

**PECO Energy Company**  
**2012 Winter Readiness Overview**  
**November 8, 2012**

PECO Energy Company (“PECO” or “the Company”), through its extensive Winter Readiness Program is prepared to provide least cost, reliable natural gas service to our customers during this winter.

**I. PECO’s Winter Readiness Program**

PECO’s Winter Readiness Program ensures system reliability, maintains customer safety and aims for continuous improvement. The Winter Readiness Program is extensive. It requires the Company to review, inspect, maintain and modify items involving safety, corrective maintenance, preventative maintenance, scheduling, procedures, contracting, emergency preparedness, training, supply, transmission, communications, gas and customer care all prior to the winter period.

**A. Gas Operations 2012 Winter Preparedness:**

As we prepare for winter, some of PECO’s major areas of focus include, but are not limited to, the following:

**i. Employee Safety/Readiness**

PECO reinforces employee safety, year round, by conducting training and adhering to procedure. PECO also ensures that it has the personnel available for proper event response by entering into mutual assistance agreements with other utility companies in other states (such as BG&E in Maryland).

**ii. Gas System Readiness**

PECO routinely performs numerous preventative maintenance activities, including regulator station inspections and valve inspections; annual review and update of gas regulator set pressures standards; and planning for installation of necessary temporary regulator stations for the upcoming season’s Zero Degree days. PECO’s winter readiness work plan also consists of the completion of Winter Critical gas projects that will help eliminate areas that are deemed to have insufficient pressure during periods of high demand. For Winter 2012/2013, PECO identified and completed 25 main and service projects that will help assure the ability to adequately serve our customers in the event of prolonged zero degree temperatures.

PECO’s preparedness also involves tasks that give us the ability to safely and efficiently maintain/return service to our customers in times of inclement weather, such as securing contingency plans, conducting leak surveys, looking at capacity risk areas, getting snow removal equipment ready, conducting readiness checks on compressed

natural gas (“CNG”) trailers, and checking (and refreshing when necessary) portable CNG kits.

PECO also conducts several Fall/Winter drills. A Gas Mutual Assistance Drill was held on October 5, 2012, to review the process of effectively using foreign crews in a large gas event. Another drill was conducted on October 10, 2012, with Philadelphia Gas Works (“PGW”). The focus of this drill was to coordinate electric shuts off during gas emergencies. A Winter Readiness Drill, during which we will test the effects of a “Zero Degree” day on our electric and gas systems, will occur in the near future.<sup>1</sup> PECO also conducts a “Gas Load Reduction Emergency” procedures tabletop drill on an annual basis.

Other winter readiness efforts range from completing critical jobs to expand gas capacity to meet customer demands, shirring-up contracts for natural gas, readying vehicles for the winter and reaching out to snow vendors.

Additionally, PECO has filled its LNG and propane peak shaving facilities, which serve as a cushion during high demand days. PECO also fills its underground storage facilities located off interstate pipelines throughout the year when prices are low to provide customers with the most competitive price available. The company also locks in prices during the course of the year to limit the amount of gas purchased during winter months, when gas prices peak. PECO has sufficient gas supply to meet the needs of its customers this winter. PECO also has tested its system and completed a full check of readiness tasks to ensure that reliable natural gas service will be delivered to our customers.

### **iii. Frost Survey**

An essential part of PECO’s annual winter preparedness is our Frost Survey plan, designed to proactively locate and remedy system leaks and breaks due to ground during frost periods. PECO’s Frost Survey plan begins on November 1 of each year. While, PECO does not perform Frost Surveys until frost conditions exist, PECO begins monitoring daily temperatures on November 1. After the service territory experiences five consecutive days of low temperatures, PECO calculates an average temperature for those 5 days and when that 5 day average is 32° Fahrenheit or below, PECO will start performing Frost Surveys of its cast iron mains looking for breaks or conditions that could lead to breaks. The surveys will stop, if the average temperature rises above 32 degrees, until such time as the average temperature drops below 33° Fahrenheit up until April 1<sup>st</sup> of every year.

PECO also enhances its existing Frost Survey plan, when conditions dictate. Once the gas distribution system experiences 3 cast iron main breaks within a day, PECO accelerates its Frost Patrols. During this accelerated effort, PECO’s leak survey mechanics work double shifts, inclusive of weekends, surveying its system for more

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<sup>1</sup> A Winter Readiness Drill was originally scheduled for October 30, 2012. However, due to Hurricane Sandy, the drill was cancelled and will be rescheduled at a date to be determined.

breaks/leaks for a 48 hour period. After the 48 hour period expires, PECO reverts back to its normal, temperature driven, Frost Survey plan.

