

# PUBLIC SERVICE COMMISSION OF MARYLAND

Report Pursuant to  
Chapter 167, Section 2, Laws of Maryland 2011

Prepared for  
the Senate Finance Committee and  
the House Economic Matters Committee  
of the Maryland General Assembly

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This Report is prepared by the Public Service Commission of Maryland (“Commission”) in compliance with Section 2 of Chapter 167, Laws of Maryland 2011 (Senate Bill 692) (“legislation”), and is submitted to the Senate Finance Committee and House Economic Matters Committee of the Maryland General Assembly (collectively, “Committees”), in accordance with *Md. Code Ann., State Government Article, § 2-1246*.

Pursuant to the legislation, the Commission is to include in the Report its findings after conducting the following:

- (1) a review of the current regulations, tariffs, or standards relating to electric company responsibility for customer damages caused by electrical surges and assessment of the feasibility of obtaining information from electric companies regarding the extent of electrical surges and customer damages that result from electrical surges;
- (2) a study of the feasibility of incorporating an electric company’s service restoration plan into the electric company’s reliability plan; and
- (3) a study and consideration of whether to prohibit an electric company from calculating the rate charged by the electric company using a formula that decouples the electric company’s revenue from the sale of kilowatt–hours unless the formula provides for the suspension of decoupling during any extended service disruption.

## **I. REVIEW OF CURRENT REGULATIONS, TARIFFS AND STANDARDS**

This section of the Report discusses the results of the Commission’s Technical Staff’s (“Staff”) review of current regulations, tariffs, or standards relating to electric company responsibility for customer damages caused by electrical surges and the Commission’s assessment of the feasibility of obtaining information from the electric companies regarding the extent of electrical surges and customer damages that result from electrical surges.

### *Electrical Surge Description*

An electrical surge is caused by a spike in voltage. A typical residence uses electrical power in the form of 120-volt, 60-Hertz, single phase, alternating current. Voltage, however, is not delivered at a constant 120 volts, and may oscillate from 0 to a peak voltage of 169 volts. During an electrical surge, the voltage exceeds the peak voltage of 169 volts and may harm appliances and electrical devices of the customer. The increase of the voltage above an appliance’s or an electrical device’s normal operating voltage can cause an arc of electric current within the appliance. The heat generated in the arc causes damage to the electronic circuit boards and other electrical components. Additionally repeated lower voltage electrical surges may slowly damage appliances and electronic devices and shorten the life of the appliances or electronics.

### *Current Regulations and Standards*

The Commission has adopted COMAR 20.50.07.02 which set voltage limits which the electric utility must maintain in providing service to its customers as well as exceptions to the voltage requirements. In the event voltage is found to be outside of a prescribed limit, but was caused by one of the following, the Commission does not consider the occurrence to be a violation of its regulations:

1. Action of the elements (for example, lightning strikes or other weather-related events, earthquakes, or other acts of nature);
2. Service interruptions;
3. Temporary separation of parts of the system from the main system;
4. Infrequent fluctuations not exceeding 5 minutes' duration; or
5. Other causes beyond the control of the utility.

Should an electric company be found by the Commission to have violated the COMAR section, whether or not resulting damage to its customers' property occurred, the Commission may assess a civil penalty for the violation pursuant to *Md. Ann. Code, Public Utilities Article*, §§ 13-201 and 13-202, as applicable. The civil penalties are paid to the State's General Fund, and not directly to the customer(s). The Commission currently has no authority to direct the electric company to pay customers compensatory damages or monetary damages,<sup>1</sup> and thus has not adopted any regulations to direct the utilities to do so.

