

**General Introduction**

PPL Corporation is an international energy company that owns or controls more than 11,000 megawatts of electric generating capacity in the United States, and major electric distribution systems that deliver electricity to about 4 million customers in the U.S. and the U.K.

PPL recognizes its responsibility to address climate change in a reasoned and informed way – a way that works to reduce greenhouse gas emissions while maintaining a strong economy and providing reliable electricity supply and infrastructure to customers at reasonable rates.

In 2007, PPL facilities in the U.S. generated 53.6 million megawatt-hours of electricity. Of that total, about 33 million megawatt-hours (62 percent) were generated using fossil fuels, and about 20.6 million megawatt-hours (38 percent) were generated using energy sources that do not emit carbon dioxide.

**Section 1: Risks and Opportunities**

**1a: Risks**

*i. Regulatory Risks: How is your company exposed to regulatory risks related to climate change?*

A significant amount of PPL's greenhouse gas emissions derive from its electric generation in the United States (Question 2b.). These emissions may be subject to limits from legislation and subsequent regulations on the federal, regional and state levels in the next few years.

PPL is assessing the regulatory risks of climate change. The United States currently has no federal law governing greenhouse gas emissions, but various legislative proposals are being considered in the U.S. Congress, and several states already have passed legislation capping carbon dioxide emissions. Some states are joining regional compacts that will limit emissions to achieve regional caps and reductions on greenhouse gas emissions.

To date four of the states in which PPL owns generating capacity have, or are adopting, carbon dioxide emissions limits. Connecticut, Maine and New York, where PPL has 454 megawatts of fossil-fueled generating capacity, are part of the Regional Greenhouse Gas Initiative (RGGI). Montana, where PPL owns 683 megawatts of coal-fired generating capacity, has joined the regional Western Climate Initiative.

Depending on final details of federal legislation and regional programs governing greenhouse gas emissions, requirements to significantly reduce greenhouse gas emissions could have a material impact on PPL's capital expenditures and operations. However, based on the proposals evaluated so far, the makeup of PPL's generation portfolio and projected prices of energy in the future, we do not believe that PPL will be significantly disadvantaged by federal legislation or regional initiatives compared with other utilities that generate most of their electricity with fossil fuels.

PPL's wholesale and retail electricity customers could see increases in the cost of electricity depending on the details of specific legislative measures that may be enacted to control greenhouse gas emissions.

Other potential regulatory risks from climate change are:

- Longer and more complicated siting and permitting processes for future power plants.
- Increased cost of electricity from costlier new power plant construction due to carbon emission control and disposal equipment.
- Lack of demonstrated technology within the industry to reduce, capture, transport and sequester carbon dioxide emissions from existing or new fossil fuel power plants.
- Unknown capital cost of carbon dioxide controls.
- Unknown operating and maintenance costs of carbon dioxide controls.
- Recovery of capital and operating and maintenance costs related to greenhouse gas controls.
- Patchwork of inefficient and potentially conflicting state and regional programs in the absence of a unified national response to greenhouse gas emissions.
- Potential devaluation of existing fossil fuel power plants and higher prices for electricity generated with fossil fuels, depending on the legislative measures enacted to control greenhouse gas emissions.
- State mandates related to electric power generation, such as Pennsylvania's Alternative Energy Performance Standards, that require a certain percentage of electricity sold to be supplied by renewable sources without assurances that such supply will be available at prices that customers will accept, or will be available at any price.
- Retail electricity prices might not reflect the actual cost of a carbon-constrained market.
- Regional emission-control programs such as the Regional Greenhouse Gas Initiative are beginning to have an influential effect on future energy prices. Future energy supply contracts likely will be affected to an uncertain amount by the price of carbon emissions control or market value of carbon emission credits.
- Customer dissatisfaction with increases in electricity prices that could limit the recoverability of increased electricity costs.

PPL's U.K. operation, Western Power Distribution (WPD), is a "wires only" electricity distribution business. Its activities are subject to regulation by the U.K. energy regulator, Ofgem, under the UK Electricity Act (as amended). That act places certain duties on the U.K. government and regulator to ensure that regulated companies are able to finance their activities. If new U.K. climate change legislation emerged, it would be expected that the U.K. regulator would allow for efficiently incurred costs.

*ii. Physical Risks: How is your company exposed to physical risks from climate change?*

With the exception of two peaking power facilities (159 megawatts capacity) located near Long Island Sound, PPL's generating facilities are located at inland areas that would not be significantly affected from the physical effects of climate change such as sea level rise and possible increased hurricane dangers. Some specific physical risks could be:

- Increased spending for repair and replacement of electric transmission and distribution facilities in the U.S. and U.K. damaged by increased frequency and

- intensity of storms and weather extremes (including heat, cold, drought and flood).
- Disruptions in fuel delivery to PPL generating plants because of weather extremes.
  - Increased spending to mitigate future impacts on U.K. electric distribution facilities.

