



# 2002

PPL Corporation

# CERES Report



### **PPL Environmental Policy**

PPL generates and delivers energy and provides energy-related services to millions of customers worldwide. PPL's Environmental Policy provides the framework for the company's commitment to conduct its business in an environmentally responsible manner.

### **Personal Responsibility**

Living up to our environmental policy is everyone's responsibility.

### **Compliance**

We will meet or exceed all applicable environmental laws and regulations.

### **Continual Improvement**

We will monitor and assess our environmental performance, and set measurable targets that result in continual improvement.

### **Innovation**

We will take creative and proactive approaches in carrying out our environmental policy.

### **Stewardship**

Our corporate culture promotes conservation of natural resources, pollution reduction and protection of the environment.

### **Resource Commitment**

We will provide the human and financial resources necessary to carry out our environmental policy.

### **Communication**

We will openly communicate our environmental values, actions, performance and policy and listen to the concerns of our stakeholders. We will provide environmental education opportunities to our employees, customers and public.



President, Chairman and CEO  
PPL Corporation

## 2002 CERES Report Table of Contents

2002 CERES Report Table of Contents .....	1
Executive Summary .....	2
Performance .....	3
Challenges .....	4
Section 1: Company Profile .....	4
Section 2: Environmental Policies, Organization and Management .....	8
Audits .....	12
Section 3: Workplace Health and Safety .....	15
Section 4: Community Participation and Accountability .....	17
Emergency response .....	20
Section 5: Product Stewardship .....	21
Section 6: Supplier Relationships .....	23
Fuel suppliers .....	23
Other suppliers .....	24
Section 7: Energy Acquisition, Conversion, Distribution and Sales .....	25
Electricity generation .....	25
Transmission, distribution and sales .....	25
Natural gas supply .....	28
Transportation and distribution .....	28
Section 8: Internal Use and Conservation of Natural Resources .....	30
Section 9: Emissions and Waste .....	35
Routine emissions .....	35
Spent nuclear material .....	36
Hazardous waste .....	36
Nonhazardous waste .....	38
Accidental releases .....	39
Spill prevention and leak detection .....	40
Section 10: Compliance .....	41
Section 11: Priorities and Challenges .....	43

## Executive Summary

This is PPL Corporation's sixth CERES Report since endorsing the CERES Principles in April 1997. Since that time, PPL has grown from a regional electric utility company into a diverse energy company with holdings in electricity generation, electricity delivery and sales, natural gas, and worldwide power and energy services (Figure 1).

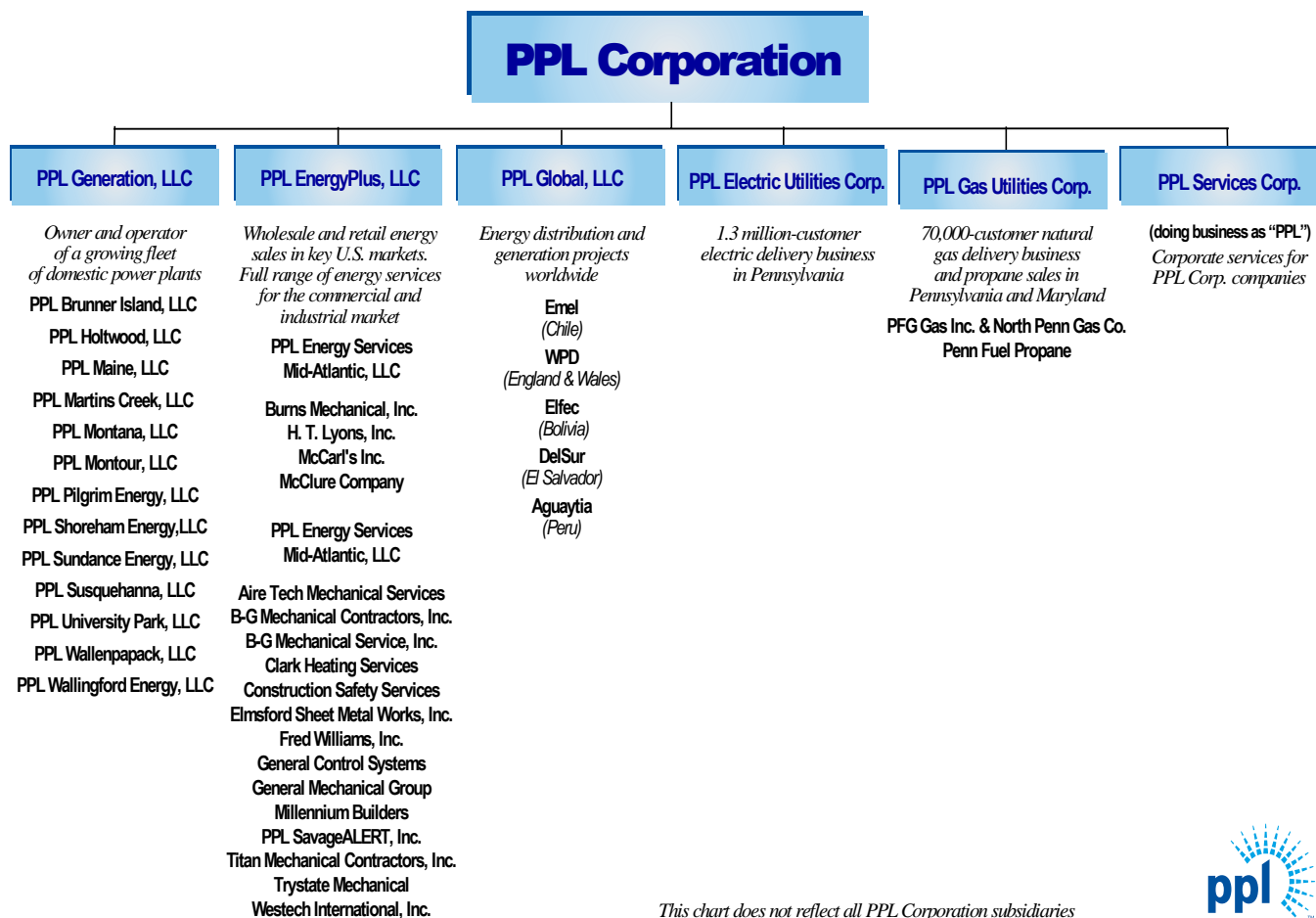


Figure 1. 2002 PPL Corporation Organizational Chart

In 2002, because of the challenging business climate, PPL, as with others in the electric utility industry, changed from acquiring and developing new generation and other new services, to stabilization and improvement of performance of current assets. The industry has experienced a period of consolidation, as deregulation has slowed and companies strengthen their balance sheets. In this new business climate, PPL has concentrated to improve its environmental and safety performance as noted throughout this report. For example, work continues on PPL's Environmental Management System (EMS) to strengthen it within major business lines and to extend it to existing international operations.

This report discusses the 2002 corporate successes and challenges related to PPL's environmental management, health and safety issues. The information is provided in the format of the first CERES report form for the electric and gas industries. PPL was honored to serve on the CERES team that developed the form.

### **Performance**

Performance highlights in this 2002 CERES Report are:

- PPL continued to reduce emissions to meet requirements of the Clean Air Act:
  - Sulfur dioxide (SO<sub>2</sub>) emission rates continued to be reduced to about 50% of what they were in 1990, by continued use of a diverse fuel mix of lower sulfur coal, nuclear generation, oil, natural gas, and hydroelectric generation.
  - Nitrogen oxide emission rates have been decreased by over 65% since 1990, through the installation of pollution control equipment and addition of natural gas generation to PPL's generating mix.
  - Greenhouse gas (CO<sub>2</sub>) emissions rate decreased by about 17% since 1990 due to changes in the mix of energy sources used to produce electricity.
  
- PPL has instituted an internal safety program to prepare sites for the Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP) status. Three sites received OSHA VPP Star status during 2002 and others are to follow. There were no fatalities in 2002, and injury rates continue to be less than the industry-best 75% percentile level.
  
- PPL continued its widely recognized volunteer agreements with the Pennsylvania Department of Environmental Protection to investigate and clean up old operations sites. Through these agreements PPL subsidiaries have remediated more than 180 sites quickly and cost-effectively, and made many properties available for reuse.
  
- PPL completed construction of its new corporate building, The Plaza at PPL Center, in late 2002/early 2003, and initial work groups moved in, in early 2003. The eight-floor building includes cutting-edge environmental design features to promote resource conservation, minimize waste and create a setting that is healthy and comfortable. PPL has applied to the U.S. Green Building Council for LEEDS certification for the building. The building also represents PPL's commitment to the revitalization of America's cities, such as Allentown, Pa.
  
- PPL continued to work with a variety of customers to install clean-energy and energy-efficiency technologies. PPL has a strong program of green power projects in operation or under development, including generation of electricity from landfill gas at sites in New Jersey and Pennsylvania, fuel cells in Pennsylvania, Montana, Massachusetts and New Jersey, and microturbines in Pennsylvania.

## **2002 CERES Report**

- Culminating work that took place throughout 2002, PPL announced a decision in June 2003 to embrace wind energy by signing a long-term power purchase agreement with Community Energy, Inc., to purchase energy from the 20 MW Bear Creek wind power project located in northeastern Pennsylvania.
- The \$20 million Sustainable Energy Fund of Central Eastern Pennsylvania, funded by PPL electric customers, continues to invest in cutting-edge renewable and energy efficiency initiatives.
- PPL continued to expand the scope of its environmental audits and assessments program in 2002. All major domestic PPL facilities have had environmental audits or performance assessments in the past three years, and a process is in place to assure their continual review. Review of select foreign operations is being planned for 2003.
- The company held its annual Environmental Forum to provide environmental managers with information on emerging issues, environmental best practices and new environmental programs.
- Since the early 1990s, PPL's Pennsylvania plants have reduced the amount of hazardous waste generated by over 80%, primarily by reducing the number of times boilers are cleaned at steam generating stations.
- In 2002, PPL's Pennsylvania power plants beneficially reused more than 90% of the ash (fly ash and bottom ash) produced at its Pennsylvania fossil-fueled generating stations.
- PPL continued to promote PPL Project Earth™ community and environmental programs by conducting employee-based volunteer efforts, employee and corporate donations campaigns, and award-winning teacher education and curriculum development programs at its environmental preserves.

### **Challenges**

Looking ahead, these environmental challenges will be addressed:

- Completion of development and implementation of a new corporate Global Climate Change Strategy and greenhouse gas inventory that aligns with the strategic direction of PPL businesses.
- Continuing to develop its Environmental Management System designed to meet the challenge of improving environmental performance in today's competitive energy marketplace. The system will collect and track environmental data uniformly across the company.
- Continued improvement in reducing air and water emissions and waste generation in a climate of business consolidation and deregulation.

## **Section 1: Company Profile**

**1-1. Name of Company:** PPL Corporation

**1-2. Contact Person:** Mr. Robert J. Barkanic, P.E.

Title           Manager-Environmental

Address        PPL Services Corporation, Two North Ninth St. (GENTW17), Allentown, PA

18101-1179  
 Phone 610-774-5466  
 Fax 610-774-5930  
 E-mail [rjbarkanic@pplweb.com](mailto:rjbarkanic@pplweb.com)  
 Parent Dun & Bradstreet Number 83-543-3830  
 Corporate Tax ID Number 23-2758192  
 Corporate Web [www.pplweb.com](http://www.pplweb.com)

**1-3. Time period (e.g., fiscal/calendar year) for which information is provided (unless otherwise noted):**

Calendar year 2002

**1-4. Please describe the core activities of your company:**

PPL Corporation is headquartered in Allentown, Pennsylvania, U.S.A., and owns facilities that generate more than 11,000 megawatts of electric power in the United States. PPL sells energy in key U.S. markets and delivers electricity to customers in Pennsylvania, the United Kingdom and Latin America.

