	No
Lehigh Portland Cement Company	1605	6	Yes	No
Separation Technologies, Inc	1605EZ	3	N/A	N/A
33 (Primary Metals Industries)				
Alcan Ingot, Sebree Aluminum Plant	1605	1	Yes	Yes
Bethlehem Steel Corporation	1605		Yes	No
Columbia Falls Aluminum Company, LLC	1605	2	Yes	No
CommScope	1605		Yes	No
Noranda Aluminum Inc.	1605	1	No	Yes
34 (Fabricated Metal Products except machinery and transportation equipment)				
DeBourgh Manufacturing Company	1605EZ	W	N/A	N/A
Majestic Metals, Inc.	1605EZ	3	N/A	N/A
35 (Industrial and Commercial Equipment and Components)				
Michigan CAT	1605	2	No	No
36 (Electronic and Other Electrical Equipment)				
Advanced Micro Devices	1605EZ	7	N/A	N/A
IBM	1605		Yes	No
Litton Poly-Scientific Clifton Precision	1605		Yes	No
Lucent Technologies Inc.	1605	22	Yes	Yes
Motorola Austin	1605		Yes	Yes
Penn Compression Moulding, Inc.	1605		Yes	No
Siemens Power Transmission & Distribution, Inc.	1605		Yes	No
37 (Transportation Equipment)				
General Motors Corporation	1605	3	Yes	No
International Truck and Engine Corporation	1605		Yes	Yes
Pratt & Whitney North Berwick	1605	43	Yes	No
Rolls-Royce Corporation	1605	4	Yes	No
38 (Instruments and Related Products)				
Danaher Controls	1605		Yes	No
39 (Miscellaneous Manufacturing Industries)				
Republic Metals Corporation	1605		Yes	No
67 (Holding and Other Investmemt Offices)				
CLE Resources	1605	9	No	Yes
Total Number of Projects Reported by Entities in Sector		**206**		
Total Number of Entities in Sector Reporting on Schedule		**32**	**46**	**17**

Table B9. Reporting Entities by Sector and SIC Code, Data Year 2000

Sector, Sic Code, and Reporter	Form Type	Number of Projects Reported (Schedule II)	Entity-Wide Report (Schedule III)	Commitments (Schedule IV)
Other				
49 (Electric, Gas, and Sanitary Services)				
Burlington County Board of Chosen Freeholders	1605	2	No	No
57 (Furniture and Homefurnishings Stores				
Abe Krasne Home Furnishings, Inc.	1605		Yes	No
72 (Personal Services)				
Maple Springs Laundry	1605		Yes	No
86 (Membership Organizations)				
Minnesota Resource Recovery Association	1605EZ	3	N/A	N/A
88 (Private Households)				
Arthur Rypinski & Jacquelyn Porth	1605	5	Yes	No
91 (Executive, Legislative, and General				
Austin Parks & Rec. Dept.- Urban Forestry Program	1605	1	No	No
U.S. Department of Energy- Office of Solar	1605	1	No	No
Total Number of Projects Reported by Entities in Sector		**12**		
Total Number of Entities in Sector Reporting on Schedule		**5**	**3**	**0**
Total Number of Projects Reported for 2000		**1882**		
Total Number of Entities Reporting on Schedule		**183**	**101**	**64**

Note: This table excludes confidential reporters.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B10. Affiliation of Reported Emission Reduction and Carbon Sequestration Projects with Voluntary Programs by Project Type, Data Year 2000

Voluntary Program	Number of Reporters	Project Type					Total Number of Projects
		Electricity	End Use	Carbon Sequestration	Methane	Halogens and Other Project Types	
Climate Challenge	83	366	258	285	42	83	1034
Climate Wise	19	3	109	2	1	7	122
Coalbed Methane Outreach	4	--	1	--	3	--	4
Compressed Air Challenge	1	--	1	--	--	--	1
Cool Communities Program	1	--	--	1	--	--	1
Energy Analysis and Diagnostic Centers	1	--	1	--	--	--	1
Energy Star Building	5	--	18	--	--	1	19
Energy Star Computers	2	--	2	--	--	--	2
Energy Star Transformers	7	6	1	--	--	--	7
Green Lights	16	--	19	--	--	--	19
Landfill Methane Outreach	37	11	--	--	151	--	162
Motor Challenge	4	--	4	--	--	--	4
Natural Gas STAR	7	--	--	--	7	1	8
Other Energy Star Programs	2	--	2	--	--	1	3
Other Voluntary Programs	7	1	3	1	2	2	9
Rebuild America	1	--	1	--	--	1	2
Sulfur Hexafluoride Emissions Reduction Partnership for Electric Power Systems	6	--	--	--	--	6	6
United States Initiative on Joint Implementation	32	3	--	38	--	--	41
Voluntary Aluminum Industrial Partnership	2	--	--	--	--	2	2
Waste Wi$e	3	--	--	--	--	3	3