*iii. General Risks: How is your company exposed to general risks as a result of climate change?*

A general risk that PPL and other energy companies face is that technology for the capture and storage of carbon dioxide emissions from new and existing power plants may not be developed or may not be commercially available when needed to meet expected statutory or regulatory deadlines. The recent decision of the U.S. Department of Energy to cancel plans to build a near-zero-emissions coal-fired power plant as part of the FutureGen Industrial Alliance intensifies this risk.

Even if technology for the capture and storage of power plant carbon dioxide emissions becomes commercially available when needed, costs could be so high that consumers may object to resulting electricity cost increases.

There are legal and regulatory risks associated with carbon capture and storage if this is the technology path chosen to reduce greenhouse gas emission.

*iv. Risk Management: Has your company taken or planned action to manage the general and regulatory risks and/or adapt to the physical risks you have identified?*

PPL has taken a number of actions to prepare for the risks of a carbon constrained future. Many of these actions are noted below in Section 3: Performance. In the U.S., PPL is closely monitoring developments on federal and state climate change legislation, and is providing its views to policymakers.

For example, PPL publicly supported the Bingaman-Specter Low Carbon Economy Act of 2007, and in Montana is a participating member of the Governor's Climate Change Advisory Committee that developed 54 recommendations for reducing greenhouse gas emissions in the state.

PPL also is a member of industry associations that are providing their views to federal and state climate change policymakers. These groups include the Edison Electric Institute, the Pennsylvania Chamber of Business and Industry, and the Pennsylvania Environmental Council, among others.

In the United Kingdom, new government requirements have been established to undertake enhanced, risk-based, vegetation management to provide greater overhead line network resilience against severe wind storms. WPD has developed policies and procedures to meet these new requirements.

U.K. government and regulatory policy is being developed to require investment to improve resilience of substations against flooding, on a risk-based, cost-benefit basis. WPD has engaged at the local level with the U.K. environmental regulator, The Environment Agency (EA), to assess risk of flooding to WPD substations. WPD has participated at national level with the U.K. government, Environment Agency, Ofgem, and other transmission and distribution companies in the development of regulatory guidance on the nature and extent of warranted flood mitigation investment.

In the U.K., WPD has participated in collaborative research with other distribution, transmission, supply and generation companies on a project with the U.K. Meteorological Office, world recognized Hadley Centre, to formulate models of climatology to assess likely timescales and impacts of climate change on a range of variables including ambient temperature, solar gain, wind speed and storm return periods. These outputs have been fed into commonly employed equipment ratings packages such as the IEEE 738 overhead line rating standard to determine impact on ratings of overhead lines, underground cables and transformers. This work is ongoing and will inform future discussion with Ofgem on the need for anticipative action on ratings.

Within the upcoming five-year price setting review, U.K. regulator, Ofgem, requested companies to publicly consult on company developed options for environmental improvement actions. WPD will seek stakeholder comment on options to reduce system energy losses and reduce associated greenhouse gas emissions. A further option to be put to stakeholders for consideration is to retire early a small number of old technology bulk sulfur hexafluoride (SF6) 132-kilovolt circuit breakers -- each of which contains some 318 kilograms of SF6. (The loss of such a quantity of gas from one circuit breaker is about the equivalent to the emissions from a loaded jumbo jet undertaking 27 trans-Atlantic flights.)

*v. Financial and Business Implications: How do you assess the current and/or future financial effects of the risks you have identified and how those risks might affect your business?*

In the U.S., the financial effects of climate change risks depend significantly on the stringency of federal and/or state climate legislation as well as regulations that may be passed that could apply to PPL's operations. PPL is continually monitoring those processes, has created an internal climate change group to analyze possible effects on the company, and is providing its views to policymakers on climate change legislative issues.

Although policymakers have declared support for many different climate change bills and actions to reduce greenhouse gas emissions, the full possible effects of these legislative proposals are unknown and are continually changing. Therefore PPL believes it is premature to speculate on the possible financial effects they, or some future variation of legislation in the U.S. Congress, may have on the company, though the cost to PPL of such emission reductions could be significant.