**1-5. Total worldwide employees:**

<b>2000</b>	12,000	<b>2001</b>	12,000	<b>2002</b>	12,655
-------------	--------	-------------	--------	-------------	--------

**Number of full-time personnel assigned to environmental management and technical support worldwide.**

As of the end of 2002, 46 full-time PPL employees plus 12 contract employees spent at least 50% of their time assigned to environmental management activities. At times, additional employees and consultants may be temporarily assigned to full-time work on environmental issues. The tally includes PPL Montana and PPL Maine operations.

**1-6. Annual worldwide revenue (billions)**

<b>2000</b>	\$4.5	<b>2001</b>	\$5.1	<b>2002</b>	\$5.4
-------------	-------	-------------	-------	-------------	-------

**1-7. What is your base country, or region, of operations?**

United States

**Please describe regulated service territory, if any:**

PPL Electric Utilities: central-eastern Pennsylvania, U.S.A.; PPL Gas Utilities: central-eastern Pennsylvania and one county in Maryland, U.S.A.

**1-8. Coverage of information provided in this report, including geographic scope (e.g., all activities, including purchased energy, generation facilities only, wholly-owned and majority-owned facilities):**

## **2002 CERES Report**

The report covers PPL's wholly owned subsidiaries and facilities at the end of 2002 (Figure 1.) Data from international holdings is provided where available.

**1-9. Revenue by Business Sector**

Please describe your company's major business sectors and approximate percent of total 2002 worldwide revenues represented by each.

Sector	% Revenues
Supply (generation and marketing)	30
Delivery	50
International	20

**1-10. Please provide the following information on the scale of your operations. Report generation/supply based on ownership; for transmission distribution transportation operations and sales, include both self-supplied (generated) and purchased energy. Note that the same energy may be reported in more than one sector (e.g., electricity that you generate, transmit and sell).**

Sector (U.S. Only)	Measure of Scale	Amount
PPL Generation	Generating capacity in Pennsylvania, Arizona, Montana, Maine, Connecticut, Arizona, Illinois and New York, as of Dec. 31, 2002(MW)	11,488
	Total generation in 2001 (MWh)	47,093,215
PPL Electric Utilities	total MWh transmitted in 2001 (MW)	57,033,197
Supply, PPL Gas Utilities	total production in 2002 (Mm <sup>3</sup> )	NA
	underground (natural) storage [not reserves] (Mm <sup>3</sup> )	NA
Transportation, PPL Gas Utilities	km of pipeline	610

**1-11. Briefly describe any significant changes in company structure (e.g., acquisitions and divestitures), sectors, and product lines during the last five years:**

PPL has grown into a global diversified energy company since the company decided to support deregulation in 1995. In 2000, PPL and PPL Electric Utilities completed a corporate realignment to separate PPL Electric's regulated transmission and distribution operations from its deregulated generation and wholesale power marketing operations. As a result of the corporate realignment, PPL's electric generating assets were transferred to PPL Generation, and its wholesale power marketing assets were transferred to PPL EnergyPlus. Also, as part of the realignment, PPL Global transferred its domestic generating assets to PPL Generation. As a result of the corporate realignment, PPL is organized in segments of Supply, Delivery and International functions.

In 2002, PPL Corporation had these major wholly owned subsidiaries:

1. PPL Generation operates power plants in Pennsylvania, Montana, Maine, Arizona, Illinois, New York and Connecticut to generate electricity to unregulated wholesale and retail markets in the northeastern and western portions of the U.S.
2. PPL Electric Utilities provides electricity delivery service to approximately 1.3 million electric customers in central and eastern Pennsylvania.

## 2002 CERES Report

3. PPL EnergyPlus markets PPL Generation and other power purchases and gas to deregulated wholesale and retail markets in the northeastern and western U.S. PPL EnergyPlus also provides distributed generation and energy services to commercial and industrial customers through its mechanical contracting and engineering subsidiaries.
4. PPL Global develops domestic generation projects for PPL Generation. It also develops, owns and operates international energy projects. As of Dec. 31, 2002, PPL Global was developing approximately 690 MW of electric generating capacity in Pennsylvania. PPL Global's major international projects include investments in two United Kingdom electricity transmission and distribution companies that serve approximately 2.5 million customers in England and Wales. PPL Global also has investments in electricity transmission and distribution companies serving about 998,000 customers in Chile, El Salvador and Bolivia.
5. PPL Gas Utilities provides natural gas and propane delivery to approximately 103,000 customers in Pennsylvania and Maryland.

**Has the company compensated for these, or other changes (e.g., new regulations), in establishing the environmental data included in this report?**

Data presented reflects operations in compliance with all currently applicable federal and state environmental regulations. Subsidiary company data are included where available.

## Section 2: Environmental Policies, Organization and Management

- 2-1. List corporate environmental policies and their dates of issue and/or revision. Detail the geographic scope of these policies and indicate whether the texts of the policies are available to the public:

Policy	Issue Date	Latest Revision	Geographic Scope	Publicly Available
Environmental Policy	1995	2001	Global	Yes
Corporate Environmental Expectations	1996	2001	United States	Yes
CFC & HCFC Policy	1994	1998	United States	Yes
Standards of Conduct & Integrity	1998	2002	Global	Yes

**Please comment on the scope of applicability. If policies are not global, do you have a plan to make them so? Over what time scale?**

PPL expects that domestic subsidiaries will develop and implement an Environmental Management System modeled on ISO 14001 to ensure that they conduct business in accordance with corporate environmental policies and guidance. PPL is evaluating how the EMS will apply to foreign operations.

**2-2. Which of the following are directly addressed by policies or associated guidance documents? Specify where not applicable to your company:**

Environmental	X	Health and Safety	X
Water Quality	X	Emergency Planning	X
Air Quality	X	Personnel Safety	X
Energy Conservation Opportunities	*	Transportation Safety	X
Solid/Hazardous Waste	X	Materials/Equipment Safety	X
Storage Tanks	X	Industrial Health/Hygiene	X
Chemical Releases	X	Occupational Medicine	**
Spill Prevention	X	Audits and Assessments	X
Site Remediation	X	Electrical Equipment	X
Chemical Inventory Reporting	X	Waste Management	X
Environmental Management System	X		

\*PPL Electric Utilities and PPL EnergyPlus provide a variety of energy conservation programs, products and services oriented to residential, commercial and large industrial customers, to promote energy efficiency and clean-energy technologies.

\*\*No formal program, but there are indirect programs and procedures such as medical examinations that are provided to employees prior to allowing them to use respirators or to work in asbestos areas and other applications.

**2-3. Please describe your company's approach to the issue of sustainability, focusing on the following elements:**

**How does it apply to your industry?**

Like the majority of large U.S.-based electric generating companies, fossil fuels make up the largest percentage of PPL's power generating capacity (60 percent). This will not change in the near future, although PPL is growing for the future by diversifying its generation mix with more hydro, natural gas and distributed energy solutions. The company's track record of reducing waste and pollution is impressive. Its commitment to improving the quality of life around our operations is a core value for how PPL operates as a company.

**What does it mean for your company and how is your company making progress toward it?**

PPL companies are exploring opportunities for developing sustainable electrical generation and energy efficiency initiatives. PPL Generation continues to purchase and build generating assets that diversify PPL's generating portfolio. This strategy keeps the costs of electricity lower for our customers and controls over-reliance on one source of fuel. PPL's 1999 acquisition of generating assets in Maine and Montana nearly doubled PPL's hydroelectric generating capacity. PPL EnergyPlus' Energy Services companies develop leading-edge distributed energy and energy efficiency solutions to assist large industrial customers in reducing energy demand. PPL Electric Utilities' customer-funded Sustainable Energy Fund of Central Eastern Pennsylvania is investing \$20 million in solar, wind and other renewable energy projects. In addition, PPL Electric Utilities offers free online energy audits to all residential customers. PPL

## 2002 CERES Report

Electric Utilities also provides energy conservation solutions to certain low-income retail customers.

### 2-4. What level of management is responsible for maintaining the currency of your corporate environmental policies and practices?

The corporate Environmental Management Department suggests revisions to the policies and to guidance documents with involvement of line departments. Senior management approves any changes.

### 2-5. Is there an officer specifically designated with environmental responsibilities?

James Seif, former Secretary of the Pennsylvania Department of Environmental Protection, joined PPL as Vice President of PPL Services. Environmental Management is one of the functions reporting to Mr. Seif, who reports to the Chairman, President and Chief Executive Officer.

### 2-6. Are there updates to senior management, the Board of Directors or a committee of the Board of Directors concerning the company's environmental activities? If yes, with what frequency?

PPL's corporate Environmental Management Department maintains or contributes to a variety of communications on the company's environmental activities and performance:

Report/Event	Purpose	Frequency
Environmental Update	Provides executives with a report on emerging issues	Weekly
Performance Report and Key Events	Provides board of directors with a report of emerging issues	Quarterly
Corporate Environmental Performance Report	Provides executives with a report on environmental performance	Quarterly
Environmental E-News	Provides environmental employees internal information.	Weekly
Environmental Forum employee conference	Provides executives and managers with information about emerging issues, EMS benchmarks and corporate performance indicators	Annually
Corporate Environmental Risks and Opportunities Report	Provides executives with a prioritized review of the emerging environmental issues and their impact on the corporation	Annually
PPL's Community and Environmental Report	Provides employees, managers and corporate leadership, as well as the public with a summary of community and environmental program accomplishments	Biennially
White Papers/Executive Briefings/Presentations	Provides PPL's managers with an in-depth overview of critical environmental issues	As needed

**2-7. Are environmental compliance and operational decisions principally handled in centralized or decentralized fashion?**

Environmental compliance and operational decisions are principally decentralized with support from corporate groups.

**2-8. How is accountability for environmental performance organized in your company?**

Primary responsibility rests with the business line most directly involved with the particular operation. Corporate staff has oversight and direction-setting responsibility. Virtually all departments that have environmental impact have environmental goals.

**2-9. Is outstanding environmental performance of teams, operating units and individuals recognized internally?**

Yes. An environmental award program designed to recognize accomplishments in key environmental performance categories began in 2002. The Chairman's Award for Environmental Excellence was presented to two facilities at the annual company Environmental Forum. Six additional categories will be added in 2003.

**If yes, how does such recognition occur (e.g. salary review, bonus, promotion, award, etc.)?**

Individuals, facilities or organizations may apply for any of the six categories (land use, recycling, environmental management systems, energy efficiency, environmental compliance and pollution prevention) of awards. The corporate Environmental Management Department judges the applications and determines the winners. Awards are presented at the annual Environmental Forum, and the CEO is scheduled to present an overall Chairman's Award for Environmental Excellence. The winners are published in internal company publications and through news releases.

**2-10. A) Does your company have, or provide access to, educational programs in which employees with environmental responsibilities participate to update their skills and knowledge?**

PPL offers many opportunities for employee environmental education and skills training. Training in areas of material handling, waste storage and handling, spill cleanup, and risk communication are mandatory for employees working in affected areas. Courses on remediation, wetlands, biodiversity, raptors and waste management are also offered. The generation group has developed videos on waste handling, storm water pollution prevention and spill control focused on facility operations. Transmission department employees review their spill response techniques and procedures annually.