#### Utility Views of Liability for Damages Caused by Electrical Surges

In response to discovery conducted by the Commission's Staff, Baltimore Gas and Electric Company ("BGE") and Potomac Electric Power Company ("Pepco") and Delmarva Power & Light Company ("Delmarva") (collectively, the "PHI Companies") explained the basis of their positions on which they disclaim liability for damage to customers' property caused by electrical surges. Each utility's practice is outlined below:

BGE responded as follows:

Fluctuations and outages necessarily occur in the normal course of the provision of electricity and claims arise regardless of whether surges, fluctuations, or outages are the result of utility action, acts of God or the activity of known or unknown third parties. The limitation of utility liability provided by the tariffs ultimately benefits the overall public good,

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<sup>1</sup> In *Bell Atlantic of Maryland, Inc. v. Intercom Systems Corporation*, 366 Md. 1, 782 A.2d 791 (2001), the Court of Appeals held that the Public Service Commission cannot award monetary damages, and that actions for monetary damages must be filed in court. See also Article 8 of the Declaration of Rights (separation of powers between the Legislative, Executive, and Judicial branches of State government).

balancing individual customer interest with the interest in maintaining a viable and responsive public utility.<sup>2</sup>

The PHI Companies stated:

The Companies seek to design and operate their electric distribution systems in a manner that minimizes the occurrence and impact of electric surges consistent with good utility practice. As an inherent feature of an electric distribution system, weather conditions, equipment failures, and a host of other occurrences beyond the control of the Companies may cause damage to customer equipment. The Companies' tariffs adequately address the consequences of those events, consistent with many years' experience and practice. No changes are necessary. Furthermore, a change which would increase the utility's liability for damage to customer equipment would tend to drive up the cost of electric distribution service. Moreover, customers are usually in the best position to cost effectively protect their equipment in most conditions through proper home and business electrical wiring and the use of surge protectors and other protective devices.<sup>3</sup>

Utility Liability-Tariff Language

All of the electric companies' tariffs contain provisions that address when each company is responsible for damage to customers' property caused by the service provided by the company and which may be found to have been within the control of the utility. Generally speaking, the provisions limit the utility's responsibility for damages caused by electrical surges, except for cases of gross negligence or willful misconduct of the Company's employees or agents.

The Commission reviewed these exculpatory provisions included in the electric utility tariffs in a proceeding in Case No. 8263.<sup>4</sup> In its final order, the Commission adopted a Proposed Order of a Public Utility Law Judge who had determined:

In conclusion, I find and conclude that tariff provisions which limit the liability of electric utilities for damages or losses due to fluctuations in the delivery of electric service are reasonable in limiting the liability of electric utilities for actions of ordinary negligence or reasonably limiting the types of damages, and should be upheld as a reasonable and prudent balancing of customer interests, company interests, and ratepayer interests. I further find that no such standard need be directed as a uniform standard, as each utility's tariff in this area should be viewed on an individual basis for reasonableness and any reasonable tariff should be accepted. The record in this proceeding indicates that fluctuations and

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<sup>2</sup> See BGE Data Response to Staff Data Request, #1, Q5.

<sup>3</sup> See Pepco Holdings Inc. ("PHI") Data Response to Staff Data Request, #1, Q5. See Pepco Data Response to Staff Data Request, #1, Q5.

<sup>4</sup> *Re Liability of Electric Power Companies for Injury or Damages Resulting from Problems in the Delivery of Electric Power*, 82 Md. PSC 92 (1991).

outages will occur in the provision of electricity, and questions regarding utility actions may be raised even when the fluctuation or outage results from direct acts not attributable to the utility. As utilities have an obligation to serve all customers, protective tariffs are in the public interest by reducing potential costs to all ratepayers, including potentially catastrophic costs which may result from future outages or other fluctuations in service, while customers who need protection may obtain protective devices for sensitive equipment or may obtain insurance for losses resulting from such fluctuations without imposing such costs upon all other ratepayers.

As a result of the Commission's decision, the Commission has accepted for filing, the Maryland electric companies' tariffs that contain exculpatory provisions that either preclude payment for claims of customers alleging damages from electrical surges or a provision in their tariff that protects the utility from paying damage claims except for gross negligence or willful misconduct of the utility.<sup>5</sup>

#### Collection of Information on Extent of Electrical Surges and Associated Customer Damages

Pursuant to COMAR 20.50.04.10, the electric utilities are required to investigate "promptly and thoroughly any complaint concerning its charges, practices, facilities, or services." COMAR 20.50.04.11 directs the utilities to keep records of the customer complaints "as will enable it to review and analyze its procedures and actions as an aid in rendering improved service." According to a survey conducted by Staff, the four investor-owned utilities ("IOUs")<sup>6</sup> investigate and maintain records of customer complaints that allege damages to customer property from electrical surges. Berlin, Easton and Hagerstown ("HLD") also reported having procedures and systems in place to investigate complaints and resolve issues, but do not compile or track this information from customer complaints.