### **1b: Opportunities**

*i. Regulatory Opportunities: How do current or anticipated regulatory requirements on climate change offer opportunities for your company?*

Climate change legislation, and its resultant cost increase to fossil-fueled generation, could make renewable energy generation development costs more favorable. Since 2002, PPL has been developing, building and operating renewable energy facilities including solar, wind and landfill gas-to-energy plants throughout the mid-Atlantic and Northeast.

Over the next five years, PPL is expected to invest at least \$100 million in new renewable energy projects, including solar, landfill gas and biomass plants. The carbon

offset potential of this commitment cannot be estimated until specific projects and technologies are identified.

In addition, PPL is investing more than \$500 million to add 156 megawatts of hydroelectric capacity at existing facilities in Maine, Montana and Pennsylvania.

PPL is increasing the generating capacity of its Susquehanna nuclear power plant in Pennsylvania, and by the end of 2008 expects to submit a Combined License Application (COL) to the U.S. Nuclear Regulatory Commission for a new nuclear generating unit in Pennsylvania.

Government incentives for carbon capture research and development also could create opportunities. PPL is participating in the Big Sky Carbon Sequestration Partnership in the northwestern U.S. This leading-edge program will provide PPL timely access to data and results from carbon capture and sequestration research on western coals.

If U.S. climate change legislation includes a cap-and-trade provision, PPL's market experience and proven ability to assess and hedge risk may provide opportunities in trading credits of greenhouse gas emissions.

PPL also expects new product lines to evolve in support of a short-term climate change response. These include energy efficiency, conservation, demand-side management programs, distributed generation and renewable energy. PPL is well-positioned to take advantage of these opportunities with its ongoing development of renewable energy projects and the capabilities of an advanced customer electric metering system installed by its U.S. electric distribution company, PPL Electric Utilities.

In the near future, PPL Electric Utilities will be able to offer its 1.4 million customers new electric rate options, demand-side management energy-saving programs, and enhanced customer electricity usage information. In 2007, PPL Electric Utilities introduced for customers a Web-based home Energy Analyzer that has had more than 165,000 users in its first nine months, and PPL has proposed expanded demand-side management and energy-efficiency programs starting later in 2008. PPL Electric Utilities also distributed more than 140,000 energy-saving compact fluorescent light (CFL) bulbs as part of a promotion for the Energy Analyzer, and has begun a program with municipalities to recycle used CFL bulbs to safely address the mercury disposal concern.

Pennsylvania's Alternative Energy Portfolio Standard requires that 18 percent of power provided to PPL Electric Utilities customers come from renewable energy sources by 2020. The renewable energy credits from this program and PPL EnergyPlus' energy trading experience also provide PPL with additional market trading opportunities.

In the United Kingdom, WPD does not operate any large generation power plants; therefore, the company is unlikely to be involved in the U.K. Emissions Trading System. If the U.K. government were to pass energy-saving legislation, it is anticipated that such measures would impact all sectors and not just electricity distribution. As WPD is not an electricity supply company, it is not in a position to offer tariffs in the manner of PPL's U.S. business as above.

*ii. Physical Opportunities: How do current or anticipated physical changes resulting from climate change present opportunities for your company?*

PPL has no additional comment on this question.

*iii. General Opportunities: How does climate change present general opportunities for your company?*

Climate change concerns will provide emphasis for PPL to focus more on existing non-fossil-fueled sources of generation that perhaps can be increased or supplemented through cost-effective facility additions that also are environmentally friendly. Also, as climate change legislation in the U.S. is advanced there may be opportunities for PPL in its renewable energy generation and customer energy management programs. These opportunities may include those originating through customer interaction with the Energy Analyzer, a PPL Web site that helps customers understand their energy use and learn ways to save electricity and money.

Because of the uncertainty surrounding carbon capture technology and what regulations the federal government will set for carbon dioxide emissions, PPL is focusing on nuclear and hydroelectric power. PPL applied for and received permission to increase by 205 megawatts the generating capacity of the Susquehanna nuclear power plant near Berwick, Pa. PPL has announced plans to apply for a combined license for a third nuclear reactor adjacent to the Susquehanna plant. In addition, PPL has proposed doubling the output from its hydroelectric plant at Holtwood Dam in Lancaster County, Pa., increasing the output of an existing hydroelectric facility in Great Falls, Mont., and restarting its hydroelectric plant in Orono, Maine.

*iv. Maximizing Opportunities: Do you invest in, or have plans to invest in, products and services that are designed to minimize or adapt to the effects of climate change?*

As an energy company providing electricity and related services to our customers, PPL's plans to adopt products and services related to climate change are discussed in other areas of this response. Additional products and service areas that PPL is interested in are the different emerging clean coal and carbon capture and sequestration technologies.