Since 1997, the corporate Environmental Management Department has been holding annual Environmental Forums that are attended by environmental professionals from across the company. The Forum is a full-day conference that is used to launch broad-based environmental training, initiatives and information sharing, and to inform environmental employees about the latest aspects of environmental management. Employees often take courses hosted by outside organizations to improve their environmental skills.

PPL also maintains an expanding Intranet site that is devoted to sharing environmental information across the company.

**B) Does your company have educational and informational programs in which all other employees participate to update their skills and knowledge and ensure their understanding and implementation of the company's environmental policies?**

PPL's Environmental Management Department maintains an Intranet site that provides environmental information, tips and issue-specific information. This information is updated periodically and is accessible to all employees. In addition, PPL publishes an online employee news service that highlights emerging environmental issues, as well as environmental education and stewardship activities.

**2-11. A) Does your company sponsor scientific or policy research devoted to environmental technology, management and performance issues, or other relevant research areas, at educational or research institutions?**

PPL sponsors environmental research through membership and participation in the programs of the Electric Power Research Institute (EPRI). Many EPRI programs are applicable to PPL's system. PPL supports Pennsylvania Academy of Natural Sciences environmental research through its Environmental Associates program and also participates in Edison Electric Institute and Pennsylvania industry association policy research programs. A PPL subsidiary, PPL Gas Utilities, is a member of the Gas Research Institute, which also performs environmental research for the gas utility industry. PPL's Electric Utility's customers are funding a Sustainable Energy Fund that seeks out and funds research and new sustainable energy projects. (Question 2-3.)

**B) Does your company participate in external activities designed to share the results of such scientific and policy research?**

PPL has shared research results and data for specific issues and projects, such as electromagnetic fields (EMF) issues. PPL has also participated in EPRI workshops and seminars by presenting papers on research that it has conducted in cooperation with EPRI. PPL also participated in the U.S. Environmental Protection Agency's program for collecting mercury data across the electric utility industry, and PPL's Colstrip plant participated in the study to evaluate the mercury removal efficiency of its scrubber.

**2-12. Does your company normalize environmental information (e.g., chemical release, energy usage, greenhouse gas emissions) by an activity unit within the company (e.g., per unit of output, per unit of input, per labor hour, per employee)?**

Quarterly environmental performance reports contain environmental performance criteria in units per output where it is relevant, especially for power generation facilities. In previous years, PPL participated in industry benchmarking studies; those data were normalized as requested by the benchmarking sponsors.

**Audits**

**2-13. Does your company have programs for workplace health, safety and environmental auditing?**

Environmental and health and safety audits are normally conducted separately; however, PPL Electric Utilities performs internal self-assessments in conjunction with safety assessments. A periodic environmental audit program is conducted at all major PPL facilities. The environmental auditing process consists of five documented programs that can be conducted once every two to five years, depending on the complexity and risk of the facility. Periodic environmental inspections occur as often as weekly at PPL's generation facilities. Power plants

and Electric Utilities' facilities are preparing for, and maintaining, certification in the federal Occupational Safety and Health Administration's Voluntary Protection Program (VPP) through an annual inspection, internal safety and health certification program. Three plants were approved for OSHA Star Status in 2002; others are working toward certification.

**2-14. Are your audits conducted by company personnel or outside individuals or organizations?**

Environmental audits are routinely conducted with company personnel. The number of internal auditors on an internal assessment varies from three to as many as 15 individuals (part time). Outside personnel (one to five auditors) may be used for independent audits. VPP certifications use independent OSHA auditors.

**2-15. Do your audit programs apply worldwide?**

Not currently; however, PPL's audit program will grow to cover worldwide operations. Its scope will be based on a needs assessment process conducted as part of the Environmental Management System (EMS) development. An environmental audit of PPL's Western Power Distribution (WPD) in England is planned for 2003.

**2-16. Which of the following are part of your audit programs?**

<b>Environmental</b>		<b>Health &amp; Safety</b>	
Compliance	X	Compliance	X
Management Systems	X	Management Systems	X
Spill Prevention	X	Emergency Planning	X
Water Quality	X	Personnel Safety	X
Air Quality	X	Transportation Safety	X
Solid/Hazardous Waste	X	Process Safety Management	X
Storage Tanks	X	Materials/Equipment Safety	X
Chemical Releases	X	Industrial Health/Hygiene	X
Site Remediation	X	Occupational Medicine	X
Chemical Registration/Certification	X	Other (specify)	

**2-17. Does your company have an internal energy audit program for identifying conservation opportunities and progress?**

PPL has no formal internal energy audit program. Energy savings opportunities are implemented on capital projects where they make economic sense. PPL also expects to develop energy-savings goals for select business lines in the future as part of the business lines' EMS activities. PPL's new Allentown, Pa., office building is being designed as a green building and is applying for LEEDS certification through the Green Building Council.

**2-18. Are the results of your audit findings reported to senior management and/or the board of directors?**

Summary results of environmental audits are reported to business-line senior management and to the audit committee of the Board of Directors.

## **2002 CERES Report**

### **2-19. What areas (divisions, operations) of your company have been audited over the last two years?**

In 2001 and 2002, Environmental Aspect analyses based on ISO 14001 standards were conducted at:

- PPL electrical services contractors (10)
- PPL Facilities Management
- PPL Montana's hydroelectric stations
- PPL Maine's hydroelectric stations
- PPL Electric Utilities
- PPL Griffith Energy
- PPL Holtwood hydroelectric plant
- PPL Wallingford Energy
- PPL University Park Energy
- PPL Sundance Energy
- PPL corporate Transportation Department

In 2001 and 2002 Environmental Assessments have been conducted of:

- PPL Maine's hydroelectric stations
- Synfuel facilities (four)
- PPL Brunner Island power plant
- PPL Montour power plant
- Corette power plant
- Colstrip power plant
- PPL Gas Utilities
- PPL Griffith Energy
- PPL Martins Creek power plant
- PPL Wallingford Energy
- PPL Sundance
- Corporate waste management program

### **2-20. Are your audit programs reviewed by an independent organization?**

No. However, an independent organization supported PPL auditors in conducting ISO 14000 gap analyses at several facilities over the past two years.

**If no, are there plans underway to utilize an independent review in the future?**

No.

### **2-21. Are your audit results available to the public?**

No. PPL environmental audits are considered confidential to encourage more open and effective communication between the audit group and the facility being audited.

### **2-22. Describe other notable aspects of your company's environmental policies, organization and management not otherwise covered in this section.**

PPL is continuing to implement its Environmental Management System (EMS). PPL expects domestic subsidiaries to develop and implement an EMS modeled after ISO 14001 to enhance the existing programs, which had some of the elements of an EMS, but were not fully integrated.

Several significant environmental aspects that were identified in previous years have been the subject of improvement goals, and have resulted in improved environmental, and sometimes financial, performance.

**Section 3: Workplace Health and Safety**

**3-1. Briefly describe your company’s activities in the area of workplace health and safety. Give examples of specific programs, accomplishments, awards and/or training activities, etc., that go beyond the requirements of the law:**

PPL has a comprehensive program encompassing corporate, power production and electric delivery. The safety and health programs are documented through annual site evaluations. First-line supervisors and employees are responsible for safety and health; safety and industrial hygiene specialists provide field technical support and direction. Beyond strict compliance, an internal safety evaluations program (comparable to the OSHA Voluntary Protection Program) is being instituted at major work sites. This internal program prepares sites for OSHA VPP. Three sites were approved for STAR status recognition in 2002; others are working toward certification. An industrial hygiene-monitoring program annually provides for assessment of employee exposure to various workplace dusts and noise.

**How are these programs and other workplace health- and safety-related information communicated to employees?**

1. Safety videos developed by the company cover important topics and are reviewed at employee safety meetings during the year.
2. Mandated safety training identifies employee-training needs and tracks their completion through a computer-based system.
3. Safety job briefings are conducted prior to beginning work (at most physical locations) to identify potential hazardous aspects of the job to be done.
4. Regularly scheduled safety meetings explore safety topics and accident events.
5. “Just-in-time” articles in the company’s internal newsletters and monthly magazine highlight health and safety issues.

**3-2. A) Does your company communicate with workers on health- and safety-related information by, for example, sharing internal safety audits, internal compliance audits, etc.?**

Industrial hygiene monitoring data are provided to sampled employees. Managers review accident reports with employees, and internal benchmarking reports are shared with employees. The internal safety evaluations site reports are routed through the departments. These reports contain up-to-date information on safety processes and their effectiveness.

	<b>Provide</b>	<b>Willing</b>
Chemical release data (please specify)		X
Chemical use and storage data		X
Worst-case accident scenarios	X	
Internal safety audits	X	
Internal compliance audits	X	
Material transportation risks		X

## 2002 CERES Report

	Provide	Willing
Process hazards analyses		X
Pollution prevention plans	X	
Other information gathered for the CERES Report		X

### 3-3. What challenges and successes has your company experienced in the area of workplace health and safety?

Like other energy providers, PPL faces the challenge of enhancing safety programs while remaining competitive in an industry that is becoming deregulated. PPL continued to improve safety programs in 2002. Using the internal safety certification process, PPL's safety programs have established action-oriented objectives for many managers and supervisors, and have formalized inspections by crews at many locations.

### 3-4. Provide information on workplace safety performance using normalized measures such as lost days. Provide such information for a base year, 1996, 1997, 1998 and a target year:

PPL's workplace safety performance for lost days as related to incidence rates is shown below:

There were no fatalities in any of the years mentioned. Injury rate is lost workdays per 200,000 hours worked.

	Lost time events	Days lost	Injury Rate
1998	29	1,035	0.47
1999	41	1,146	0.65
2000	31	833	0.50
2001	46	1,569	0.72
2002	38	917	0.62

### 3-5. Do you use other measures for workplace health and safety performance? Please explain and give trends:

PPL benchmarks OSHA-recordable injuries (lost time and no lost time) against other utilities of similar size that report their experience through the Edison Electric Institute (EEI). The EEI value reported is the top (best) 75% percentile level. Values provided are in number of incidents per 200,000 hours worked.

	EEI	PPL
1998	3.67	2.25
1999	3.21	2.18
2000	3.66	2.15
2001	3.25	2.26
2002	3.25	2.42

Motor vehicle accident performance is measured per ANSI D-15 reporting guidelines. Incidence rates are based on the number of recordable accidents per million miles driven.

	<b>Motor vehicle accidents</b>	<b>Injury Rate</b>
1996	176	7.07
1997	139	5.53
1998	129	4.91
1999	161	2.18
2000	155	6.69
2001	176	7.55
2002	164	7.37

**3-6. Describe other notable aspects of your company's workplace health and safety not otherwise covered in this section:**

Corporate management is intensely focused on safety issues. Safety receives recognition through performance-based employee safety and health recognition programs, performance-based goals within an increasing number of managers' annual objectives, and a reporting structure that has the company's safety group reporting to senior management.

## **Section 4: Community Participation and Accountability**

**4-1. Does your company have a policy/procedure to consider community impacts in its decision-making?**

Yes. Ongoing communication with corporate stakeholders is part of PPL's environmental and community affairs policies.