The Commission's Office of External Relations ("OER") also collects information from customers who call with complaints and inquiries.<sup>7</sup> OER collects the customer complaints that claim damages from electrical surges under Complaint Code 1137.

According to OER's records, cumulative damage complaints among all utilities increased from 44 in the time period October 2009-September 2010 to 58 in the time period October 2010-September 2011. Table 1 compares the damage complaints received by utilities for the time period October 2009-September 2010 with complaints received by utilities for time period October 2010-September 2011. BGE recorded the highest number of complaints in both time periods, with 33 in 2009-2010 and 36 in 2010-2011. This is largely because the utility serves the most customers. As expected, Pepco, which is the second largest utility, received the second most complaints with 9 in 2009-2010 and 15 in 2010-2011.

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<sup>5</sup> The Court of Special Appeals has ruled that an electric company tariff provision limiting damages from ordinary negligence is applicable to customer damage claims resulting from power outages. *Singer Company, Link Simulation Systems Division v. Baltimore Gas and Electric Company*, 79 Md. App. 461, 558 A.2d 419 (1989).

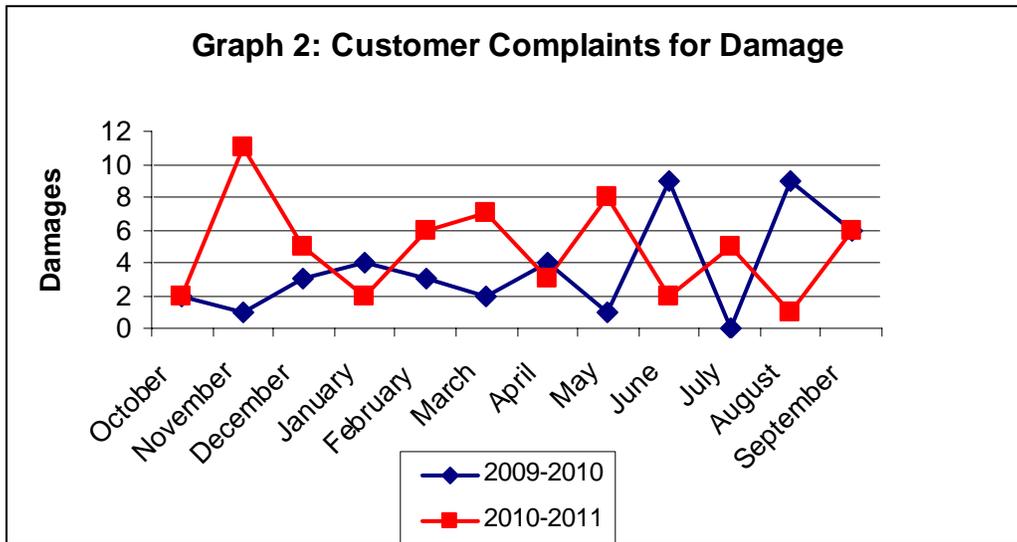
<sup>6</sup> The four IOUs are: BGE, Pepco, Delmarva, and The Potomac Edison Company ("PE").

<sup>7</sup> Under the Commission's regulations, prior to submitting a complaint to OER, the customer must first direct the complaint to the applicable utility and receive a response to the complaint prior to OER accepting the complaint from the customer.

**Table 1: Damage Complaints**

	Statewide	BGE	Choptank	DPL	Pepco	PE
October 2009 - September 2010	44	33	0	2	9	0
October 2010 - September 2011	58	36	1	5	15	1

The highest number of complaints occurred in November of 2010 with 11 complaints received. Complaints have been recorded every month in 2010-2011, while no complaints were recorded in July of 2010. Graph 2 compares the monthly damage complaints received by utilities for time period October 2009-September 2010 with monthly damage complaints received by utilities for time period October 2010-September 2011. The same number of complaints was recorded in each month for October and September of 2010 and 2011.