#### **iv. Emergency Dispatch**

PECO's Emergency Response Organization provides the necessary management and support for emergency incidents, mitigates threats to public and personnel safety, and ensures safe and reliable delivery of service to customers. PECO's Emergency Response Plan incorporates an incident management approach to streamline and coordinate emergency response.

PECO has established an expectation that all gas emergency odor calls will be responded to within 1 hour. It also has a plan to respond to severed winter weather incidents for the gas distribution system. PECO monitors the National Weather Service for winter storm warnings when the average daily temperature is forecast to reach 5° Fahrenheit or below. When such warnings issue and a storm is likely, PECO will organize to prepare and develop the appropriate response plan. As part of those plans, PECO personnel will be ready to respond to gas odor calls within 1 hour and clear ice and snow from gas meters and regulators.

#### **B. Communications and Outreach**

PECO has a crisis communication plan that ensures the roles, responsibilities and guidelines for Crisis Communications maintain employee and public confidence in the Company's ability to identify and respond effectively to any operational emergency or other crisis situation that may affect our ability to safely deliver natural gas to customers.

This crisis communications plan is intended to:

1. Keep employees and the public informed about the Company's readiness and/or response efforts in an emergency/crisis that impacts customer service, gas operations, employee and/or public safety;
2. Demonstrate command and control during an emergency/crisis, define clear roles and responsibilities, and clarify staffing and resources available;
3. Ensure all external communications are well-coordinated with various publics; and
4. Provide guidance and direction for communications activities during crisis management, helping to mitigate the crisis and achieve speedy recovery.
5. Utilize County Affairs Managers to communicate to public officials during crisis situations.

This plan would go into effect when a significant natural gas disruption occurs that generates extensive news media coverage and/or public scrutiny. The resulting public

scrutiny will affect the organization's normal operations and also could have a political, legal, financial and governmental impact on business. A crisis can be caused by human error, mechanical problems, an Act of God, or management actions. It is an event, revelation, allegation or set of circumstances that threaten the integrity, reputation or survival of an individual or organization.

### **C. Gas Supply and Planning:**

PECO will meet its obligation to provide least cost natural gas to its firm customers for the winter of 2012-2013 by utilizing various sources of firm transportation capacity, storage, and supply to meet design day and design winter demand.

#### **i. Peak Design Day Evaluation**

PECO uses a design temperature of zero (0) degrees Fahrenheit – an average of hourly temperatures over a 24-hour period. The design temperature of zero degrees is a reasonable compromise between reliability and cost because it provides assurance that firm service customers are not likely to face service interruptions and keeps the costs for peak day capacity at an acceptable level. For the winter 2012-2013, PECO's design day is 793,481 mcf or 817,286 dth.

#### **ii. System Supply Requirement Review – Capacity Planning**

In order to ensure PECO meets its firm delivery commitments, the Company applies a multi-tier approach to its capacity and supply utilization plan, including deliveries of supply from: (1) Firm Transportation ("FT") contracts (to meet approximately the first third of design day supply); (2) contracted storage (to meet one third of demand); and (3) on-system peak facilities or contracted peak deliveries.

PECO's FT contracts with interstate pipelines provide an integral part of its overall gas supply reliability plans, due to both the firm delivery rights inherent to the contracts and also due to the geographic diversity of supply provided by the firm supply receipt location capacity rights guaranteed by the contracts. Over the last two years, this supply diversity has been further enhanced as Marcellus Shale supply has become more readily available.

PECO will supplement the supply from its eight long-term gas supply contracts with supplies withdrawn from storage and delivered under storage-related FT contracts.

PECO also will utilize its two peak shaving facilities to inject firm supplies directly into its distribution system. PECO's LNG facility will provide 161,710 dth on a peak day, and its propane facility will provide another 25,750 dth on a peak day.

In addition to the above sources, PECO contracts with one or more reliable suppliers for peak shaving services delivered on a firm basis to PECO's citygate. There

is one long-term peaking contract, which provides for the delivery of 20,000 dth on any day for 10 days in the winter period.