**Does this policy provide for direct community involvement? If so, with which groups? How are these groups chosen?**

The PPL Project Earth™ provides many opportunities for direct community involvement through employee volunteerism, public relations efforts and community support efforts. The company's aggressive community relations and external affairs program reaches out to local, state and federal government officials. PPL power plants are involved with the local communities through plant advisory committees (PACs). The PACs are made up of individuals who live and work near PPL's power plants and are impacted by plant operations. PAC members provide input into the plant's day-to-day decision making. PPL also works closely with a variety of community and environmental groups on local environmental projects. PPL's Community of Volunteers program provides a mechanism for matching local needs with the interests of employees to provide resources to community groups on a project-by-project basis.

Community input is also sought through such mechanisms as the Federal Energy Regulatory Commission's (FERC) Hydroelectric Licensing Procedure. The company is following this approach to relicense hydroelectric facilities in Pennsylvania, Maine and Montana.

**How is this involvement organized (e.g., through community advisory panels, public hearings, newsletters, regular meetings, open forums)?**

## **2002 CERES Report**

PPL uses many methods to organize community involvement. The company sends representatives to local government meetings and offers the community use of its facilities. The PPL Project Earth™ Web site provides two-way communication with the communities where the company does business. Environmental Currents, a quarterly newsletter, is circulated to about 10,000 key community contacts near PPL's environmental preserves. The newsletter explains what the company is doing to promote strong environmental/education programs at the preserves and generating facilities, and offers readers an opportunity to participate in PPL-sponsored environmental and energy awareness events. The company also sponsors open houses and takes part in regional committees to address a wide variety of local concerns ranging from air quality issues to water quality protection and waste recycle/disposal.

### **4-2. Does your company proactively seek the advice and counsel of independent community groups (e.g., through newsletters, regular meetings, open forums or community oversight committees) regarding possible risks posed by your operations?**

Yes. For the most part, the agendas for PPL's plant advisory committee meetings address local concerns associated with our operations. PPL tries to inform neighbors and gather input on projects that are planned or underway at its power plants. PPL discusses assessment and remedial actions to be taken under its remediation program (**Question 8-11, below**) with the local community to ensure that they are aware and supportive of the planned actions. PPL also maintains a staff of community development directors, who meet regularly with local Pennsylvania government officials to review local issues related to PPL operations.

### **4-3. Are employees encouraged to participate in community activities aimed at improving environmental quality?**

Yes. PPL Project Earth™ focuses on fostering employee volunteerism. PPL's Community of Volunteers provides a program for employees interested in volunteering their time on a wide variety of projects including environmental projects. As a result, hundreds of volunteers turned out last year at a variety of community and environmental projects.

### **4-4. List up to three community-oriented environmental activities sponsored by your company:**

Here is just a snapshot of PPL Project Earth™ activities:

- PPL conducts accredited seminars for educators to help them deliver creative and educationally-sound environmental lessons in the classroom. In 2002, we reached more than 300 educators with a potential educational impact of 20,000 students.
- PPL's environmental preserves provided environmental stewardship messages to more than 600,000 visitors throughout the year.
- PPL staff provided environmental education to more than 5,000 students and provided environmental/interpretive programs for 3,500 people at PPL environmental preserves.
- Hundreds of PPL employee volunteers participated in community environmental projects ranging from cleaning up trash from local streambeds to planting trees, building a new play ground for inner city youths and creating an outdoor classroom for an inner city school.
- PPL's continued environmental stewardship actions are helping to protect populations of species, such as the bald eagle, peregrine falcon, osprey, Atlantic salmon and American shad.
- PPL was named by the New Jersey Warren County Human Relations Commission as its 2003 Partnership Award Winner. The Partnership Award acknowledged PPL's work with

New Jersey educators, including its “Energy for Living” teacher workshops held at the PPL Martins Creek power station.

- PPL created an environmental education mini-grant program where educators can receive up to \$2,000 for school projects that focus on environmental issues. Eleven projects were selected to receive the grants.
- PPL sponsored two teachers to serve summer internships at the company's Martins Creek power plant to develop a high school curriculum on air quality. Titled “The Air We Breathe,” the unit is being disseminated at PPL-sponsored teacher workshops.
- In Long Island, New York, PPL is partnering with the Wading River Civic Association to conduct a site inventory at the Association’s Duck Pond.
- In Montana, PPL has committed \$23 million over the next 10 years for recreation, fisheries, water quality and wildlife habitat development along a 524-mile portion of the Madison-Missouri River corridor.
- PPL is part of a new community-wide partnership in Billings, Montana, called “Celebrate Billings.” The intent is to improve the quality of life in Billings by addressing education, health and public safety, the environment and economic development.
- In Maine, PPL is the major corporate sponsor of the Maine Discovery Museum, helping to create an interactive display that teaches children about hydroelectric power.
- PPL and its employees contributed over \$1.8 million to the United Way.

**4-5. What challenges and successes has your company faced in the area of community participation and accountability?**

The company remains challenged with continuing these programs at a high level and expanding them globally; this means being able to demonstrate how these initiatives impact on the corporate bottom line. In times of growth, cost control and competing priorities, this remains a significant challenge, but the accomplishments noted above show that progress continues.

**4-6. How are environmental considerations incorporated into your company’s public policy activities?**

PPL recognizes the need to integrate environmental concerns as part of our responsibility to provide reliable and affordable electric power. Environmental considerations are incorporated through several management processes, including:

- PPL environmental and community policies.
- Environmental improvement goal setting.
- Monitoring and analysis of emerging issues.
- Internal reports/review of environmental performance and compliance.
- Site remediation program actions
- Formal corporate reporting initiatives.
- Environmental audits and assessments.
- Public disclosure of environmental information.

**4-7. Environmental justice refers to actions in support of populations most negatively affected by environmental factors. These populations tend largely to be those most vulnerable to economic, political, racial or other factors. In support of the goals of environmental justice, describe if and how your company ensures protection of particularly vulnerable or at-risk groups in communities directly affected by your activities:**

## 2002 CERES Report

PPL strives for the same high environmental standards in its projects and operations that affect the community regardless of geographic designation or social demography. For example, PPL's remediation programs are cleaning up unused and underutilized sites that have been contaminated by past operations. This is being done through Pennsylvania's Land Recycling (Brownfields) Program. PPL works with state and local governments and communities to identify uses for the remediated properties that support community needs. Also, near five of its major power plants, PPL maintains environmental preserves and recreation areas that improve the environmental quality of life for local communities in many ways (**Question 4-4, above**).

### 4-8. Does your company provide, or is it willing to provide, the following information?

	Provide	Willing	Not Willing	N/A
Chemical release data	X			
Chemical use and storage data	X			
Worst-case accident scenarios	X			
Internal safety audits		X		
Internal compliance audits			X	
Material transportation risks		X		
Process hazards analyses		X		
Pollution prevention plans		X		
Resource conservation plans		X		
Other information gathered for the CERES Report	X			

### Emergency response

#### 4-9. Does your company have trained personnel and equipment capable of handling chemical emergencies that your plants might experience, including those that might involve radioactive materials?

At fossil-fueled generating plants, HAZWOPER trained staff is on site and a limited amount of emergency response gear is kept on hand. PPL's corporate Environmental Management Department has a number of trained personnel who maintain HAZWOPER Supervisor Certification who can support activities at the power plants if needed. However, PPL's philosophy is one of limiting its staff's response to defensive measures, such as initial containment. The company uses qualified, on-call emergency response contractors for additional containment and cleanup operations.

The emergency response crew at PPL's Susquehanna nuclear power plant is trained in both hazardous and radiological spill response, providing full on-site capabilities. PPL's internal crew is backed up by crews staffed by outside contractors, the Nuclear Regulatory Commission and the Pennsylvania Department of Environmental Protection's Bureau of Radiation Protection, all of whom are trained in radiological response procedures.

#### 4-10. Does your company conduct training exercises with firefighters and rescue teams in all communities where research and development and production facilities are located?

The company maintains trained fire brigade personnel at each facility to provide immediate response capabilities. Interactive training with community emergency responders is difficult to

schedule; however, PPL does conduct joint exercises when possible. In addition, PPL operates a fire training school with state-licensed instructors to train employees. The fire training school also conducts an electrical emergency course for fire departments on a requested basis.

**4-11. Does your company keep local emergency responders informed of risks created by, or chemicals used by, your operations?**

All facilities storing and/or using listed hazardous chemicals in reportable quantities must report these to local fire departments, local emergency planning committees and the state emergency response commission as required under the federal Emergency Planning Community Right to Know Act. This information also is shared with local emergency responders as opportunities arise.

**4-12. Are the neighbors at your plant sites informed of the existence of any procedures and evacuation plans that may be needed in case of an incident?**

PPL directly informs neighbors of evacuation plans and procedures around its power plants, and makes information available to the public as part of county emergency management plans.

## **Section 5: Product Stewardship**

**5-1. Does your company have a formal policy requiring an environmental, health and safety evaluation of its new and existing energy products and services (e.g., rate structures, “green” power offerings, conservation services)?**

PPL currently does not have a formal policy requiring an environmental, health and safety evaluation of new and existing energy products and services. This is an area that the company is looking at through the development and implementation of an EMS. PPL does have several programs and services that address this need:

- As part of the 1998 deregulation agreement with the Pennsylvania Public Utility Commission, PPL Electric Utilities customers contribute about \$3.2 million annually until the end of 2004 to a Sustainable Energy Fund to promote the development and use of green power resources in Pennsylvania. To date the fund has accumulated \$20 million.
- PPL EnergyPlus offers a variety of clean and renewable distributed generation products and services. These services reduce a customer’s bottom-line expenses while balancing environmental concerns.

**If yes, how can this be obtained by the public?**

- Information about PPL’s Sustainable Energy Fund is available by contacting the fund at 610-740-3102 or on the Web at [www.sustainableenergyfund.org](http://www.sustainableenergyfund.org).
- PPL EnergyPlus’ products and services are available on the Web at [www.pplweb.com](http://www.pplweb.com).

**5-2. Does your company have procedures in place to monitor the commitments it makes in this policy?**

- PPL tracks the environmental impacts that acquisitions and developments have on the corporation’s overall air emissions strategy.

## **2002 CERES Report**

- The company and the Pennsylvania PUC monitor contributions to Pennsylvania's Sustainable Energy Fund.
- PPL EnergyPlus tracks energy and heat generated from its distributed generation projects through its software and billing systems.
- PPL monitors and reports to management environmental performance metrics on a quarterly basis.

### **5-3. Has your company instituted procedures to assist energy product and service designers create products or services (e.g., rate structures, "green" power offerings, energy efficiency services) with the potential for lowered environmental impact?**

PPL's distributed generation group assists in efficient energy design and green power projects. PPL can assist customers in building green energy projects and selling green power. Environmental considerations are included at the project level in the planning, design and implementation stages of new products and services as needed and relevant on a case-by-case basis. PPL also uses job planning guidelines that instruct design engineers and planners to 1) use only approved waste transporters and vendors, 2) use only approved chemicals and materials, and 3) investigate the impact on sensitive environmental areas of proposed projects. The guidelines were designed to consider the life-cycle impact of projects and are available company-wide on PPL's EnviroNet computer system.