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
8309 Tujunga Avenue Corporation	Alternative Energy							1605
A&N Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Abe Krasne Home Furnishings, Inc.	Other					1605	1605	1605
Advanced Micro Devices	Industry							1605EZ
Advanced Micro Devices, Inc.	Industry				1605EZ	1605EZ	1605EZ	
ADVANE Heli-Welders	Industry					1605EZ		
AES Hawaii	Electric Power			1605	1605			
AES Hawaii, Inc.	Electric Power					1605	1605	1605
AES Shady Point	Electric Power			1605	1605	1605	1605	1605
AES Thames	Electric Power			1605	1605	1605	1605	1605
AES Warrior Run, Inc.	Electric Power							1605
Air Exchange, Inc.	Other					1605		
Ajinomoto USA, Inc.	Industry							1605
Alabama Biomass Partners, Ltd	Alternative Energy					1605EZ	1605EZ	1605EZ
Alcan Ingot, Sebree Aluminum Plant	Industry	1605	1605	1605	1605	1605	1605	1605
Allegheny Energy, Inc.	Electric Power						1605	1605
Allegheny Power Service Corporation	Electric Power	1605	1605	1605	1605	1605		
Allergan, Inc.	Industry					1605	1605	1605
Alliant Energy	Electric Power					1605	1605	1605
Ameren Corporation (formerly UE and CIPS)	Electric Power					1605	1605	1605
AmerenCIPS	Electric Power				1605			
American Electric Power, Inc.	Electric Power	1605	1605	1605	1605	1605	1605	1605
American Forests	Agriculture & Forestry		1605	1605	1605	1605	1605	1605
American Municipal Power - Ohio	Electric Power			1605	1605	1605	1605	1605
AMERICAN SOILS	Industry					1605EZ		
Anoka Municipal Utility	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Arizona Electric Power Co-op	Electric Power	1605EZ						
Arizona Electric Power Cooperative, Inc.	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Arizona Portland Cement Co.	Industry				1605	1605	1605	1605
Arizona Public Service Company	Electric Power	1605	1605	1605	1605	1605	1605	1605
Arthur Rypinski & Jacquelyn Porth	Other	1605	1605	1605	1605	1605	1605	1605
Asheville Landfill Gas, LLC	Alternative Energy				1605	1605	1605	1605
AT&T	Industry						1605	
Atlantic Energy, Inc. (AEI)	Electric Power		1605	1605	1605	1605	1605	
Atlas Paper Mills	Industry						1605	1605
Audros Corporation	Industry					1605EZ		
Austin Energy	Electric Power					1605EZ	1605EZ	1605EZ
Austin Parks & Rec. Dept.- Urban Forestry Program	Other							1605
Austin Quality Foods, Inc.	Industry							1605
Avista Utilities	Electric Power						1605	1605
Azdel, Inc	Industry							1605
Baltimore Gas & Electric Co.	Electric Power	1605	1605	1605	1605	1605	1605	
Baltimore Gas & Electric Company	Electric Power							1605
BARC Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Baxter Healthcare Inc.	Industry							1605
BAYER Corporation	Industry					1605		
Berkeley Electric Cooperative	Electric Power	1605EZ		1605EZ	1605EZ			
Berkeley Electric Cooperative Incorporated	Electric Power		1605EZ					
Bethlehem Steel Corporation	Industry					1605	1605	1605
Biomass Partners, LP	Alternative Energy					1605EZ	1605EZ	1605EZ

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
Black Warrior Methane Corp.	Alternative Energy					1605	1605	1605
Blue Earth Light & Water	Electric Power		1605					
Bountiful City Light & Power	Electric Power	1605EZ	1605	1605	1605	1605	1605	
BP	Industry							1605
BP America	Industry				1605			
BP Amoco	Industry					1605		
Brooklyn Union	Industry	1605EZ	1605EZ	1605EZ				
Buckeye Power Inc.	Electric Power	1605						
Buckeye Power Incorporated	Electric Power		1605EZ		1605			
Burlington County Board of Chosen Freeholders	Other				1605	1605	1605	1605
Calaveras Cement Company	Industry						1605	1605
California Portland Cement Co. - Colton Plant	Industry				1605	1605	1605	1605
California Portland Cement Co. - Mojave Plant	Industry				1605	1605	1605	1605
Cargill, Inc. - Oil Seeds Division	Industry							1605
Carolina Power & Light Company	Electric Power	1605	1605	1605	1605	1605	1605	1605
Carter H. Lewis, III	Other	1605EZ						
Catawba Landfill Gas, LLC	Alternative Energy					1605	1605	1605
CDX Gas, LLC	Alternative Energy					1605	1605	
Cedar Falls Utilities	Electric Power	1605	1605	1605	1605	1605	1605	1605
Centerior Energy Corporation	Electric Power	1605	1605	1605	1605			
Central and South West Corporation	Electric Power				1605	1605	1605	
Central Hudson Gas & Electric Corp	Electric Power	1605	1605					
Central Hudson Gas & Electric Corporation	Electric Power			1605	1605	1605	1605	1605
Central Illinois Light Company	Electric Power	1605	1605	1605	1605			
Central Illinois Public Service Company	Electric Power	1605	1605	1605				
Central Louisiana Electric Co., Inc.	Electric Power	1605	1605	1605				
Cereza Energy, Inc.	Alternative Energy					1605		
Choptank Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Cinergy Corp.	Electric Power	1605	1605	1605	1605	1605		1605
City of Austin Electric Utility	Electric Power	1605	1605EZ	1605EZ	1605EZ			
City of Edmond, OK Elec. Dept.	Electric Power	1605EZ						
City of Edmond, Oklahoma, Electric Department	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
City of Fairfield Wastewater Division	Other				1605EZ	1605EZ		
City of Palo Alto	Electric Power			1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
City of Sherill Power and Light	Electric Power			1605EZ				
City of Sherrill Power & Light	Electric Power	1605EZ	1605EZ		1605EZ			
City of Wayne	Electric Power	1605EZ	1605EZ					
CITY UTILITIES OF SPRINGFIELD	Electric Power	1605	1605	1605	1605	1605	1605	
Clairol	Industry						1605	
CLE Resources	Industry			1605	1605	1605	1605	1605
Cleco Corporation	Electric Power				1605	1605	1605	1605
CMS Energy	Electric Power						1605	1605
CMV Joint Venture	Alternative Energy					1605	1605	
Columbia Falls Aluminum Company	Industry			1605	1605			
Columbia Falls Aluminum Company LLC	Industry					1605	1605	
Columbia Falls Aluminum Company, LLC	Industry							1605
COM/Electric	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ		
Commonwealth Bethlehem Energy LLC	Alternative Energy					1605		
Commonwealth Bethlehem Energy, LLC	Alternative Energy						1605	1605
Commonwealth Edison Company	Electric Power	1605						
Commonwealth Edison Company (ComEd)	Electric Power							1605
CommScope	Industry							1605