Other than the OER data, the utilities currently are not required to provide information regarding the electrical surges that cause damage to customer property. COMAR 20.50.07.02, setting the voltage limits, does not require the utilities to submit a report to demonstrate compliance with the regulations.

Based on the number of complaints received for the past several years, the Commission does not believe that the benefit of requiring a submission of the information in a periodic report outweighs the expenses and resources that would be expended to do so. Consequently, the Commission does not consider collection of this information necessary at this time. The Commission, however, will have OER continue to monitor the number of complaints received per utility and direct OER to alert the Commission if OER concludes that there is a significant

increase in the number of complaints that warrant an investigation of the cause of the increased number of electrical surges experienced by customers of the utility.

## **II. REVIEW OF SERVICE RESTORATION PLAN**

This section of this Report discusses the existence and extent of electric utilities' service restoration plans and priorities and the feasibility of incorporating an electric company's service restoration plan into the electric company's reliability plan.

As discussed below, none of the utilities currently have a comprehensive document known as a "reliability plan." The Commission, however, in its Administrative Docket, RM43, is considering new and revised reliability and service quality standards for services provided by electric companies in Maryland ("Reliability Regulations").<sup>8</sup> On December 13, 2011, the Commission directed the publication of proposed amendments to COMAR 20.50 (revised reliability and service quality standards for electric companies) in the *Maryland Register* for notice and comment. Included in these proposed regulations is a requirement that each utility submit an annual performance report by February 1 of each year, to include, among other things, "a description of the utility's reliability objectives, planned actions and projects and programs for providing reliable electric service." If the provision is adopted, any electric utility with a total number of 40,000 or more customers served in Maryland<sup>9</sup> will have a "reliability plan" on file with the Commission.

The Commission addresses the current availability of service restoration plans below. The Commission also has proposed in the Reliability Regulations to require that each utility submit: a supplemental annual performance report by April 1 of each year to include, among other things, service restoration requirement information, downed wire response information, customer communications performance information and periodic equipment inspection information, and the applicable results as required in the proposed regulations, including COMAR 20.50.12.06, .07, .08, and .10; and a Major Outage Event Plan within 60 days of the effective date of the adopted Reliability Regulations to include storm restoration priorities. Additionally, on October 31, 2011, by Order No. 84445 in Case No. 9279,<sup>10</sup> the Commission directed the IOUs to submit a report describing in detail the utility's priority protocols for the restoration of public safety infrastructure, hospitals, licensed nursing home providers, and other persons given priority in the utility's restoration process. These reports were filed on November 22, 2011.

When the Reliability Regulations are finally adopted, the Commission believes that "reliability plans" and "service restoration plans" will be on file with the Commission and available for review and download by customers and other interested parties.

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<sup>8</sup> RM43 is an on-going administrative docket initiated by the Maryland Public Service Commission on January 12, 2011, to consider revisions to the Code of Maryland Regulations 20.50, Service Supplied by Electric Companies, which implement or modify electric company reliability and service quality standards; vegetation management standards; annual reliability reporting; and the availability of penalties for failure to meet the standards.

<sup>9</sup> The Reliability Regulations do not apply to the smaller rural electric cooperatives and the municipal electric companies.

<sup>10</sup> *In the Matter of the Electric Service Interruptions Due to Hurricane Irene in the State of Maryland Beginning August 27, 2011*, Case No. 9279.

### Reliability Plans – Current Status

The electric utilities currently do not have specific reliability plans for their respective distribution systems, but the majority of utilities do address reliability issues. BGE makes two filings with the Commission that are associated with reliability-related efforts: an Annual Performance Report, which is filed by May 1 each year, and an Operations and Maintenance Manual, which is filed by December 31 each year. Both Delmarva and Pepco have extensive documentation with respect to system planning, distribution design standards, construction practices and other activities that promote the design and operation of a reliable electric distribution system consistent with good utility practice and in accordance with applicable law and regulation. PE has a reliability strategy to maintain its distributions system. HLD uses the Structured Maintenance Schedule that is reviewed annually by the Engineering Division of the Commission.