### **5-4. Describe demand-side management, energy efficiency services or other "green" service activities undertaken by your company (e.g., energy audits, weatherization programs). Provide information on the number of customers served:**

Through PPL EnergyPlus, PPL offers energy management services to its commercial and industrial customers. PPL has implemented various clean and green power projects including fuel cells and methane-driven engine and microturbine projects. During the past several years, PPL has been successful in contracting these services to several large customers, including a school district, a municipality and a military base. PPL also continues to offer its popular WRAP Program, which provides residential customers with energy-saving ideas and subsidies, and its popular Comfort Home for new home construction with built-in measures for energy-efficient living. PPL also provides Web-based self-energy audits and recommendations based on actual customer use patterns.

### **5-5. Describe consumer energy efficiency programs undertaken by your company.**

Some examples are: (1.) Green power from a PPL landfill project is being supplied to PPL's new office building in Allentown, Pa., and (2.) PPL's installation of fuel cells to supply clean heat and power to government facilities, data centers, hotels and colleges across the country. PPL EnergyPlus built an automation system for three school districts enabling maintenance supervisors to monitor and control energy use in all school buildings from their offices. At a group of nursing homes, EnergyPlus installed water conservation measures and a new laundering technology that uses less water and detergent. At a military base, PPL converted the heating system from fuel oil to cleaner-burning natural gas.

### **5-6. Does your company's rate structure promote reduced consumption?**

No.

### **5-7. Describe other notable aspects of your company's product stewardship activities:**

PPL participates in EPA's Landfill Methane Outreach Program (LMOP). In this program, PPL EnergyPlus develops landfill gas-to-energy projects and purchases electricity made from landfill gas facilities and other sources of methane. PPL sells this electricity to its customers, thereby reducing the need to generate that electricity from other sources of emissions and preventing the methane emissions from entering the atmosphere.

## **Section 6: Supplier Relationships**

### **Fuel suppliers**

#### **6-1. Does your company have a policy to incorporate environmental criteria in the selection of fuel suppliers? Is this policy globally applicable?**

PPL normally selects coal, oil, uranium and gas on the basis of quality and price. Although purchases are made to assure all environmental standards are met, environmental criteria are not directly factored into the fuel purchase process.

#### **6-2. When selecting suppliers, does your company consider criteria such as the following?**

##### **Determining whether the fuel supplier has the necessary environmental permits:**

PPL believes that vendors are responsible for securing their necessary environmental permits. Using reputable suppliers provides the best assurance that applicable state and federal environmental regulations are being met.

##### **Determining whether the fuel supplier has an environmental management system in place:**

PPL does not currently factor this into the supplier selection process.

##### **Conducting a physical evaluation of the fuel supplier's facility:**

Typically, PPL staff completes vendor site evaluations prior to any fuel shipments; however, operational conditions, and not an environmental review, is the site visit focus.

##### **Chemical composition of fuel (e.g., sulfur in coal):**

Sulfur content is a major factor in PPL's coal purchase decisions. A direct link exists between the sulfur content of the coal and SO<sub>2</sub> concentrations in the power plant stack gases. PPL seeks the lowest sulfur content coal consistent with other fuel cost and performance criteria.

##### **Impact of fuel delivery:**

The cost of delivery and the quality of service are considered in making purchase decisions.

##### **Giving preference to fuels extracted locally:**

Since transportation is a major factor in the coal delivery price, economics dictate that the coal suppliers closest to the plant site who meet all performance criteria generally have an advantage over more distant sources. This is an economic and not an environmental decision, but may result in fewer emissions and lower fuel consumption during the transportation of coal to the power plant.

**Other suppliers**

**6-3. Does your company have a policy to incorporate environmental criteria in the selection of suppliers for other (i.e., nonfuel) goods and services it purchases? Is this policy globally applicable?**

PPL revised its procurement manual to explicitly incorporate environmental criteria into the process of selecting suppliers of nonfuel goods and services. Specifically, the criteria recommends that life-cycle cost analysis is used when evaluating competitive bids, and that preference be given to products with a greater content of recycled waste. Preference also is to be given to suppliers with established sustainable development programs and/or environmental management systems. Also, as part of PPL's program to develop strategic relationships with preferred product suppliers and service providers, PPL has the opportunity to work directly with the vendor to find ways to help them improve their environmental performance in support of PPL's Environmental Policy. For example, in cooperation with an alliance partner, PPL switched from one supplier of janitorial products to another because of the superior environmental and safety performance of the new supplier.

**6-4. When selecting such suppliers, does your company consider criteria such as the following?**

Specific materials procurement requirements and energy source preferences are addressed in Section 8, below.

	Yes	No
Supplier's use of environmentally preferable materials	X	
Materials use efficiency of supplier operations		X
Energy use efficiency of supplier operations	X	
Hazardous waste management practices	X	
Solid waste management practices	X	
Final waste and emissions volumes for supplier operations		X
EHS compliance record	X	

PPL routinely screens waste management and remediation site contractors for environmental and health and safety performance criteria in the bid and selection process for their services.

**6-5. Does your company actively share its knowledge of environmentally preferable processes with its suppliers, or work proactively in some other way with its suppliers to develop environmentally preferable materials, products, processes or services?**

PPL has entered into a number of strategic relationships with preferred service providers and suppliers, and is constantly evaluating other similar opportunities. These relationships allow the company to work directly with its preferred suppliers to consider issues such as the environmental, safety and health performance of both the supplier and its sub-suppliers. An example of how this works is a partnership with the company's janitorial products partner, who came to PPL to suggest switching to a new supplier whose environmental and safety and health performance was superior to the supplier PPL had been using. In 1999 PPL created a similar

partnership with a waste management vendor. This new partner helps PPL more effectively evaluate the various off-site waste treatment and disposal facilities used to manage wastes.

**6-7. If your company purchases energy (e.g., electricity or natural gas) for resale, what environmental criteria, if any, does it incorporate in selecting a supplier?**

PPL does not incorporate environmental criteria in selecting the supplier for its electricity or gas purchases for resale. Other factors, such as availability of the power on the PJM system and business contracts, control these purchases.

**6-8. What challenges and successes have your company experienced in the area of supplier relations?**

The major accomplishment in supplier relations has been in the area of strategic relationships. This represents a major change over the way the company used to do business. These arrangements allow PPL to work directly with preferred suppliers to identify and act upon opportunities to improve environmental, safety and health performance. Because PPL's experience with this type of relationship has been good, the company is constantly looking for other areas where such relationships make sense.

## Section 7: Energy Acquisition, Conversion, Distribution and Sales

### Electricity generation

#### 7-1 Primary Fuel Sources of Generation

2002 PPL Generation	MWh Generated	% of total Generation
<b>Combustible Fuels</b>		
Oil and gas	2,420,300	5
Coal	29,135,689	57
Other—CTs and diesel	22,981	small
Hydro (excluding pumped storage)	3,918,523	8
Nuclear	15,658,231	30
<b>Total Generation</b>	<b>51,155,724</b>	

### Transmission, Distribution, and Sales

**7-2. Please provide the information regarding fuel source in the table below. If this information is not known for some or all electricity (e.g., purchased power), please note that fact:**

Source: PPL Electric Utilities—2002 data.	Source of MWh Transmitted
Oil/gas	2,420,300
Coal	29,135,689
Hydro (excluding pumped storage)	3,918,523
Nuclear	15,658,231
Diesel and combustion turbine	22,981

## 2002 CERES Report

Purchases	21,209,968
<b>TOTAL Transmission (MWh)</b>	<b>72,365,692</b>

Other than for Purchases in the information above, it is assumed that Sales to the end user take place approximately according to the same distribution of generation sources.

7-3. Please provide the following information on your transmission network (69kV and above):

(1) What percentage of your transmission network is above ground?

Over 99%.

(2) What fraction of network right of way lies on public land?

Less than 1%.

(3) What fraction of your transmission network is on shared right of way?

Less than 1%.

(4) Please describe right-of-way management policies, including herbicide use, trails management (access and maintenance), wetlands policy, erosion control.

The vegetation on PPL Electric Utilities' transmission rights of way (ROW) is maintained utilizing the management techniques of tree trimming, tree removal, re-clearing and herbicide application. All lines are field surveyed about every three years, and needed work is done based on the conditions observed.

PPL selectively manages the ground vegetation on its ROWs. Cutting and herbicide application activities generally target the taller trees. This approach promotes safe, reliable operation of PPL's facilities and delivery of electric power to users. PPL selectively treats and maintains the vegetation in the right of way, leaving the low-growing vegetation that competes with undesirable vegetation, helps reduce future maintenance requirements and creates favorable wildlife habitat.

PPL uses herbicide application as an important vegetation management tool. This technique is the safest, most effective means of controlling undesirable vegetation. PPL uses only EPA-approved herbicides, selectively applied from the ground, which minimizes the amount of herbicide that has to be used. The application methods currently used are stem foliar (high/low volume), low-volume basal and cut surface. PPL also uses the Department of Agriculture Hypersensitivity Registry before applying herbicides, so those specific individuals are notified in advance.

Planning for potential wetlands and water encroachments begins in the early stages of a project and continues through construction. PPL conducts environmental inventories whenever new transmission lines are constructed. These inventories cover wetlands, water crossings and threatened and endangered species habitat. PPL considers social and technical constraints to determine a line route that best balances regulatory requirements, the wishes of the public and cost.

Any required environmental permits are obtained during this process. If effects on wetlands and waters are unavoidable, a multidisciplinary team reviews potential encroachments with a goal of including mitigation strategies into the final line design. The vegetation management foreman (VMF) is a key member of this team and is trained in both construction techniques and erosion and sedimentation control regulation requirements. The VMF works closely with local conservation districts, the state Department of Environmental Protection and the U.S. Army Corps of Engineers, as needed. Acting as the principal contact between PPL field construction operations and the governmental agencies, the VMF assures full compliance with all permits and that there is minimal disturbance to the environment during project construction.

**(5) Please describe measures taken to protect people and animals (including raptors) from electrocution.**

PPL installs "Danger, High Voltage Above" signs on each of the four sides of transmission structures. In rare cases where climbing of structures has been identified, PPL has installed anti-climbing devices, such as barbed wire, to preclude such activity. Substations are fenced, and danger signs are posted on all sides of the fenced areas.

PPL usually has no need to modify its structures to prevent raptor electrocution since raptor line contact is very infrequent. Most contacts are from turkey vultures, which are not a threatened or endangered species. PPL's Transmission Maintenance Manual Raptor Policy also protects raptors. PPL personnel are instructed to call for assistance in the identification of the species or nest. The policy precludes crews from disturbing the nest if a raptor nest or if an endangered, threatened or protected species nest is encountered on a company structure or right of way. PPL reports the nest to the local wildlife conservation officer and requests guidance. If injured raptors are encountered, the Raptor Policy provides a list of contacts for assistance.

**(6) Please discuss corporate responses to public concerns regarding electromagnetic fields (EMFs) and stray voltage.**

PPL continues to take a reasoned, prudent approach in responding to the EMF issue. This approach consists of these elements:

- Providing EMF information to customers and employees.
- Providing magnetic-field measurements to residential customers.
- Establishing and implementing a program to reduce magnetic fields in new or rebuilt facilities, when it can be done at no or low cost.
- Integrating EMF into PPL's public involvement process when siting of transmission lines.
- Developing an EMF Teachers' Guide for middle school teachers with discussion topics and classroom activities to familiarize students with the issue.

**7-4. Please provide the following information on your local distribution network (below 69kV):**

**(1) What percentage of your local distribution network is above ground?**

Over 90% of PPL's local distribution network is above ground. However, PPL, like all other Pennsylvania electric utilities, must comply with a Pennsylvania Public Utility Commission rule that requires the placing of electric lines underground in developments of five houses or more. PPL has been doing this for a number of years.