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
Community Electric Cooperative	Electric Power		1605					
Community Electric Cooperative	Electric Power			1605	1605	1605	1605	1605
Conectiv Atlantic Generation (CAG)	Electric Power							1605
Conectiv Delmarva Generation	Electric Power							1605
CONSOL Coal Group	Industry		1605	1605		1605	1605	1605
Consolidated Edison Company of New York, Inc.	Electric Power							1605
Cooperative Power Association	Electric Power	1605	1605	1605	1605	1605		
County Sanitation Districts of Los Angeles County	Alternative Energy					1605	1605	1605
Dade Behring, Inc.	Industry					1605		
Danaher Controls	Industry							1605
DeBourgh Manufacturing Company	Industry		1605	1605EZ	1605EZ			
Delaware Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Delaware Solid Waste Authority	Alternative Energy						1605	1605
Delmarva Power	Electric Power	1605	1605	1605	1605	1605	1605	
Delta Electric Power Ass'n	Electric Power	1605EZ						
Delta Electric Power Association	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Deptford Electric Company, LLC	Alternative Energy							1605
Dominion Energy, L.P.	Alternative Energy					1605		
Dominion Generation	Alternative Energy							1605
Doxey Furniture Corporation	Industry							1605
Dragon Products Company, Inc.	Industry					1605		
Drummond Company, Inc.	Industry							1605
DTE Energy/ Detroit Edison	Electric Power		1605	1605	1605	1605	1605	1605
Duke Energy Corporation	Electric Power					1605	1605	1605
Duke Engineering and Services	Alternative Energy			1605EZ	1605EZ			
Duke Power Company	Electric Power	1605	1605	1605	1605			
DuPont Company	Industry		1605		1605	1605		
Duquesne Light Company	Electric Power		1605	1605	1605	1605		
Dynegy Midwest Generation Inc.	Electric Power						1605	1605
East River Electric Power Coop	Electric Power	1605EZ						
East River Electric Power Cooperative, Inc.	Electric Power		1605EZ	1605EZ				
Ecogas Corporation	Alternative Energy					1605	1605	
El Paso Production Company	Alternative Energy						1605	1605
Energy Management Partners, LP	Alternative Energy						1605EZ	1605EZ
Energy Northwest	Electric Power							1605EZ
Engelhard	Industry					1605		
Enron Renewable Energy Corporation	Alternative Energy			1605EZ				
Entergy Services, Inc.	Electric Power	1605	1605	1605	1605	1605	1605	1605
EnviroGas Limited Partnership	Alternative Energy		1605					
Environmental Synergy, Inc.	Agriculture & Forestry						1605EZ	1605EZ
Environmentally Correct Concepts, Inc.	Agriculture & Forestry				1605			
Essential Foods, Inc.	Industry					1605	1605	
Essroc Cement Corp. - Speed, IN Plant	Industry					1605	1605	
Essroc Cement Corp. -- Bessemer, Pa Plant	Industry					1605	1605	
Essroc Cement Corp. -- Essexville, MI Plant	Industry					1605	1605	
Essroc Cement Corp. -- Frederick, MD Plant	Industry					1605	1605	
Essroc Cement Corp. -- Logansport, IN Plant	Industry					1605	1605	
Essroc Cement Corp. -- PA Operations	Industry					1605	1605	
Essroc Cement Corp. -- San Juan, PR Plant	Industry					1605	1605	
Estee Lauder Companies	Industry					1605	1605	
Fayetteville Gas Company, LLC.	Alternative Energy			1605	1605			
Fidelity Exploration & Production Company	Alternative Energy							1605