### Service Restoration Plans – Current Status

The four IOUs have service restoration plans, but these are not separate documents. BGE's restoration priorities are described in its General Storm Playbook, which it follows during average customer outages, and its Electric Delivery Emergency Response Plan, which it follows when a significant number of customer outages occur. Delmarva and Pepco's plans for addressing service restoration and emergency plans for system outages are embodied in the PHI Crisis Management Plan and the individual Delmarva and Pepco Incident Response Plans. PE considers a service restoration plan to be the same as an emergency plan and maintains an electronic version of this plan that is utilized for outages. The four IOUs, along with Berlin, Easton, HLD and Williamsport, have a priority list for restoring service during system outages. For the most part, public safety issues and critical facilities such as 911 centers, hospitals and pumping stations are given top priority. For these utilities' priority list for restoring service during system outages, see Appendix A.

## **III. SUSPENSION OF DECOUPLING**

This section of this Report discusses results of the proceedings that the Commission has conducted regarding decoupling that has allowed it to “study and consider whether to prohibit an electric company from calculating the rate charged by the electric company using a formula that decouples the electric company’s revenue from the sale of kilowatt–hours unless the formula provides for the suspension of decoupling during any extended service disruption.”

Four electric utilities, BGE, Pepco, Delmarva, and Southern Maryland Electric Cooperative, Inc. (“SMECO”), have decoupling mechanisms in their electric service tariffs. The Commission became concerned in late 2010 that these decoupling mechanisms, which were intended to remove a disincentive for the utility to install energy conservation and efficiency measures, might allow a utility to recover sales revenues during extended outages and thus may have inadvertently eliminated a critical incentive for the utility to restore service to its customers. On February 1, 2011, the Commission issued orders which opened four proceedings, one for each of the utilities with decoupling mechanisms. The Commission established a procedural schedule which sought comments from interested parties on adjustments to the electric service tariffs that

would resolve the issue of the collection of revenues during extended outages. A legislative-style hearing was conducted on July 22, 2011. Besides the four utilities, comments were provided by Montgomery County, the Office of People's Counsel, and Staff.

On January 25, 2012, by Order No. 84653 ("Order"), the Commission issued its decision addressing whether modification to the electric utilities' decoupling mechanism was needed. In the Order, the Commission stated that it "found that the decoupling mechanisms as currently designed do not appropriately align the company's financial incentives with reliability goals."<sup>11</sup> The Commission determined that the existing decoupling mechanism required modification to prevent recovery of lost revenues due to electric outages occurring as a result of Major Storms.<sup>12</sup> By definition, a "Major Storm" does not occur until a specified number of customers are out of service for more than 24 hours. Consequently, under the Commission's ruling, once the Major Storm threshold has been met, the utility is no longer permitted to recover any lost revenues due to these outages, until the utility has restored service to its pre-Major Storm level.

Pursuant to the Order, BGE, Pepco, Delmarva and SMECO were directed to modify its decoupling mechanism to prevent collection of decoupling revenue, including customer and demand charges, if electric service is not restored to pre-Major Storm levels within 24 hours of the commencement of a Major Storm. Further, to the extent service is not restored within 24 hours of the commencement of a Major Storm, each of these utilities was directed to modify its decoupling mechanisms to prevent the imposition of a decoupling surcharge for revenue losses beginning 24 hours after the commencement of the Major Storm and continuing until all Major Storm-related sustained interruptions are restored. Under the Commission's ruling, the utilities are not precluded for decoupling recovery for outages occurring during so-call "Blue Sky" conditions, short-term outages of less than 24 hours, and outages during storms that do not meet the Major Storm threshold.

The Commission, however, recognized that storms may vary in size, strength and damage that may be imposed within a utility's service territory. Accordingly, the Commission will allow the electric utility to file a waiver of the prohibition of decoupling recovery for Major Storms if the utility can affirmatively demonstrate that the electric outage was not due to inadequate emphasis on reliability and that the utility's restoration efforts were reasonable under the circumstances. The Commission cautioned that waiver requests should be filed, and will be granted, only in rare and extraordinary circumstances that could impose significant financial hardship on the utility.