## **2002 CERES Report**

### **(2) Please describe pole material selection, management and disposal policies.**

Wood poles make up over 98% of PPL's distribution poles. Fiberglass and steel poles are used for specific applications, where accessibility, strength or environmental concerns prove them to be advantageous.

Current poles are Southern Yellow Pine with pentachlorophenol as the wood preservative. In the past creosote was used as the preservative. Creosote still makes up the majority of the poles on PPL Electric Utilities' system. Cross arms are Douglas fir treated with pentachlorophenol. Poles are inspected based on age, and the appropriate ground line treatment or replacement is determined by the results.

PPL's disposal policy is to find a beneficial reuse first. If this is not possible, the poles are disposed in accordance with all applicable standards.

### **Natural gas supply**

#### **7-5. Are you a primary producer of natural gas? If so, please describe environmental protection measures in place.**

No. None of PPL Gas Utilities subsidiaries are primary producers of natural gas. North Penn Gas owns 35 to 40 shallow production wells and operates 15 to 20 that produce natural gas. Most of the former production wells have been closed and are being systematically plugged per Pennsylvania regulations.

### **Emissions controls on compressors.**

No compressors are owned or operated.

### **Other environmental protection measures.**

PPL Gas Utilities has a formal, ongoing program under a consent order and agreement with the Pennsylvania Department of Environmental Protection to systematically plug depleted gas and oil production wells according to state regulations.

#### **7-6. Please describe environmental protection measures in place associated with your storage operations.**

North Penn Gas operates a total of seven drip condensate tanks associated with the Meeker Gas Storage Field. Six of these tanks are skid-mounted with spill containment attached. The remaining tank is enclosed within an earthen dike that is lined with impermeable membranes. As the older tanks are taken out of service, they are replaced with newer, double-walled tanks.

### **Transportation and distribution**

#### **7-7. If you transport natural gas:**

##### **(1) What percentage of your pipeline network is above ground?**

4%.

##### **(2) What fraction of the network passes through public land?**

6%.

**(3) What are company policies regarding siting of pipelines that transect sensitive ecosystems?**

PPL follows all applicable federal, state and local regulations when submitting erosion and sedimentation control plans, general permits applications, PNDI searches and other permits for construction.

**(4) What percentage of your transportation network is on shared right of way?**

Less than 6%.

**(5) Please describe pipeline material selection, management and disposal policies.**

Pipeline Material Selection – PPL Gas Utilities Operating Procedures Manual states that “the pipe shall be manufactured in accordance with Title 49 CFR, Part 192, Appendix Band Section DOT 192.59 (Plastic) or DOT 192.55 (Steel).”

Pipeline Material Management – Pipe and associated materials are visually inspected at the time of delivery to insure they meet company specifications. Steel pipe is stored on wooden padding according to the specific stacking height, width and spacing guidelines provided in the Operating Procedures Manual. Polyethylene pipes are stored following the manufacturer’s recommended shelf life and so as to avoid exposure to ultraviolet light. All steel pipes are coated and the coating is inspected using an electronic “holiday” detector before installation. Select backfill and/or protective sheeting is used to protect the installed pipe.

Disposal policies – All pipes to be removed from service are abandoned according to PPL Gas Utilities Corp. Operating Procedures Manual. Most buried pipe removed from service is abandoned in-place. All other steel pipe, including that above ground, is cut into manageable lengths for storage or disposal. Salvageable steel pipe is stored for future use as protective casing sleeves for new pipe or for miscellaneous structure fabrication. Unused steel scraps are disposed of in local salvage yards. Scraps of unused polyethylene are temporarily stored in a trash container until they can be permanently disposed. Used glycol and silica gel are temporarily stored in 55-gallon drums until they can be disposed of at an appropriate waste disposal facility.

**(6) Please describe right-of-way management policies, including herbicide use, trails management (access and maintenance), wetlands policy and erosion control.**

PPL Gas Utilities maintains rights of ways so they are passable for required surveys and maintenance. Growth-retardant herbicide is utilized in areas where permitting is available and where property owners grant permission. Erosion control is addressed in the initial installation and final grading of rights of way. Indications of erosion are reported as part of an annual (minimum) patrol of transmission rights of way. Where the use of herbicides is not permitted, the right of way is often maintained with the use of mechanical equipment.

**(7) Please describe policies surrounding the siting and operation of compression, storage and conditioning stations.**

Compressor Stations – None.

## **2002 CERES Report**

Storage Stations – North Penn Gas owns two underground gas storage fields, one of which it operates. A third party, Dominion Transmission, operates the other field and provides compression and gas conditioning for both. As these storage fields are developed from naturally occurring natural gas reservoirs, the policies regarding citing are limited.

Conditioning Stations – Mercaptan-based odorant is added to the gas stream at take and demand stations to indicate the presence of gas. Mercaptan injection into the natural gas follows the regulations outlined in Title 49 CFR, Part 192, Section DOT 192.625. Glycol and silica gel are used to remove moisture from the gas stream in critical areas, such as regulation and metering stations.

### **(8) Please describe measures taken to minimize losses from your pipeline system.**

- Leakage surveys are conducted using flame-ionization gas detectors.
- Check metering is utilized to identify unusual flows on sections of the transmission system.
- The gas is odorized to alert the public of any leaking condition.
- Gas sales and purchases are monitored to determine the “unaccounted for” rate.
- PPL participates in the Pennsylvania One-Call system to reduce third-party damage to its facilities. The company conducts its own programs with excavators and others to gain their cooperation when they work near PPL facilities.
- Excess flow valves are used on all residential gas services extended from facilities operating at 10 psig or more.
- Coated steel pipe, and some bare pipe, is cathodically protected to minimize corrosion.
- Older pipe is replaced with new plastic and coated steel pipe that is less likely to leak.
- Employee and contractor awareness training assures that all workers are trained to prevent and identify leaks in the field.

### **(9) What measures are taken to protect habitats and human populations from the risk of leakage and/or explosion?**

In addition to the steps noted in 7.7 (8), PPL also maintains trained field personnel who are skilled at identifying and correcting potentially dangerous situations. Calls are answered 24 hours a day, seven days a week, by trained personnel who are prepared to initiate appropriate corrective action.

### **7-8. If you distribute natural gas to the consumer:**

#### **(1) What percentage of your distribution network is in plastic pipes?**

About 55 percent of PPL gas mains are plastic, based on length of pipe; greater than 81 percent of PPL gas services are plastic, based on the number of services.

#### **(2) Please describe measures taken to minimize losses from your pipeline system.**

The same measures listed in Question 7-7 (8), above, also apply to distribution facilities.

## **Section 8: Internal Use and Conservation of Natural Resources**

### **8-1. Describe how your company incorporates environmental guidelines into its selection of goods and services (as distinct from its selection of suppliers):**

As noted in Question 6-3, PPL revised its procurement manual to explicitly incorporate environmental criteria into the process of selecting suppliers of nonfuel goods and services. Specifically, the criteria recommend that life-cycle cost analysis be used when evaluating competitive bids, that preference be given to products with a greater content of recycled waste, and to suppliers with established sustainable development programs and/or environmental management systems. Also, PPL has begun to incorporate environmental guidelines into the selection of goods and services by setting up strategic relationships with preferred suppliers to consolidate procurement practices and to reduce costs. For example, the corporation has instituted a process through an alliance partner for ordering janitorial chemicals to better document and control the types and quantities of those products that are used across the corporation's business lines. As part of this alliance, PPL is expanding the program to include environmental criteria in the selection of janitorial goods. A second example is a similar strategic relationship established with a waste vendor to handle much of PPL's wastes. PPL uses the resources of this partner to help identify waste recycling opportunities and to better manage its wastes.

Also, PPL has an internal approved chemical review process to help assure that chemicals used meet applicable environmental and safety standards. The program's specific goals are to provide guidance in choosing the least hazardous chemicals for each job, monitor chemical use, and minimize generation of hazardous wastes. These procedures apply to all chemical products used throughout the corporation.

**8-2. Does your company have a formal written policy regarding materials/resource conservation, reduction, reuse and recycling?**

PPL's environmental policy reflects a corporate culture that promotes conservation of natural resources, pollution reduction and protection of the environment

**8-3. Are the following targeted by that policy?**

	Yes	No
Reduced consumption of virgin materials through product or process redesign	X	
Water conservation	X	
Energy conservation		X
Habitat conservation	X	
Risk reduction	X	
Procurement of reused goods		X
Procurement of goods with recycled content	X	
Recycling of solid waste	X	
Recycling of hazardous waste and toxic materials	X	

**8-4. Give some examples of techniques, practices and procurement methods employees are using to conserve materials/resources:**

PPL's power plants and vehicle garages use parts washers that recycle used solvent on-site, resulting in less solvent consumption and less waste solvent being shipped off-site for disposal.

## 2002 CERES Report

The garages also recycle their own antifreeze, reducing the amount of antifreeze that has to be purchased and the amount of waste antifreeze. By switching to dry ash-handling systems, the fossil power plants have reduced their use of water by over 50% since 1990. The fossil plants also have increased the amount of ash that can be recycled, thereby conserving the natural resources that would otherwise be used in its place, such as cement and soil. Recently, PPL began using a computerized work management and chemical inventory system that should result in less excess inventory and waste. The increased use of computers at PPL has caused a reduction in the amount of paper that would have otherwise been used.

### **8-6. Have you established specific targets for material/resource conservation programs (e.g., metal, wood, office paper, cardboard, vehicle batteries, motor oil)?**

PPL's Environmental Management System encourages establishment of specific business line environmental performance improvement goals, and several business lines are examining establishing specific targets in these areas. A key objective of establishing a waste vendor strategic relationship (Question 8-1 above) is to obtain the data necessary to establish meaningful source reduction and recycling targets for a variety of wastes, and to monitor performance against those targets.

### **8-7. Please describe your company's activities to minimize energy use at its own facilities (not including generating facilities):**

As part of PPL's Environmental Management System, PPL's major business lines are developing environmental performance improvement goals that in some cases include energy savings programs at certain facilities.

### **8-8. What steps have you taken to minimize the environmental burdens associated with employee transportation for work-related or other purposes?**

PPL experimented with electric vehicles for company-related operations over the past several years, but this program has had limited success. In 2002, PPL completed its subsidy of mass transit as part of a consent order agreement with the state related to opacity violations at its Martins Creek power plant.

### **8-9. Document trends in company-owned and leased-fleet vehicle fuel use:**

Vehicle fuel	1998	1999	2000
Electricity (kWh)	11,192	17,551	7,261
Total km traveled	16,089	19,247	7,400
kWh per 100 km traveled	72.01	90.72	98.12

PPL's electric vehicles were returned in 2000 to their manufacturers.

### **8-10. Please describe your company's policies and programs regarding proactive ecosystem protection and stewardship (such as wetlands preservation, revegetation, wilderness and ecosystem protection, etc.) in areas affected by your operations. Include discussion of issues associated with easements and right of ways.**

PPL has aggressive land management and aquatic ecosystem protection programs. As a major hydropower operator in Montana, Maine and Pennsylvania, PPL is involved in protecting fish and wildlife, water quality, aquatic and terrestrial habitat, cultural, public safety, and recreation resources. This includes hundreds of miles of river in Montana where the company operates 11 hydroelectric power stations and one storage reservoir. In Pennsylvania PPL's environmental preserves provide recreational opportunities to millions of visitors every year. PPL also sets aside thousands of acres of company land including woods, streams, lakes, meadows and wetlands. These nature areas thrive in close proximity to the company's largest power plants and show that it is possible to provide energy in harmony with the environment.