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
FirstEnergy Corporation	Electric Power					1605	1605	1605
Flint Electric Membership Corporation	Electric Power		1605EZ					
Flint EMC	Electric Power	1605EZ						
Florida Power & Light Company	Electric Power	1605	1605	1605	1605	1605		
Florida Power Corporation	Electric Power		1605	1605	1605	1605	1605	1605
Florida Transport 82	Industry						1605	1605
FPL Group	Electric Power						1605	1605
Fred Weber, Inc.	Alternative Energy					1605EZ	1605EZ	
Gas Recovery Systems	Alternative Energy						1605	
General Motors Corporation	Industry	1605	1605	1605	1605	1605	1605	1605
General Public Utilities Corporation	Electric Power	1605	1605					
Generating Resource Recovery Partners, LP	Electric Power							1605
GeoMet Inc.	Alternative Energy					1605	1605	
Gilead Sciences	Industry						1605EZ	
Golden Valley Electric Association, Inc	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
GPU, Inc.	Electric Power			1605	1605	1605	1605	1605
Granger Electric Company	Alternative Energy			1605	1605	1605	1605	1605
Grayson Hill Farms	Agriculture & Forestry					1605EZ		
Greater Caribbean Energy & Environment Foundation	Agriculture & Forestry						1605EZ	1605EZ
Greater New Bedford Regional Refuse Mgt District	Alternative Energy							1605
GSF Energy, LLC	Alternative Energy			1605	1605	1605		
Hackensack Meadowlands Development Com.	Alternative Energy							1605
Hanes Dye and Finishing	Industry							1605
Hawaiian Electric Company, Inc.	Electric Power					1605	1605	1605
Highland Industries, Inc.	Industry							1605
Hopkinsville Electric System	Electric Power	1605EZ	1605EZ		1605EZ			
Houston Lighting & Power Company	Electric Power	1605	1605	1605	1605			
IBM	Industry	1605	1605	1605	1605	1605	1605	1605
ILLINOIS POWER COMPANY	Electric Power	1605	1605	1605	1605	1605		
Imperial Plating	Industry					1605		
Industrial Equipment and Supplies	Industry					1605		
Integrated Waste Services Association	Alternative Energy		1605	1605	1605	1605	1605	1605
International Truck and Engine Corporation	Industry						1605	1605
Iredell Landfill Gas, LLC	Alternative Energy				1605	1605	1605	1605
J.M. Gilmer and Company, Inc.	Agriculture & Forestry			1605	1605	1605	1605	1605
Jacksonville Electric Authority	Electric Power		1605EZ	1605EZ	1605EZ			
JEA	Electric Power					1605EZ	1605EZ	1605EZ
Johnson & Johnson	Industry	1605	1605	1605	1605	1605	1605	1605
Kansas City Power & Light Company	Electric Power	1605	1605	1605	1605	1605	1605	
KeySpan Energy Corporation	Electric Power						1605	1605
L'ORÉAL USA - Florence Manufacturing	Industry							1605
Lafarge U.S. Cementitious	Industry							1605
LAHD Energy, Inc.	Alternative Energy			1605EZ	1605EZ	1605EZ	1605EZ	
Landfill Energy Systems	Alternative Energy							1605
Lehigh Portland Cement Company	Industry						1605	1605
LFG Energy, Inc.	Alternative Energy		1605EZ	1605EZ		1605	1605	1605
Litton Poly-Scientific Clifton Precision	Industry							1605
Lockheed Martin	Industry		1605					
Long Island Lighting Company	Electric Power	1605	1605	1605	1605			
Long Island Power Authority & KeySpan Energy	Electric Power					1605		
Los Angeles Department of Water and Power	Electric Power	1605	1605	1605	1605	1605	1605	1605
Lower Colorado River Authority	Electric Power	1605	1605	1605	1605	1605	1605	1605