Finally, PECO will supplement these services with other firm winter delivered services totaling 36,228 dth per day. A portion of the winter delivered service requirement will be supplied by PECO's natural gas suppliers ("NGSs") under its Gas Choice Program, as they elect the Delivered Service Option.

### **iii. Interstate Supply & Contract Arrangements**

PECO has annual firm transportation contracts with two major interstate pipelines (Texas Eastern and Transcontinental (Transco)) and another firm transportation contract with Eastern Shore Natural Gas, which provide PECO with maximum daily transportation capacity during the winter months.

Under the foregoing contracts, PECO flows gas purchased under long-term, seasonal, and spot purchase agreements with its suppliers, which, as mentioned previously, represents about one third of PECO's peak day supply requirements. PECO also holds approximately 30,000 dth/day of firm capacity on Dominion Transmission's ("DTI") pipeline, which is typically used to feed the Transco market area capacity needs. PECO also has additional transportation contracts with Texas Eastern, Equitrans and Panhandle Eastern Pipeline Company that are used to flow gas in and out of particular storage fields. PECO further has a transportation contract with UGI Utilities. Under its current supply contracts, PECO can purchase gas from numerous, liquid natural gas trading hubs and transport that gas on a firm basis from receipt to delivery at PECO's city gate.

### **iv. Utility and Contract Storage Inventory Delivery Plans**

About one third of PECO's design day requirements and one third of PECO total winter deliveries will be sourced from PECO's eight interstate pipeline storage contracts. These storage contracts either include transportation or are matched with one of PECO's FT contracts to ensure firm delivery. PECO's contract storage utilization plan ensures that the maximum withdrawal capability is available as a source of gas from December 1 through February 15. This withdrawal capability is protected by ensuring PECO's inventory associated with any of the storage contracts does not dip below levels that would trigger an automatic reduction of withdraw capability by the pipelines. PECO can hold a total of 22 Bcf of gas in inventory under its eight storage contracts. PECO's storage inventory was at least 95% full by October 31. (PECO must leave space in its inventory for injections that may be necessary in due to warm days in November).

As stated above, PECO also has on system propane and LNG storage facilities. The inventory in these facilities is withdrawn in the winter for two primary reasons: (1) when system demand projections exceed the ability of PECO's firm transportation and storage contracts to meet demand; and (2) when intraday changes in forecasted weather increase demand requirements so rapidly, that unscheduled pipeline storage and

transportation capacity could not be utilized. By November 1, 2012, the LNG facility, which has an inventory capacity of 1.2 Bcf, was 97% full and the propane facility, which holds 1.98 million gallons of liquid propane, was at capacity.

#### **v. Emergency Curtailment Plans**

PECO's emergency curtailment plan has a three-phase approach:

- 1) Gas Load reduction Crisis Phase I: Request for voluntary load reductions
- 2) Gas Load Reduction Crisis Phase II: Mandatory reduction of industrial and commercial load
- 3) Gas Load Reduction Crisis Phase III: Mandatory reduction of residential load

The curtailment crisis plan resolves PECO's inability to meet firm gas demand, which is compromised due to inadequate supply predicated by pipeline company delivery issues, peak shaving facility issues, or a distribution system infrastructure event.

In addition, PECO conducts a test of its "Send Word Now" system. During the test a text and/or an audio message is sent to all customers served under PECO's various interruptible gas rates letting these customers know that they must stop using natural gas. This year the test is scheduled for November 8.

#### **vi. Weather and Forecasting**

As PECO's gas demand is highly temperature driven, the Company relies on a number of weather forecasting services and tools to aid in projecting near and short gas system demand. For example, PECO's Gas Supply and Transportation Department, which has the responsibility of ensuring adequate supply, will review forecasts from Planalytics Inc, Meteorlogix and internal forecasts generated by PECO's affiliate, Constellation. The forecast is used to make and adjust supply contingency plans, storage management and purchasing requirements to ensure overall least cost and reliability.

PECO's Gas System Operators ("GSOs") are responsible for forecasting short-term load requirements (1 to 4 days) and rely on Meteorlogix to provide the weather forecast to aid them in doing so. GSOs utilize historic data accessing SCADA historic demand information and analyze variables including, temperature, time of year, wind speed, warming and cooling trends when making their short term forecast. The forecasted demand information is forwarded to Gas Supply and Transportation who utilizes it in the daily gas demand load balancing process.