*v. Financial and Business Implications: How do you assess the current and/or future financial effects of the opportunities you have identified and how those opportunities might affect your business?*

PPL has no additional comments on this question.

## **Section 2: Greenhouse Gas Emissions Accounting**

### **2a: Accounting Parameters**

- i. Reporting Boundary: Please indicate the category that best describes the company, entities or group for which your response is prepared:*
  - a. Companies over which financial control is exercised – per consolidated audited Financial Statements.*
  - b. Companies over which operational control is exercised.*
  - c. Companies in which an equity share is held.*
  - d. Other (please provide details)*

This response is prepared for PPL Corporation, headquartered in Allentown, Pennsylvania, U.S.A., and covers facilities in which an equity share is held.

PPL Corporation is a Fortune 500 international energy holding company. The company controls more than 11,000 megawatts of generating capacity in the United States, sells energy in key U.S. markets and delivers electricity to about 4 million customers in Pennsylvania and the United Kingdom. In addition, PPL Gas Utilities delivers natural gas and propane to 110,000 customers in Pennsylvania, Maryland, West Virginia and Delaware. PPL is in the process of selling PPL Gas Utilities. During 2007, PPL completed the sales of its Latin American electricity delivery businesses.

PPL Corporation includes PPL Generation LLC; PPL EnergyPlus LLC; PPL Renewable Energy LLC; PPL Nuclear Development LLC; PPL Electric Utilities Corporation; PPL Global LLC; PPL Gas Utilities Corporation; PPL Services Corporation and PPL Development Company LLC.

*ii. Reporting Year: Please explicitly state the dates of the accounting year or period for which greenhouse gas emissions are reported.*

The accounting year for this report is January 1, 2007, through December 31, 2007.

*iii. Methodology: Please specify the methodology used by your company to calculate greenhouse gas emissions.*

PPL's U.S. carbon dioxide emissions are measured by emission monitoring systems that are installed, operated and maintained according to the Title 40 Code of Federal Regulations, Protection of Environment Part 75, Continuous Emission Monitoring. Other greenhouse gas emissions not directly measured by monitoring systems are estimated in accordance with the WRI/WBCSD Greenhouse Gas Protocol Revised Edition, or U.S. Department of Energy 1605(b) Technical Guidelines. Sulfur hexafluoride (SF<sub>6</sub>) emission estimates from transmission and distribution systems/equipment are based on changes in annual SF<sub>6</sub> inventory levels similar to procedures used by the U.S. Environmental Protection Agency SF<sub>6</sub> Emission Reduction Partnership for Electric Power Systems Protocol, and using PPL equipment leakage rate operational experience. In the U.K., there is no mandatory reporting system. Guidelines for reporting on greenhouse gas emissions have been issued by the U.K. government's Department for Environment, Food & Rural Affairs (DEFRA).

In the U.K., the trade association for all major distribution and transmission companies has established a common standard for reporting SF<sub>6</sub> inventories and emissions. The standard, which was drafted by WPD, is based on an Intergovernmental Panel on Climate Change protocol.

## **2b. Direct and Indirect Emissions-Scope 1 and 2 of the Greenhouse Gas Protocol.**

*i. (a.) Scope 1 Direct greenhouse gas emissions*

PPL Corporation's direct carbon dioxide emissions in 2007 were about 31.4 million tons (about 28.5 million metric tons) in the U.S. and U.K. This includes about 90,000 tons (about 82,000 metric tons) of carbon dioxide equivalent direct emissions of sulfur hexafluoride (SF<sub>6</sub>) consisting of about 83,000 tons in the U.S. and about 7,000 tons in the U.K.

*i. (b.) Scope 1 Direct greenhouse gas emissions for Annex B Countries*

Same as answer for Question 2b.i.(a.) because PPL's emissions are in the U.S. and the U.K., both of which are Annex B countries.

*i. (c.) and i. (d.) Scope 2 Indirect greenhouse gas emissions*

Electricity purchases data in Questions 2b.i.(e.), and 2b.i.(f.) are U.S. data only for all uses and include effects of line energy losses. PPL does not track specific indirect U.S. greenhouse gas emissions and does not have a 2007 value for its total internal energy use.

In the U.K., Scope 2 indirect carbon dioxide emissions from system distribution energy losses were about 729,000 tons in 2006 (about 663,000 metric tons). The 2007 U.K. system loss figure is not yet available.

*i. (e.) Total Global MWh of purchased electricity*

In 2007, PPL purchased 22.1 million megawatt-hours of electricity. PPL does not track how much, if any, of its U.S. purchased power or its carbon dioxide equivalent was used for internal purposes.