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
Lucent Technologies	Industry			1605	1605	1605	1605	
Lucent Technologies Inc.	Industry							1605
Lynchburg Gas Producers, LLC	Alternative Energy							1605
M.J. SOFFE COMPANY	Industry							1605
Madison County Depart. of Solid Waste & Sanitation	Alternative Energy						1605	1605
Majestic Metals, Inc.	Industry		1605EZ					1605EZ
Mallinckrodt, Inc.	Industry							1605
Maple Springs Laundry	Other							1605
McMinnville Electric System	Electric Power	1605EZ	1605EZ					
McNeil Generating Station	Electric Power					1605	1605	1605
MCNIC Oil & Gas Co.	Alternative Energy			1605	1605	1605		
Mead Johnson Nutls/Bristol-Meyers Squibb	Industry							1605
Mecklenburg Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Michigan CAT	Industry							1605
Middlesex Generating Company, LLC	Alternative Energy							1605
Miller Brewing Company	Industry							1605
Minnesota Power	Electric Power	1605	1605	1605	1605	1605	1605	1605
Minnesota Resource Recovery Association	Other			1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Missouri Basin Muni Pwr Agency	Electric Power	1605EZ	1605EZ	1605EZ				
Missouri River Energy Services	Electric Power				1605EZ	1605EZ	1605EZ	
Montana Power Company	Electric Power	1605	1605	1605	1605	1605		
Monteco Gas, LLC	Alternative Energy			1605EZ	1605EZ	1605		
Moorhead Public Service	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Mora Municipal Utilities	Electric Power	1605EZ	1605EZ					
Motorola Austin	Industry				1605	1605	1605	1605
Municipal Electric Authority of Georgia	Electric Power	1605	1605	1605	1605	1605		
N.C. Electric Membership Corp	Electric Power	1605EZ						
N.W. Electric Power Cooperative, Inc.	Electric Power		1605EZ					
Nashville Electric Service	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
National By-Products Inc	Industry							1605
National Grid USA	Electric Power						1605	1605
National Spinning Co., Inc.	Industry							1605
Natural Power, Inc.	Alternative Energy						1605	1605
Navistar International Transportation Corp.	Industry					1605		
NC Muni Landfill Gas Partners, LLC	Alternative Energy							1605
NC Muni Landfill Gas Partners, LP	Alternative Energy			1605	1605	1605	1605	
Nebraska Public Power District	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
NEO Corporation	Alternative Energy						1605	1605
Nevada Power Company	Electric Power				1605EZ	1605EZ		
New England Electric System (NEES) Companies	Electric Power	1605	1605					
New England Electric System (NEES) Company	Electric Power				1605			
New England Power Company, a NEES Company	Electric Power			1605				
New York Power Authority	Electric Power				1605	1605		1605
Newton Landfill Gas, LLC	Alternative Energy			1605	1605	1605	1605	1605
Nexstar Pharmaceuticals, Inc.	Industry				1605EZ	1605EZ		
Niagara Mohawk Power Corporation	Electric Power	1605	1605	1605	1605	1605	1605	1605
NIPSCO Industries	Electric Power	1605	1605	1605	1605			
NiSource/NIPSCO	Electric Power					1605	1605	1605
Noranda Aluminum Inc.	Industry	1605	1605	1605	1605	1605	1605	1605
North American Carbon, Inc.	Alternative Energy			1605	1605	1605	1605	1605
North Carolina Biomass Partners	Alternative Energy					1605EZ	1605EZ	1605EZ
North Carolina Electric Membership Corporation	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
Northeast Utilities	Electric Power	1605	1605	1605	1605	1605	1605	
Northern Neck Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Northern States Power Company	Electric Power	1605	1605	1605	1605	1605	1605	
Northern Virginia Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Northwest Fuel Development, Inc.	Alternative Energy	1605	1605	1605	1605	1605	1605	1605
NRG Energy Inc	Electric Power							1605
Oak Creek Energy Systems Inc.	Alternative Energy						1605	1605
Ocean County Landfill Corporation	Alternative Energy							1605
Ohio Edison Company	Electric Power	1605	1605	1605	1605			
Old Dominion Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Omaha Public Power District	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
OREGON STATE UNIVERSITY (ST. OF OR.)	Other	1605						
Oregon State University (State of Oregon)	Other		1605	1605	1605		1605	
Osage Municipal Utilities	Electric Power	1605	1605	1605				
Pacific Energy Operating Group, LP	Electric Power							1605
Pacific Gas and Electric Co.	Electric Power	1605EZ						
Pacific Gas and Electric Company	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ		
Pacific Natural Energy, LLC	Alternative Energy							1605
Pacific Recovery Corporation	Alternative Energy							1605
PacifiCorp	Electric Power	1605	1605	1605	1605	1605	1605	1605
Pak-Lite, Inc. - Mebane Plant	Industry							1605
Palmer Capital Corporation	Alternative Energy						1605	1605
Pan American Hospital	Other					1605		
Peabody Holding Company, Inc.	Industry	1605	1605	1605	1605	1605		
PECO Energy Company	Electric Power					1605EZ	1605	1605
PEI Power Corp	Alternative Energy						1605	1605
Penn Compression Moulding, Inc.	Industry							1605
Pennsylvania Power & Light Co. (PP&L)	Electric Power	1605	1605					
PG&E Corporation	Electric Power						1605	1605
Pharmacia & Upjohn	Industry						1605EZ	
Pharmacia & Upjohn Caribe, Inc.	Industry							1605EZ
Pintexs	Industry					1605		
Pitt Landfill Gas, LLC	Alternative Energy					1605	1605	1605
Platte River Power Authority & 4 owner cities	Electric Power				1605	1605	1605	1605
Portland General Electric Co.	Electric Power	1605	1605	1605	1605	1605	1605	1605
Potomac Electric Power Company	Electric Power	1605	1605	1605	1605			
Power Management Partners, LP	Alternative Energy					1605EZ		
PP&L RESOURCES, INC.	Electric Power			1605	1605	1605		
PPL CORPORATION	Electric Power						1605	1605
Pratt & Whitney North Berwick	Industry						1605	1605
Prince George Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Public Service Company of New Mexico	Electric Power			1605	1605	1605	1605	1605
Public Service Electric and Gas Company	Electric Power	1605	1605	1605	1605	1605		
Public Service Enterprise Group	Electric Power						1605	1605
Public Utility District No. 1 of Snohomish County	Electric Power	1605	1605	1605	1605	1605	1605	1605
Puget Sound Energy, Inc.	Electric Power			1605EZ				
Puget Sound Power & Light Company	Electric Power	1605	1605					
Quad/Graphics, Inc.	Industry		1605		1605		1605	1605
Rangely Weber Sand Unit	Industry						1605	1605
Rappahannock Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Redstone Gas Partners LLC	Alternative Energy						1605	
Reliant Energy - HL&P	Electric Power					1605	1605	1605