#### **IV. CONCLUSION**

Currently, the Commission is aware that, from time-to-time, an electrical surge may occur in a Maryland utilities' distribution system, which may result in damage to a customer's property. Based on the number of complaints received about damages due to electrical surges, the

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<sup>11</sup> Order No. 84653 at 2.

<sup>12</sup> "Major Storm" currently means a weather-related event during which more than 10% or 100,000, whichever is less, of the electric utility's Maryland customers experience a sustained interruption of electric service; and restoration of electric service to these customers takes more than 24 hours. Included in the Reliability Regulations (RM43), the Commission proposed to replace the term "Major Storm" with a slightly more inclusive term "Major Outage Event." If the proposed language is finally adopted, the requirement of the Order will apply to Major Outage Events.

Commission does not currently believe that tracking and reporting of the electrical surges and damages caused by the surges is necessary. The Commission will continue to monitor the matter and will investigate any increase in the number of electric surges being experienced by customers that result in significant damages to the customers' property.

The Commission is addressing the need to have reliability plans and restoration plans on file with it through its Reliability Regulations. The Commission will update the Committees on the status of the Reliability Regulations once the Commission has finally adopted the regulations.

Finally, the Commission conducted an investigation of the current decoupling mechanisms employed by BGE, Pepco, Delmarva and SMECO, and determined that the decoupling mechanisms were required to be modified to prevent the utility from recovering lost revenues due to extended electrical outages resulting from Major Storms. The Commission directed the four utilities to modify their decoupling mechanism to prevent the imposition of a decoupling surcharge for revenue losses beginning 24 hours after the commencement of the Major Storm and continuing until all Major Storm-related sustained interruptions are restored.

## APPENDIX A

Please list the utility's priorities for restoring service during system outages.

Utility	Response
BGE	BGE's restoration priorities are public safety issues and critical facilities, such as 911 centers, hospitals and pumping stations. Then restoration is dedicated to the electric system backbone, including sub-transmission feeders, substations and distribution feeders. Next restoration is generally scheduled so that the greatest number of customers can be restored as quick and as safe as possible. However, in cases of extended power outages, consideration is also given to customers who have been without service for the longest.
Berlin	Medical, Police, Fire & Rescue & Shelters, will be the utilities first priority for restoring service during system outages.
Delmarva	<p>The following guidelines are used when prioritizing restoration efforts.</p> <ul style="list-style-type: none"> <li>• Immediate Life Threatening Situations (Live primary wires down)</li> <li>• Transmission Lines (Prioritized)</li> <li>• Substations (Prioritized)</li> <li>• Three-Phase Distribution Trunk Lines (Prioritized)</li> <li>• Public Health and Safety (Hospitals, EOCs, 911 Centers, Critical Water Supply, etc.)</li> <li>• Three-Phase Tap Lines</li> <li>• Single-Phase Tap Lines</li> <li>• Distribution Transformers</li> <li>• Individual Premise Services</li> <li>• Privately-Owned Facilities</li> </ul>
Easton	<p>Priorities for restoration:</p> <ol style="list-style-type: none"> <li>A. Safeguard Human Life</li> <li>B. Protect property</li> <li>C. Locate and minimize the cause of the emergency</li> <li>D. Re-establish electricity supply should an interruption occur</li> <li>E. Investigation of any emergency or event warranting such activity</li> </ol>
Hagerstown	The restoration order is as follows: Subtransmission Source, Substation, Distribution Main-Line, Distribution Radials, Distribution Transformers, and Individual Services.
PE	<p>Excerpt from FirstEnergy's emergency plan:  <b>SEQUENCE OF EMERGENCY ACTIVITIES</b>  A. <i>HAZARDS</i> - Eliminating hazards is always a priority.  B. <i>SERVICE RESTORATION</i> - Good judgment and the prevailing conditions at the time may dictate changes in service restoration priorities. In addition, our organization is structured so that several of these activities may take place concurrently.</p>
Pepco	See Delmarva above.
WilliamSPORT	The Town of WilliamSPORT would seek to first restore any known customer critical care medical equipment needs. Further, the Town would seek to restore power to; the water wells & pumps, waste water treatment plant, fire station, and any emergency shelter.