In the U.K., 2007 purchased power for internal use was about 31,200 megawatt-hours, equivalent to about 18,100 tons of carbon dioxide emissions.

*i. (f.) Total MWh of purchased electricity for Annex B countries*

Same as answer for Question 2b.i.(e.).

*i. (g.) Total global MWh of purchased electricity from renewable sources.*

In 2007, about 1.5 percent of PPL's purchased electricity in the U.S. was from renewable generation. In the U.K., supply businesses — not PPL's U.K. subsidiary — are the commercial traders between generation and customers. PPL has no choice or role in the U.K. for the proportion of renewable energy contracted for between generators, suppliers and customers.

*i. (h.) Total MWh of purchased electricity from renewable sources for Annex B countries.*

Same as answer for Question 2b.i.(g.).

**2c. Other Emissions- Scope 3 of greenhouse gas Protocol**

*(a.) Details of the most significant Scope 3 sources for your company.*

The most significant Scope 3 greenhouse gas sources for PPL would be those associated with fleet mobile equipment and employee business and commute travel.

*(b.) Details in metric tons carbon dioxide of greenhouse gas emissions for:*

*i. Employee travel*

PPL has been discussing with internal business lines how greenhouse gas emissions for employee business and commute travel may be documented, but does not now have the internal processes or resources established to measure them in the U.S. In the U.K., business use carbon dioxide emissions are about 1,100

tons per year (1,000 metric tons per year) and are included in the direct emissions answer to Question 2b.i.(a.).

*i.i. External distribution/logistics.*

PPL does not directly measure this factor because the primary product PPL produces is electricity provided to its customers by an electrical transmission and distribution system. PPL has inventoried its fleet vehicle equipment emissions in past years, and while PPL does not have a 2007 carbon dioxide emission level for fleet mobile equipment, a typical annual emission level would be estimated at about 20,000 tons per year (18,156 metric tons per year) in the U.S. In the U.K., fleet emissions are about 10,200 tons per year (about 9,300 metric tons per year) and are included in the direct emissions answer to Question 2b.i.(a.).

*i.i.i. Use/disposal of the company's products and services*

PPL does not include greenhouse gas emissions resulting from customer use of its product (electricity) because those emissions result from a large number of different types of sources, would be difficult to quantify, and many would likely be counted more than once.

*i.v. Company supply chain*

PPL does not monitor greenhouse gas emissions by its suppliers. PPL expects its suppliers to comply with applicable environmental laws and regulations.

**2d. External Verification:**

*i, ii, and iii, greenhouse gas emissions data auditing*

As noted above, the majority (over 99 percent) of PPL's greenhouse gas emissions are direct carbon dioxide emissions from power plants in the production of electricity. These emissions are monitored by continuous emission monitoring (CEM) analyzer systems that are audited periodically by environmental agencies in the states where PPL operates fossil-fuel plants: Pennsylvania, Montana, Connecticut, New York, and Illinois. PPL and the U.S. Environmental Protection Agency review and verify the CEM data before it is posted on EPA's Web site.

**2e. Data Accuracy**

See answer to Questions 2d., i, ii and iii, above.

**2f: Emissions History**

*Do the emissions reported for your last accounting year vary significantly compared to previous years? If so, please explain the reasons for the variations.*

In September 2007, PPL retired two 150-megawatt coal-fired generating units at the Martins Creek plant in Northampton County, Pa.

Their retirement is part of a voluntary agreement reached in 2003 between PPL and environmental agencies in Pennsylvania and New Jersey to reduce sulfur dioxide emissions.

Another environmental benefit of the shutdown will be an annual reduction in carbon dioxide emissions of about 1 million tons.

PPL donated 70 percent of the units' sulfur dioxide emission allowances and 70 percent of the nitrogen oxides emission allowances and emission reduction credits to the Pennsylvania Environmental Council, a nonprofit organization. The allowances will not be sold or transferred to other generating units.

## **2g: Emissions Trading**

- i. *Does your company have facilities covered by the EU Emissions Trading Scheme? If so:*
  - a. *Please provide details of the annual allowances awarded to your company in Phase I for each of the years from 1 January 2005 to 31 December 2007 and details of allowances allocated for Phase II commencing on 1 January 2008.*
  - b. *Please provide details of actual annual emissions from facilities covered by the EU ETS with effect from 1 January 2005.*
  - c. *What has been the impact on your company's profitability of the EU ETS?*

More than 99 percent of PPL's greenhouse gas emissions result from electric power generation in the United States. Because the U.S. government has not signed the Kyoto Protocol, PPL's U.S. operations may not participate in the European Union Emissions Trading Scheme or Clean Development Mechanism and Joint Implementation (CDM/JI) projects. PPL's U.K. electric distribution facilities have not been subject to the Phase I EU ETS emission allowances program and are not expected to be significantly affected by the Phase II program.