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
Republic Metals Corporation	Industry						1605	1605
Rochester Institute of Technology	Other		1605	1605	1605		1605	
Rolls-Royce Corporation	Industry						1605	1605
Rosewood Resources, Inc.	Alternative Energy						1605	
Sacramento Municipal Utility District	Electric Power			1605	1605	1605	1605	1605
Salt River Project	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Santee Cooper	Electric Power	1605	1605	1605	1605	1605	1605	1605
Science Applications International Corporation	Other			1605EZ				
Seattle City Light	Electric Power	1605	1605	1605	1605	1605	1605	1605
SeaWest Windpower, Inc.	Alternative Energy					1605	1605	1605
Seminole Electric Coop., Inc.	Electric Power	1605EZ	1605EZ					
Seminole Electric Cooperative, Inc.	Electric Power				1605EZ	1605EZ	1605EZ	1605EZ
Seneca Energy, Inc.	Alternative Energy		1605EZ	1605EZ		1605	1605	1605
Seneca Meadows, Inc.	Alternative Energy		1605EZ					
Separation Technologies, Inc	Industry					1605EZ	1605EZ	1605EZ
Separation Technologies, Inc.	Industry			1605EZ	1605EZ			
Shenandoah Valley Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Sherry Manufacturing	Industry						1605	1605
Shrewsbury Electric Light Plan	Electric Power	1605EZ	1605EZ					
Shrewsbury Electric Light Plant	Electric Power			1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Siemens Power Transmission & Distribution, Inc.	Industry							1605
Sierra Pacific Power Company	Electric Power	1605	1605	1605				
SONAT Exploration Company	Alternative Energy					1605		
South Carolina Electric & Gas Company	Electric Power				1605	1605	1605	1605
Southeastern Biomass Partners, LP	Alternative Energy					1605EZ	1605EZ	1605EZ
SOUTHERN CALIFORNIA EDISON CO.	Electric Power	1605	1605	1605	1605	1605	1605	1605
Southern Company	Electric Power			1605	1605	1605	1605	1605
Southside Electric Cooperative	Electric Power		1605	1605	1605	1605	1605	1605
Steuben Rural Electric Co-op	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Sunbelt Land and Mineral Co., Inc	Agriculture & Forestry		1605					
Sunoco, Inc.	Industry						1605	1605
SWEENEY Furniture	Other					1605EZ		
Tacoma Public Utilities	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	
Tampa Electric Company	Electric Power		1605	1605	1605	1605	1605	1605
Taunton Municipal Lighting Pla	Electric Power	1605EZ						
Taunton Municipal Lighting Plant	Electric Power		1605EZ	1605EZ	1605EZ	1605EZ		
Tennessee Valley Authority	Electric Power	1605	1605	1605	1605	1605	1605	1605
Texaco, Inc.	Industry							1605EZ
Texas Utilities Electric Company	Electric Power	1605	1605	1605	1605			
The Bentech Group of Delaware, Inc.	Alternative Energy						1605	1605
The Detroit Edison Company	Electric Power	1605						
The Dow Chemical Company	Industry		1605	1605	1605	1605	1605	1605
The Empire District Electric Co.	Electric Power							1605
The Gillette Company	Industry					1605	1605	
The Pacific Forest Trust, Inc.	Agriculture & Forestry						1605EZ	
The Southern Company	Electric Power	1605	1605					
The Virkler Company	Industry							1605
Town of Colonie Solid Waste Management Facility	Alternative Energy						1605	
Trees for the Future	Agriculture & Forestry	1605	1605					
Tucson Electric Power Company	Electric Power		1605		1605	1605		1605
TXU	Electric Power					1605	1605	1605
U. S. Steel Mining Company, LLC	Alternative Energy					1605	1605	1605

Table B11. Reporting Entities and Sectors, Years Reported, and Form Type, Data Years 1994-2000

Reporter	Sector	1994	1995	1996	1997	1998	1999	2000
U.S. Department of Energy - Energy Managment	Other						1605	
U.S. Department of Energy- Office of Solar	Other					1605	1605	1605
UNICOM (Commonwealth Edison Company)	Electric Power		1605	1605	1605	1605	1605	
Union Electric Company	Electric Power	1605	1605	1605	1605			
United Power Association	Electric Power	1605	1605	1605	1605	1605		
Unocal Corporation	Industry							1605
Urban Forestry Alliance	Agriculture & Forestry					1605EZ		
USGen New England, Inc.	Electric Power					1605		
USX Corporation	Alternative Energy					1605	1605	
Utah Municipal Power Agency	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Utility Board of Key West, FL	Electric Power	1605EZ						
Valdese Manufacturing Company	Industry							1605
VANALCO, INC. - (Primary Aluminum Reduction Plant)	Industry			1605	1605	1605	1605	
Vermont Public Power Supply Authority	Electric Power	1605	1605	1605	1605	1605	1605	1605
Volvo Cars of North America, Inc.	Industry			1605EZ	1605EZ	1605EZ	1605EZ	
Waverly Light & Power Company	Electric Power	1605	1605	1605	1605	1605	1605	1605
Western Resources, Inc.	Electric Power	1605	1605	1605	1605	1605	1605	1605
Whatcom Land Trust	Agriculture & Forestry					1605	1605	
Wisconsin Electric Power Co.	Electric Power	1605	1605	1605	1605	1605	1605	1605
Wisconsin Power & Light	Electric Power	1605	1605	1605	1605			
Wisconsin Public Power Inc.	Electric Power		1605EZ		1605EZ	1605EZ	1605EZ	1605EZ
Wisconsin Public Power Inc. SYSTEM	Electric Power			1605EZ				
Wisconsin Public Power, Inc.	Electric Power	1605EZ						
Wisconsin Public Service Corporation	Electric Power	1605	1605	1605	1605	1605	1605	
World Parks Endowment	Agriculture & Forestry					1605	1605	
World Wood Co.	Industry							1605
Wyeth-Lederle Vaccines	Industry							1605
Xcel Energy	Electric Power							1605
Zahren Alternative Power Corp.	Alternative Energy	1605EZ	1605EZ					
Zahren Alternative Power Corporation	Alternative Energy			1605EZ	1605EZ	1605EZ	1605EZ	1605EZ
Zeeland Board of Public Works	Electric Power	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ	1605EZ

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B12. Project-Level Reductions, by Entity Sector, Data Years 1994-2000
(Metric Tons Carbon Dioxide Equivalent)