For example, PPL operates its Martins Creek Environmental Preserve in coordination with many stakeholder groups to manage wildlife habitat around the power plant. Part of the Martins Creek Environmental Preserve is enrolled in the Pennsylvania Game Commission's Farm-Game Cooperative Program, which has a goal to manage habitat for game and non-game species, as well as to provide land for public hunting. The preserve has worked with Waterfowl USA in the past and installed wood duck boxes along the river portion of the Tekening Hiking Trails. The preserve has blue bird boxes and wren boxes around the site, and has worked with a local birding group to install kestrel boxes. PPL even has a peregrine falcon nest box mounted on one of the power plant's exhaust stacks. The site also has protected a wetland pond habitat for painted turtles, snapping turtles, frogs, green herons, great blue herons and wood ducks. While closing part of a bottom ash disposal basin, PPL also has preserved the habitat of wild turkeys, rabbits and white-tailed deer, along with a wide variety of bird species.

At the Martins Creek power plant, PPL hosted teacher intern programs in the summer of 2002 and 2003. The interns from 2002 developed an air pollution and air monitoring curriculum, "The Air We Breathe," for use by high school teachers.

PPL's ecosystem protection programs are not restricted to the United States. In Chile, the company is working to save black-neck swans that cross the top of the Molles Dam. These birds were getting hurt when they came in contact with high-voltage power lines. Working with the Municipal Museum of Natural Sciences and Archaeology of San Antonia, PPL modified the line and installed safety devices to allow the birds safe passage.

**8-11. Please describe your company's policies and programs regarding environmental restoration, in those cases where company activities or operations have resulted in damages.**

The Pennsylvania Department of Environmental Protection has recognized PPL as a leader in site remediation. PPL companies have multi-site remediation agreements with the Pennsylvania Department of Environmental Protection (DEP) to assess and remediate, when needed, sites that may have been contaminated by past PPL or predecessor company operations. This voluntary program was the first of its kind in the state, and is probably one of the best voluntary remediation programs in the country. It is a prime example of PPL's environmental policy in action to address environmental concerns even before there is regulatory requirement or stakeholder concern. More than 180 sites have been addressed, and hundreds of acres of previously idle property have been made available for productive reuse.

Agreements such as this one allow the company to effectively manage past environmental liabilities and to incorporate action to address additional liabilities as they become identified. Recently, both PPL Electric Utilities and PPL Gas Utilities have added sites to their respective multi-site agreements so that potential affects of past operations can be addressed over the life of the agreements, and site remediation can be managed and prioritized within currently available resources.



## Section 9: Emissions and Waste

### Routine emissions

#### 9-1. Does your company have goals or policies to reduce or eliminate routine emissions of the following?

	Yes	No
Greenhouse gases (GHGs) as defined by the Kyoto Protocol	See Note	
Ozone depleting substances (ODSs) as defined by the Montreal Protocol	X See 9-2	
Key air pollutants (specifically carbon monoxide, lead, volatile organic compounds, nitrogen oxides [NO <sub>x</sub> ], particulate matter [PM 2.5, PM10] and sulfur oxides [SO <sub>x</sub> ])	X See 9-2	

**Please discuss these goals and comment on their genesis (i.e., were they internally generated, generated in response to regulation or generated in response to an externally initiated voluntary goal):**

PPL is developing a new Global Climate Change strategy to position the company to respond to the increasing actions of federal, state and other stakeholders, as the climate change issue continues to increase in importance. This corporate-wide program includes development of a greenhouse gas Inventory and development of the strategy by multiple teams from major company business lines.

PPL's 1990-2000 greenhouse gas emission reductions archived in the U.S. Department of Energy's 1605(b) national data base resulted from voluntary actions taken under the Department of Energy's Climate Challenge program. PPL successfully completed its Climate Challenge Agreement with the DOE with the filing of its 1605(b) greenhouse gas emission reduction report for 2000.

PPL uses three types of Ozone Depleting Substances (ODSs): halons, CFCs and chlorinated solvents. The company has programs to minimize their use. Trichloroethane (TCA), previously used as a degreaser, has been phased out in nearly all applications.

Since 1990, PPL has reduced its SO<sub>2</sub> and NO<sub>x</sub> emissions rates by about 50% and 65%, respectively, in response to both regulatory requirements and some voluntary actions.

#### 9-2. Indicate routine emissions data and targets for greenhouse gases, ozone depleting substances, key air pollutants and other chemicals associated with energy that your company sells, including purchased energy.

PPL Generation*		Base Year 1990	1999	2000	2001	2002
CO <sub>2</sub>	Total (million tons)	29.03	23.81	28.4	26.9	27.8
	lb./gWh	1.31	1.18	1.14	1.15	1.09

## 2002 CERES Report

PPL Generation*		Base Year 1990	1999	2000	2001	2002
Carbon Monoxide	Total tons		2,223	2,374	2,651	3,352
Lead	Total tons		4.5	4.0	1.99	1.99
VOCs	Total tons		146	172	175	280
NO <sub>x</sub>	Total tons	115,564	46,505	51,269	46,019	44,788
	lb./mwh	5.45	2.31	2.07	1.97	1.75
SO <sub>2</sub>	Total tons	385,833	258,485	224,186	212,786	223,601
	lb./mwh	18.21	12.83	9.05	9.09	8.75

\* Includes PPL Generation East and West emissions and Susquehanna generation. Does not include purchased energy.

### **Please comment on significant trends for total/overall emissions information:**

Since 1990 PPL has significantly reduced SO<sub>2</sub>, NO<sub>x</sub> and CO<sub>2</sub> emission rates (by about 50%, 65% and 17% respectively) by switching fuels to lower sulfur coal, changing the way it operate plants and changing their fuel mix.

#### **9-3. Has your company formally adopted a climate change policy?**

PPL is in the process of developing a revised global climate change strategy. See Question 9-1.

#### **9-4. Has your company agreed to voluntary chemical or other emissions reductions with specific targets and timetables, as defined by others or established by the company itself?**

Yes. See Question 9-1. Also, to reduce NO<sub>x</sub> emissions, PPL installed state-of-the-art nitrogen oxide removal technology (SCRs) at the Montour power plant in 2000-2001, in advance of emission reductions called for by 2003 by the Ozone Transport Commission's MOU.

Also, in May, 2003, PPL reached a voluntary agreement on a permit issue with the New Jersey and Pennsylvania Departments of Environmental Protection and will reduce SO<sub>2</sub> emissions from its Martins Creek power plant starting in 2004. PPL also will shut down or repower the two coal-fired generating units at the plant by 2007, and donate 70% of the SO<sub>2</sub> and NO<sub>x</sub> emission allowances to a nonprofit environmental organization from the shutdown or repowering.

### **Spent nuclear material**

#### **9-5. If your company generates spent nuclear material, please provide information on quantities generated (in metric tons and curies), management type and policies regarding storage.**

In 2002, PPL generated approximately 55 metric tons of spent fuel from its Susquehanna nuclear plant.

### **Hazardous waste**

#### **9-6. Does your company have specific programs in place to encourage hazardous waste minimization?**

Yes. PPL has had a hazardous waste minimization plan in place since 1986. State and federal regulations require that PPL maintain written hazardous waste minimization plans and residual waste reduction plans. PPL has partnered with national leaders in the hazardous and nonhazardous waste handling and recycling business, to help the company effectively manage its waste handling and minimization programs.

**9-7. What quantity of hazardous waste has your company generated during the last three years? Please provide both absolute and normalized data, as well as the unit(s) of output used for normalization. Please also note the base and target years used. Please specify the definition of hazardous waste used to compute these figures:**

PPL Generation East, Electric Utilities and Gas Utilities	U.S. Totals	
	Tons	lb./MWh
Base year (1994)	677	0.038
2000	249	0.015
2001	92	0.002
2002	63	0.001

PPL uses the federal classification of hazardous waste based on ignitable, corrosive, toxic and reactive properties or the listing of specific process wastes. Quantities shown are from the company's U.S.-based Eastern operations. Normalized data is in pounds of hazardous waste per kilowatt-hour generated.

**Please comment on significant trends:**

PPL reduced hazardous waste generation by about 85% in the early 1990s through a number of efforts, including managing boiler water chemistry at the power plants. Reductions from these actions leveled off at small quantities in the late 1990s. Annual totals are now characterized by small yearly variations in hazardous waste production. PPL continues to identify additional cost-effective hazardous waste reduction opportunities.

**9-8. Of the hazardous waste generated in the last measured year, what percentage was:**

Management Type	% Off-site
Converted to salable product	0
Recycled	69
Incinerated	9
Treated	21
Landfilled	1

PPL continuously seeks best management practices for hazardous waste, practices that are environmentally responsible, that limit future corporate liability and that are cost-effective.

**9-9. Does your company investigate the environmental performance of its hazardous waste disposal vendors?**

## 2002 CERES Report

Yes. Onyx, PPL's hazardous waste partner, maintains an extensive vendor audit program both for initial approval of, and doing continued business with, hazardous waste disposal vendors. PPL views the Onyx program as more rigorous than PPL's internal programs. PPL has committed to using only hazardous waste vendors approved through the Onyx program.

### 9-10. At how many sites has your company been involved in remediation of contaminated soil or water?

The Pennsylvania Department of Environmental Protection (Pa. DEP) has recognized PPL as a leader in site remediation. PPL companies have site remediation agreements with the Pa. DEP to assess and remediate, when needed, sites that may have been contaminated by PPL or predecessor companies' past operations. This voluntary program was the first of its kind in the state. More than 180 sites have been addresses and hundreds of acres of previously idle property have been made available for productive reuse.

### What is the current and expected financial impact of your involvement in these sites?

Under its voluntary, multi-site remediation agreement with the state (see Question 8-14), PPL is obligated to spend no more than \$5 million a year on site assessment and remediation. Similarly, PPL is required to spend no more than \$1.75 million a year under its Gas Utilities agreement. As of the end of 2002, PPL has a remaining contingency balance of about \$15 million to address the minimum amount of remaining site work currently defined under the remediation agreements.

### Nonhazardous waste

### 9-11. Please identify any significant non-hazardous waste streams (e.g., solid, agricultural, office, packaging, dairy) generated by your products or processes:

Coal ash by far is the most significant non-hazardous waste stream generated by PPL. The company has an outstanding ash management program that beneficially reuses the majority of its coal ash. In 2002, PPL's Pennsylvania coal plants generated 842,367 tons of coal ash. Ninety percent of that ash was beneficially reused.

### 9-12. Are there programs in place at your company to minimize nonhazardous waste streams?

Yes. The Pennsylvania Department of Environmental Protection requires that residual waste generators draft source-reduction strategies for each type of residual waste produced. These strategies describe each waste stream and either the alternatives explored or the actions taken to minimize the waste toxicity and volume. PPL's residual waste minimization options are limited because the large volume of coal ash produced is not amenable to source reduction efforts. Both the U.S. Environmental Protection Agency and Pennsylvania Department of Environmental Protection recognize this limitation and encourage electric utilities to maximize beneficial ash reuse in lieu of source reduction. As indicated in the response to Question 9-11, PPL has been highly successful in beneficial reuse of its ash.