- ii. *What is your company's strategy for trading or participating in regional and/or international trading schemes (eg: EU ETS, RGGI, CCX) and Kyoto mechanisms such as CDM and JI projects?*

As noted above in Question 2g.i., PPL's electric distribution company in the United Kingdom does not have an obligation to participate in the EU Emissions Trading Scheme. PPL has elected not to participate in the Chicago Climate Exchange at this time. PPL has fossil generation assets within the Regional Greenhouse Gas Initiative signatory states and will have to participate in the emission allowance compliance program. PPL is exploring ways to generate emission offsets that might be used to partially meet greenhouse gas emission reduction requirements.

## **2h: Energy Costs**

- i. *Please identify the total costs in US \$ of your energy consumption, e.g. from fossil fuels and electric power.*
- ii. *What percentage of your total operation costs does this represent?*
- iii. *What percentage of energy costs are incurred on energy from renewable sources?*

PPL facilities generated 53.6 million megawatt-hours of electricity in 2007. Fuel is a major component of generation costs. PPL fuel costs in 2007 were \$821 million, which represents about 17 percent of total operating expenses.

## **Section 3: Performance**

### **3a: Reduction Plans**

*i. Does your company have a greenhouse gas emissions reduction plan in place? If so, please provide details along with the information requested below. If there is currently no plan in place, please explain why.*

With the exception of Connecticut, Maine and New York where PPL has relatively small electric generation assets subject to Regional Greenhouse Gas Initiative carbon dioxide emission limits now being developed as described in Question 1a.i., there are yet no greenhouse gas emission limits for the majority of PPL's power plants. Montana has joined the Western Climate Initiative and possible WCI/Montana greenhouse gas emission limits will be adopted. Therefore, while PPL is involved in many preliminary studies and a wide variety of actions to prepare, PPL currently has no formal greenhouse gas emissions reduction plan in place, primarily because of the uncertainty and continually changing status of future requirements. PPL's preliminary actions are discussed below in Question 3a.iv.

*ii. What is the baseline year for the emissions reduction plan?*

No particular baseline year has been chosen for a PPL emission reduction plan (see Question 3a.i.), because climate change emission reduction provisions are still being debated in numerous federal and state bills, and none yet directly affects greenhouse gas emissions from the majority of PPL's facilities.

*iii. What are the emissions reduction targets and over what period do those targets extend?*

As noted in Questions 3a.i. and 3a.ii., PPL does not yet have a formal greenhouse gas emissions reduction plan. Emission reduction targets and their timetables being used in internal studies generally conform to those in current climate change legislative proposals being advanced by policymakers.

*iv. What activities are you undertaking to reduce your emissions, e.g.: renewable energy, energy efficiency, process modifications, offsets, sequestration, etc.? What targets have you set for each and over what timescales do they extend?*

PPL has many actions under way to prepare the company for expected climate change requirements. These include:

- PPL participates in renewable energy projects that use wind, landfill methane, sunlight and fuel cells to generate electricity. Two of PPL's landfill energy projects have been recognized by the U.S. Environmental Protection Agency's Landfill Methane Outreach Program. The Frey Farm landfill gas-to-energy project was named a 2006 EPA Project of the Year and the Greater Lebanon landfill gas-to-energy project was selected as a 2007 Community Partner of the Year.
- PPL purchased 331,481 megawatt-hours of renewable energy in 2007.
- PPL plans to invest more than \$100 million to develop renewable energy projects over the next few years, and an additional more than \$500 million to expand existing hydroelectric projects in three states.
- PPL is a member of the U.S. Department of Energy's Big Sky Carbon Sequestration Partnership in the northwestern U.S. to support the development of technologies that can provide for long-term storage of carbon dioxide through