Sector and Reduction Type	1994	1995	1996	1997	1998	1999	2000
Agriculture & Forestry							
Direct	--	--	--	-0.6	--	--	--
Indirect	--	6.8	6.8	--	--	--	--
Sequestration	356,558.8	234,702.2	35,198.7	39,527.2	2,046,934.5	431,291.1	112,746.8
Unspecified (EZ)	0.0	0.0	0.0	0.0	36,222.2	68,195.8	0.5
Alternative Energy							
Direct	261,496.0	25,769.5	-14,859,969.8	-15,366,381.4	22,577,221.3	26,000,314.4	34,191,889.2
Indirect	1,270.1	43,859,155.5	39,754,203.2	22,580,777.7	20,789,485.1	23,609,470.2	22,761,758.1
Sequestration	--	--	--	--	--	--	--
Unspecified (EZ)	560,913.9	1,146,892.6	1,273,056.8	1,343,821.2	2,499,685.6	3,051,879.0	2,913,611.0
Electric Power							
Direct	59,004,436.5	85,222,962.8	100,982,856.3	105,172,388.1	118,256,785.1	124,424,203.4	145,953,210.1
Indirect	5,092,842.9	8,450,945.3	13,518,927.8	14,619,760.1	20,210,012.2	30,681,524.2	31,672,798.3
Sequestration	389,701.8	955,767.6	8,640,540.8	9,736,746.8	10,341,012.6	9,184,547.0	8,794,286.2
Unspecified (EZ)	3,721,044.1	4,969,791.4	4,332,595.8	6,568,087.6	15,472,773.5	8,247,572.5	7,827,360.0
Industry							
Direct	3,347,075.1	3,074,795.4	3,756,581.1	5,013,299.1	6,882,518.5	4,819,723.6	6,991,532.9
Indirect	263,267.7	167,400.2	161,265.7	382,016.8	1,197,425.5	2,195,718.9	6,533,549.6
Sequestration	0.0	0.0	0.0	68,707.8	102,980.2	0.0	102,980.0
Unspecified (EZ)	3,107.7	5,433.4	61,265.6	234,112.3	235,606.2	261,546.5	337,981.3
Other							
Direct	193.4	382.5	571.4	77,518.7	279,800.7	197,739.6	201,097.0
Indirect	0.7	1,409.4	1,494.6	2,986.1	1,036,351.5	51,158.3	30,497.0
Sequestration	284.1	284.0	851.9	4,825.2	0.0	7,760.5	8.6
Unspecified (EZ)	3.3	0.0	1,778.7	490,586.3	1,173,957.2	1,256,894.9	1,192,787.5

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B13. Project-Level Reductions by Location of Project, Data Years 1994-2000
(Metric Tons Carbon Dioxide Equivalent)

Geographic Scope	1994	1995	1996	1997	1998	1999	2000
Foreign							
Direct	188.9	378.0	802.9	6,169.4	1,994.5	49,794.9	-208,274.7
Indirect	23,126.6	48,734.4	61,561.7	403,367.4	59,105.6	339,396.7	4,035,671.4
Sequestration	356,842.9	758,944.0	8,426,200.0	9,472,230.5	11,352,313.9	8,958,450.4	8,283,829.0
Unspecified (EZ)	--	--	--	--	--	--	--
U.S.							
Direct	62,613,012.1	88,323,532.1	89,879,236.3	94,890,654.6	147,994,331.1	155,392,186.1	187,546,003.9
Indirect	5,334,254.8	52,430,182.8	53,374,336.4	37,182,173.3	43,174,168.7	56,198,474.9	56,962,931.6
Sequestration	389,701.8	431,809.9	250,391.4	377,576.5	1,138,613.4	665,148.3	726,192.5
Unspecified (EZ)	4,285,069.0	6,122,117.4	5,668,696.9	8,636,607.5	19,418,244.8	12,886,088.8	12,271,740.3

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B14. Reporting Entities by Type of Form and Organization, Data Years 1994-2000
(Number of Forms Received)

Reporting Entity	Reports Received							Percent of Total						
	1994	1995	1996	1997	1998	1999(R)	2000	1994	1995	1996	1997	1998	1999(R)	2000
Form EIA-1605														
Individual or Family	1	1	1	1	1	1	2	1.4	1.0	0.9	0.8	0.6	0.6	1.1
Partnership	--	1	1	2	3	2	2	--	1.0	0.9	1.6	1.9	1.2	1.1
Corporation	56	67	74	83	112	114	132	76.7	66.3	67.9	68.0	70.4	68.7	71.0
Non-profit	5	4	5	6	5	3	1	6.8	4.0	4.6	4.9	3.1	1.8	0.5
Privately Held	4	9	11	14	35	38	45	5.5	8.9	10.1	11.5	22.0	22.9	24.2
Publicly Traded	41	48	44	49	59	60	63	56.2	47.5	40.4	40.2	37.1	36.1	33.9
Subsidiary	6	6	14	14	21	21	24	8.2	5.9	12.8	11.5	13.2	12.7	12.9
Government	12	13	11	12	13	17	16	16.4	12.9	10.1	9.8	8.2	10.2	8.6
Federal	1	1	1	1	2	3	2	1.4	1.0	0.9	0.8	1.3	1.8	1.1
Local	7	8	8	7	8	10	8	9.6	7.9	7.3	5.7	5.0	6.0	4.3
Regional	1	1	--	1	1	1	2	1.4	1.0	--	0.8	0.6	0.6	1.1
State	3	3	2	3	2	3	4	4.1	3.0	1.8	2.5	1.3	1.8	2.2
Joint Venture	--	--	--	1	1	2	2	--	--	--	0.8	0.6	1.2	1.1
Limited Liability Company	--	--	--	--	5	7	10	--	--	--	--	3.1	4.2	5.4
Other	4	18	21	22	23	22	21	5.5	17.8	19.3	18.0	14.5	13.3	11.3
Trade Association	--	1	1	1	1	1	1	--	1.0	0.9	0.8	0.6	0.6	0.5
Total Form EIA-1605	73	101	109	122	159	166	186	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Form EIA-1605EZ														
Individual	1	--	--	--	--	--	--	2.9	--	--	--	--	--	--
Company	7	14	17	15	26	19	17	20.6	34.1	41.5	37.5	54.2	46.3	47.2
Government	20	18	17	19	16	14	13	58.8	43.9	41.5	47.5	33.3	34.1	36.1
Non-Profit Organization	4	6	5	4	4	6	5	11.8	14.6	12.2	10.0	8.3	14.6	13.9
Other	3	3	2	2	2	2	1	8.8	7.3	4.9	5.0	4.2	4.9	2.8
Total Form EIA-1605EZ	34	41	41	40	48	41	36	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(R) = Revised