### 9-13. What quantity of such wastes has your company generated during the past three years? Please provide both absolute and normalized data, as well as the unit(s) of output used for normalization. Please note the base and target years used.

Waste Stream	Base year (1994)	2000	2001	2002
--------------	------------------	------	------	------

	Million Tons	Lb./ MWh	Million Tons	Million Tons	Million Tons
Solid	1.05	59.5	0.83	0.73	0.87

**9-14. Of the nonhazardous waste generated last year, what percent was:**

Management Type	Percentage of waste managed
Recycled/reused	90
Incinerated	0
Treated	0
Landfilled	10
Used for energy recovery	0

**Accidental releases**

**9-15. Do you track oil spills, chemical spills and other accidental releases (e.g., radioactive releases or upset conditions)?**

Yes. PPL’s electric transmission/distribution and generation business lines track oil, chemical spills and accidental releases on an annual basis.

**9-16. If yes, detail what you consider minimum “reportable quantities” for releases in international as well as domestic operations (your internal standards, not necessarily those defined by law). Please provide information for releases to all media (land, water, air):**

Reportable quantities depend on the significance of the spill and the sensitivity of the area or equipment impacted. Reporting guidelines for some spills are defined by state or federal regulation and generally depend on the nature of the spill and the material spilled.

**9-17. Provide the following information on spills and accidental releases. Please specify the units used:**

PPL Electric Utilities Routine Spills and PPL Generation Agency Reportable Spills						
	Oil Spills		Chemical Spills		Other Releases	
	#	Vol. (gal.)	#	Vol. (gal.)	#	Vol. (gal.)
<b>2002</b>						
Released to land	63	4,680	13	346	1	10
<b>2001</b>						
Released to land	79	1,148				
<b>2000</b>						
Released to land	92	2,283				
<b>1999</b>						

## 2002 CERES Report

Released to land	82	1,063	1	75		
<b>1998</b>						
Released to land	97	200	1	1,400		
Released to air					2	324

The majority of oil spills involve five gallons of oil or less from small distribution transformer equipment.

### Spill prevention and leak detection

#### 9-18. Discuss your company's programs for preventing spills and detecting leaks for:

##### a. Management of coal piles.

Coal storage piles are contoured to maximize runoff and minimize percolation of rainfall through the coal. This lowers the moisture content of the coal, (moisture adversely affects plant operation) and reduces the amount of leachate that could potentially affect ground water. Coal pile runoff at the power plants is collected and either reused for fugitive dust control or directed to nearby wastewater treatment basins. At the Brunner Island power plant site, the entire coal pile area is lined with an amended fly ash product to protect the local ground water quality. Also, PPL is in the process of lining Montour power plant's coal pile.

##### b. Management of feedstock chemicals used in the combustion process.

All power generation facilities have spill prevention, control and countermeasure plans addressing the storage and use of both petroleum products and chemicals. These plans are based on a thorough operational and engineering evaluation of spill potential at the facilities. Generally, all above-ground bulk storage tanks are equipped with secondary containment, and all underground storage tanks are of double-walled, fiberglass construction with built-in interstitial leak-detection monitoring.

##### c. Management of ash piles and other stored combustion byproducts.

Fly ash being stored for beneficial reuse is managed in silos equipped with state-of-the-art emission controls, such as bag filters and dust suppression systems. Bottom ash is stored temporarily in stockpiles located within the surface impoundment from which it was dredged. All runoff from the stockpiled material drains naturally back into the impoundment, where it is managed as part of the facility's permitted wastewater treatment system. Dusting is generally not a problem due to the very coarse nature of the material.

##### d. The percentage of your company's fuel or waste oil storage tanks that are underground.

About 30 percent of PPL's oil storage tanks are underground. (PPL Gas Utilities has no underground storage tanks).

##### e. Programs and progress on replacing or upgrading underground storage tanks.

PPL began an aggressive program at its generating stations, service centers and other facilities in 1989, to bring underground tanks (USTs) up to existing standards, and to eliminate tanks no longer required. As of December 1998, the U.S. Environmental Protection Agency and the

Pennsylvania Department of Environmental Protection deadline for replacing or upgrading USTs, all of PPL's USTs had been removed, retired, replaced or upgraded to meet the regulations. At PPL Gas Utilities, the underground mercaptan (odorant) vessels, although not regulated tanks, are being removed where they are no longer needed and replaced where needed in the North Penn Region.

**f. The percentage of your company's fuel or waste oil storage tanks that have engineering controls for leak prevention and/or leak detection (e.g., double-walled tanks).**

Excluding five USTs associated with the emergency diesel generators at the Susquehanna nuclear power plant that are under tight inspection controls, all of PPL's USTs for fuel (diesel or gasoline) have double-walled tanks with interstitial monitoring for leak detection. Of the 14 underground waste oil tanks, 93% (13 tanks) are double walled.

**g. Any other controls or programs for spill prevention and leak detection.**

USTs receive, at a minimum, a monthly inspection that is documented for regulatory compliance. Above-ground storage tanks receive inspections that can vary from daily inspections to monthly, depending on tank size and location.

In addition, PPL's Arizona plant, Griffith Energy has a lined water pond that requires leak detection and associated reporting to the Arizona Department of Environmental Protection as part of a zero discharge water permit.

## Section 10: Compliance

**10-1. Provide the following information for compliance with all applicable national/federal regulations:**

Regulation	Year	Number Violations	Number Penalties	\$ Value
Air Quality	1998		1	\$2,500
	1999	1	2	\$7,200
	2000	0	2	\$1,500
	2001	2	1	\$120,300
	2002	2	1	\$27,800
Water Quality	1998	0	2	\$2,800
	1999	0	0	\$0
	2000	6	1	\$3,700
	2001	1	1	\$2,320
	2002	4	1	\$2,900
Administrative	2001	2	2	\$1,600
	2002	2	0	\$0
Hazardous Waste	1998	0	0	\$0
	1999	0	0	\$0
	2000	0	0	\$0
	2001	0	0	\$0

**2002 CERES Report**

	2002	0	0	\$0
Workplace Health and Safety	1998		1	\$1,500
	1999	1	1	\$2,125
	2000	2	1	\$6,800
	2001	1	1	\$975
	2002	0	0	\$0

Note: 2002 data includes both PPL Generation East, PPL Generation West.

## **Section 11: Priorities and Challenges**

**11-1. Please briefly summarize your environmental, health and safety performance for the last year, and priorities for the future.**

**What do you believe are your company's three most important environmental metrics that indicate impact?**

1. The continued progress in reduction of fossil-fueled power plants' emission rates.
2. The continued progress in cleaning up sites under voluntary remediation agreements with the Pennsylvania Department of Environmental Protection.
3. Compliance with environmental laws, regulations and corporate improvement goals.

**What do you believe are your company's three most important environmental program priorities?**

1. Development and implementation of a corporate global climate change strategy and greenhouse gas inventory.
2. Continued improvement in reducing air and water emissions and wastes.
3. Continued progress in implementing an Environmental Management System in each PPL domestic subsidiary.

**Give examples of three key environmental, health and safety accomplishments your company has achieved over the last year.**

1. Beginning of development of a new corporate Global Climate Change strategy and Inventory to better align the company with the strategic direction of the company's businesses.
2. Continued reduction or stabilization of air pollution emission rates from fossil-fired plants.
3. Completion of construction of the new corporate office building, the Plaza at PPL Center. The Plaza contains state-of-the-art environmental design features to promote conservation, minimize waste and provide an attractive parklike setting in downtown Allentown, Pa. The Plaza is being considered for LEEDS certification.

***(Other examples of key accomplishments are noted in the Executive Summary Performance Highlights on pages 3 and 4.)***

**Give examples of three key environmental, health and safety challenges your company has experienced over the last year.**

1. Positioning the company to respond to proposed Clean Air Act changes, including the Global Climate Change issue, and the increasing expectations from stakeholders for further fossil plant emission reductions, including carbon emission controls.
2. Continuing to grow corporate environmental, health and safety programs, including an Environmental Management System, in today's tight-budgeted business climate.
3. Expansion of PPL's Environmental Management System to cover all domestic and foreign operations.



By adopting these Principles, PPL publicly affirms its belief that corporations have a responsibility for the environment, and must conduct all aspects of their business as responsible stewards of the environment by operating in a manner that protects the Earth. We

### **Protection of the Biosphere**

We will reduce and make continual progress toward eliminating the release of any substance that may cause environmental damage to the air, water or earth or inhabitants. We will safeguard all habitats affected by our operations and will protect open spaces and wilderness while preserving biodiversity.

### **Sustainable Use of Natural Resources**

We will make sustainable use of renewable natural resources, such as water, soils and forests. We will conserve nonrenewable natural resources through efficient use and careful planning.

### **Energy Conservation**

We will conserve energy and improve the energy efficiency of our internal operation and of the goods and services we sell. We will make every effort to use environmentally safe and sustainable energy sources.

### **Risk Reduction**

We will strive to minimize the environmental, health and safety risks to our employees and the communities in which we operate through safe technologies, facilities and operating procedures, and by being prepared for emergencies.

### **Safe Products and Services**

We will reduce and, where possible, eliminate the use, manufacture or sale of products and services that cause environmental damage or health and safety hazards. We will inform our customers of environmental impacts of our products or services and try to correct unsafe use.

### **Disclaimer**

These Principles establish an environmental ethic with criteria by which investors and others can assess the environmental performance of companies. Companies that endorse these Principles pledge to go voluntarily beyond the requirements of the law. The terms may and might in Principles one and eight are not meant to encompass every imaginable consequence, no matter how remote. Rather, these Principles obligate endorsers to behave as prudent persons who are not governed by conflicting interests and who possess a strong commitment to environmental excellence and to human health and safety. These Principles are not intended to create new legal liabilities, expand existing rights or obligations, waive legal defenses, or otherwise affect the legal position of any endorsing company, and are not intended to be used against an endorser in any legal proceeding for any purpose.

believe that corporations must not compromise the ability of future generations to sustain themselves.

We will update our practices constantly in light of advances in technology and new understandings in health and environmental science. In collaboration with CERES, we will promote a dynamic process to ensure that the Principles are interpreted in a way that accommodates changing technologies and environmental realities. We intend to make consistent, measurable progress in implementing these Principles and to apply them to all aspects of our operations throughout the world.

### **Environmental Restoration**

We will promptly and responsibly correct conditions we have caused that endanger health, safety or the environment. To the extent feasible, we will redress injuries we have caused to persons or damage we have caused to the environment and will restore the environment.

### **Informing the Public**

We will inform in a timely manner everyone who may be affected by conditions caused by our company that might endanger health, safety or the environment. We will regularly seek advice and counsel through dialogue with persons in communities near our facilities. We will not take any action against employees for reporting dangerous incidents or conditions to management or to appropriate authorities.

### **Management Commitment**

We will implement these Principles and sustain a process that ensures that the Board of Directors and Chief Executive Officer are fully informed about pertinent environmental issues and are fully responsible for environmental policy. In selecting our Board of Directors, we will consider demonstrated environmental commitment as a factor.

### **Audits and Reports**

We will conduct an annual self-evaluation of our progress in implementing these Principles. We will support the timely creation of generally accepted environmental audit procedures. We will annually complete the CERES Report, which will be made available to the public.



**PPL Corporation**

Two North Ninth Street  
Allentown, PA 18101-1179



This report is printed on  
recycled paper and is recyclable.