- geologic or terrestrial sequestration. Information from this program may be important to future operation of PPL's fossil fuel generation facilities in Montana.
- PPL has increased electric generation capacity at existing nuclear and hydro plants.
  - By the end of 2008, PPL expects to submit a Combined License Application (COL) to the U.S. Nuclear Regulatory Commission for a new nuclear generating unit in Pennsylvania.
  - PPL decommissioned two older coal-fired units at the Martins Creek power plant in 2007, reducing annual carbon dioxide emissions by about 1 million tons.
  - PPL Electric Utilities has installed an advanced metering system for its 1.4 million Pennsylvania customers, one of the first such systems in the U.S. This technology will enable the company to offer new customer rate options and demand-side management programs to help customers plan and reduce their electricity use.
  - PPL Electric Utilities launched a program, called e-power, that encourages customers to conserve energy and educates them on ways they can save money on their electric bills.
  - PPL Electric Utilities has proposed expanding programs for customer demand-side management and energy efficiency starting later in 2008.
  - A building at PPL's headquarters was the first privately owned building in Pennsylvania to receive a "Gold" rating from the U.S. Green Building Council.
  - PPL Electric Utilities uses bio-diesel alternative fuel (20 percent supplemented with soybean or vegetable oil) for more than 300 fleet vehicles.
  - PPL participates on the Montana Governor's Climate Change Advisory Committee, which recently made 54 recommendations on climate change issues for the state.
  - PPL has created a new internal group under a senior executive to plan and coordinate climate change programs across PPL businesses.
  - As part of the upcoming five-year regulatory price-setting mechanism, WPD is seeking stakeholder views on options to reduce system energy losses and thus greenhouse gases. Alongside these options is one to phase out use of bulk sulfur hexafluoride (SF6) circuit breakers on the basis of environmental greenhouse gas emission risk.
  - WPD's transport fleet has been modernized and emissions reduced through improved gas mileage.

*v. What investment has been or will be required to achieve the targets and over what time period?*

As noted above, PPL has not established firm emission reduction targets because of the uncertainty about climate change legislation in the U.S., but has taken actions to reduce greenhouse gas emissions risk, and to prepare the company to respond to the climate change issue. One of these actions is the recent formation of a new group under a senior executive to plan and coordinate climate change programs across PPL businesses. One of the issues the group is charged with is to manage internal studies to examine and estimate the investment needed to comply with major climate change legislative proposals.

vi. *What emissions reductions and associated costs or savings have been achieved to date as a result of the plan?*

PPL does not yet have a formal emissions reduction plan as noted in Question 3a.i. Ongoing internal studies are done to assess compliance costs and business opportunities as major climate change legislative proposals are advanced by policymakers. Under the deregulated state environments in which PPL operates, the results of these ongoing studies and evaluations are confidential.

**3b: Emissions Intensity**

i. *What is the most appropriate measurement of emissions intensity for your company?*

PPL reports its greenhouse gas emission intensity levels in short tons per megawatt-hour of net electricity generation by PPL-owned assets.

ii. *Please state your greenhouse gas emissions intensity in terms of total tones of carbon dioxide reported under Scope 1 and Scope 2 per U.S. \$m turnover and EBITDA for the reporting year.*

PPL’s greenhouse gas emissions intensity performance for the last six years is shown in the chart below. PPL reports in short tons per net megawatt-hour (MWh) to maintain consistency with past and current reporting in other forums and with standard financial reporting practices.

Year	Carbon dioxide emissions (short tons) (Scope 1 only)	Carbon dioxide emissions rate (short tons/net MWh)
2007	31.4 million tons	0.56 tons/MWh
2006	30.3 million tons	0.58 tons/MWh
2005	32.6 million tons	0.55 tons/MWh
2004	32.3 million tons	0.60 tons/MWh
2003	30.8 million tons	0.59 tons/MWh
2002	29.9 million tons	0.58 tons/MWh

iii. *Has your company developed emissions intensity targets? If so:*

a. *Please state your emissions intensity targets.*

b. *Please state what reductions in emissions intensity have been achieved against targets and over what time period.*

*If not, please explain why?*

PPL has not developed formal emissions intensity targets for the same reasons noted in Question 3a.i. about emissions reduction targets and timetables. In preparation for expected climate change requirements in coming years, PPL is investigating possible ways to increase energy efficiency in both its facilities and programs being developed for customer energy savings as noted in answers to other questions of this survey.

**3c: Planning**

*Do you forecast your company’s future emissions and/or energy use? If so:*

i. *Please provide details of those forecasts, summarize the methodology used, and the assumptions made.*

*ii. How do you factor the cost of future emissions into capital expenditure planning?*

*iii. How have these considerations made an impact on your investment decisions?*

PPL analyzes the dynamics of developing climate change legislation and regulation requirements under a variety of potential scenarios for internal decision-making on capital expenditures and investments. In the competitive electricity markets in which PPL operates, business planning details of these methods and results are confidential.

At this time, because there is no proven commercially available technology to capture and sequester greenhouse gases, it is not now a critical component of PPL's capital budgeting process for existing generation sources.