Notes: The total number of corporations is less than the sum of the subtypes for some years, because one entity is listed both as publicly traded and as a subsidiary in 1998, 1999 and 2000, and because each of the seven Essroc Cement Corp. plants is listed both as privately held and as a subsidiary in 1998 and 1999.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B15. Summary of Reports Received by Schedule, Data Years 1994-2000

Form and Year	Number of Reports: With Emission Reduction Projects (Schedule II)	Number of Reports: With Entity-Wide Emissions or Reductions (Schedule III)	Number of Reports: With Commitments to Reduce Future Emissions (Schedule IV)	Total Number Reports Received
Form EIA1605				
1994	64	40	45	73
1995	88	51	62	101
1996	99	56	64	109
1997	110	60	72	122
1998	144	76	72	159
1999	148	82	66	166
2000	148	100	65	186
Form EIA1605EZ				
1994	35	--	--	35
1995	41	--	--	41
1996	41	--	--	41
1997	40	--	--	40
1998	48	--	--	48
1999	41	--	--	41
2000	36	--	--	36
Total				
1994	99	40	45	108
1995	129	51	62	142
1996	140	56	64	150
1997	150	60	72	162
1998	192	76	72	207
1999	189	82	66	207
2000	184	100	65	222

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B16. Distribution of Projects Reported by Project Type, Data Years 1994-2000

Project Type	Number of Reporters							Number of Projects						
	1994	1995	1996	1997	1998	1999(R)	2000	1994	1995	1996	1997	1998	1999(R)	2000
Electricity Generation, Transmission, and Distribution	69	86	88	92	96	92	93	221	292	325	369	428	435	462
Cogeneration	4	8	10	14	13	10	12	4	11	13	20	19	17	18
Energy End Use	75	90	85	92	107	100	91	204	271	267	309	374	386	424
Transportation	25	33	37	39	45	43	41	31	48	58	64	72	73	72
Waste Treatment and Disposal (Methane)	12	20	29	31	44	48	59	27	39	65	81	129	195	234
Agriculture (Methane and Nitrous Oxide)	2	2	2	2	3	3	4	3	3	3	3	4	4	5
Oil and Natural Gas Systems and Coal Mining (Methane)	8	10	14	15	22	21	19	13	16	22	19	30	31	26
Carbon Sequestration	40	62	67	75	73	70	66	78	199	198	309	355	442	494
Halogenated Substances	13	18	18	21	23	27	29	15	22	23	30	35	36	44
Other Emission Reductions	33	45	47	54	61	57	57	38	59	66	84	103	102	103
All Categories	97	128	140	150	191	187	183	634	960	1040	1288	1549	1721	1882
Did Not Report Projects	11	14	10	12	16	20	39	--	--	--	--	--	--	--
Total, All Reporters	108	142	150	162	207	207	**222**	**634**	**960**	**1040**	**1288**	**1549**	**1721**	**1882**

(R) = Revised

Notes: The total numbers of reporters are smaller than the sums of the numbers of reporters for each project type, because reporters may provide information on projects of more than one type.

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.

Table B17. Affiliation of Reporting Entities with Voluntary Programs, Data Years 1994-2000

Voluntary Program	Number of Reporters						
	1994	1995	1996	1997	1998	1999	2000
AgSTAR	--	1	--	--	--	--	--
Climate Challenge	77	97	93	103	98	88	83
Climate Wise	--	5	3	11	31	28	19
Coalbed Methane Outreach Program	1	1	2	2	8	7	4
Compressed Air Challenge	--	--	--	--	--	1	1
Cool Communities Program	--	2	1	1	1	--	1
Energy Analysis and Diagnostic Centers	--	1	--	--	--	--	1
Energy Star Buildings	1	1	1	3	3	6	5
Energy Star Computers	2	1	1	1	1	1	2
Energy Star Transformers	1	5	6	6	7	7	7
Green Lights Program	12	18	20	19	19	18	16
Landfill Methane Outreach Program	4	6	12	13	23	24	37
Methane Recovery Systems Landfill	--	3	--	--	--	--	--
Motor Challenge Program	--	3	2	4	3	5	4
Natural Gas STAR	3	5	5	4	4	7	7
Other Energy Star Programs	--	--	2	2		2	2
Other Federal, State and Local Programs	6	5	6	6	4	8	7
Rebuild America	--	--	--	--	--	1	1
Sulfur Hexafluoride Emissions Reduction Partnership	--	--	--	--	--	1	6
United States Initiative on Joint Implementation	2	17	23	29	29	25	32
Voluntary Aluminum Industrial Partnership	2	2	3	2	2	3	2
Waste Wi$e Program	1	3	2	2	2	3	3

Source: Energy Information Administration, Forms EIA-1605 and EIA-1605EZ.