However, because of the uncertainty surrounding clean-coal technology and what regulations the federal or state governments will eventually set for carbon dioxide emissions, PPL's plans now focus on nuclear and hydroelectric power. The company is investigating adding a third nuclear reactor adjacent to its existing nuclear generation facility near Berwick, Pa., and has proposed doubling the output from its hydroelectric plant at the Holtwood Dam in Lancaster County, Pa., and increasing generation from existing hydroelectric facilities in Great Falls, Mont., and Orono, Maine. Associated costs for those projects are included in the capital planning process. Any costs associated for carbon capture and sequestration for carbon dioxide emissions from future and existing PPL facilities may be significant at some future date but are highly uncertain at this time.

## **Section 4: Governance**

### **4a: Responsibility**

*Does a Board Committee or other executive body have overall responsibility for climate change? If not, please state how overall responsibility for climate change is managed. If so:*

- i. Which Board Committee or executive body has overall responsibility for climate change?*
- ii. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?*

PPL's climate change response is the responsibility of the Corporate Leadership Council, which consists of the chief executive officer, chief operating officer, chief financial officer and senior vice president-general counsel and secretary.

The council receives regular updates on the progress and status of climate change actions from a climate change team that includes representation from operating companies and corporate service organizations such as Environmental Management, Office of General Counsel and External Affairs. PPL has designated the president of its Development Company as the executive liaison for climate change issues.

The climate change issue and PPL's plans/actions are periodically reviewed with the Board of Directors by way of presentations and/or briefing documents.

### **4b: Individual Performance**

*Do you assess or provide incentive mechanisms for individual management of climate change issues including attainment of greenhouse gas targets? If so, please provide details.*

A portion of executive compensation is based on achievement of prescribed business results. The awards are based on objective corporate financial and operational measures. Specific written performance objectives and business goals are established during the first quarter of each year. Operating goals for 2007 did not include climate change strategy or attainment of greenhouse gas emissions goals.

#### **4c: Communications**

*Please indicate whether you publish information about the risks and opportunities presented to your company by climate change, details of your greenhouse gas emissions and plans to reduce emissions through any of the following communications:*

- i. the company's Annual Report or other statutory filings, and/or*
- ii. formal communications with shareholders or external parties, and/or*
- iii. voluntary communications such as Corporate Social Responsibility reporting.*

*If so, please provide details and a link to the document(s) or a copy of the relevant excerpt.*

PPL has a history of transparency and accountability in its communications. In addition to quarterly and annual reports ([www.pplweb.com/investors/research+tools/Annual+Report.htm](http://www.pplweb.com/investors/research+tools/Annual+Report.htm)) the company issues on its financial condition, PPL has published environmental reports since 1993, Ceres reports since 1997, and community and environmental reports since 2002.

In 2006, PPL adopted the reporting guidelines of the Global Reporting Initiative in producing its first Corporate Responsibility Report ([www.pplweb.com/corporate+responsibility+report/corporate+vision+and+strategy/overview.htm](http://www.pplweb.com/corporate+responsibility+report/corporate+vision+and+strategy/overview.htm)), which combines elements of PPL's financial reports, the community and environmental report, and Ceres report. In 2007, PPL updated its 2006 CRR and is now working on its third (2008) sustainability report. PPL has participated in the Carbon Disclosure Project since 2006.

#### **4d: Public Policy**

*Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading? If so, please provide details.*

As a major energy producer, PPL recognizes a responsibility to address climate change in a reasoned way that works to reduce greenhouse gas emissions while keeping the economy strong.

In July 2007, PPL Chairman James H. Miller joined U.S. Sens. Jeff Bingaman and Arlen Specter and other business leaders in Washington, D.C., to express support for the key principles in the Bingaman-Specter bill. These principles include a unified, national approach to controlling greenhouse gas emissions that covers all sectors of the economy, establishes a system of allowances that would create economic incentives for companies to reduce greenhouse gas emissions in cost-effective ways, and provides federal funding for research, development and deployment of new energy technologies.

In Montana, PPL testified on more than a dozen bills related to climate change during the 2007 Montana Legislative Session. With PPL's input, Montana passed a law

that cut the tax rate in half for equipment used to capture, compress, sequester and transport carbon dioxide.

PPL also takes an active role in the Montana Governor's Climate Change Advisory Committee and has helped to develop 54 recommendations to reduce greenhouse gas emissions in the state.

The company continues to offer testimony in Montana and surrounding states on the feasibility of carbon capture and sequestration as well as the issues of regulatory and environmental liability.

In Pennsylvania, PPL participated in the development of a Climate Change Roadmap for the commonwealth, and participated in the Pennsylvania Department of Conservation and Natural Resources' Carbon Management Advisory Group.