

Disaster Preparedness – Utility Best Practices

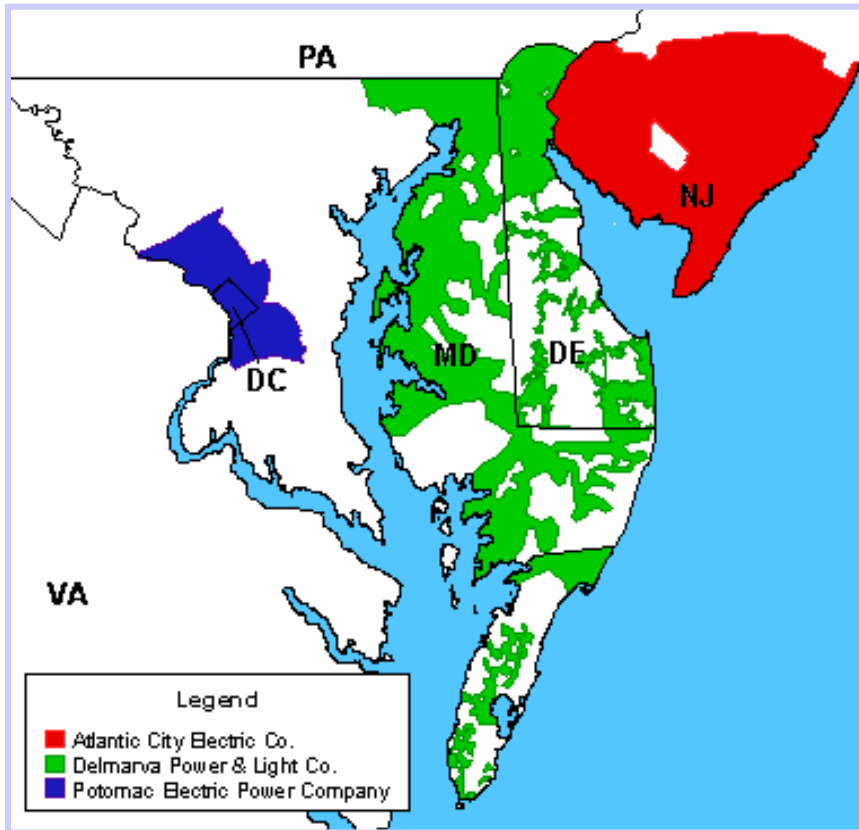
Presented at the
NARUC Winter Meeting
Electric Reliability Staff Subcommittee

February 12th, 2006

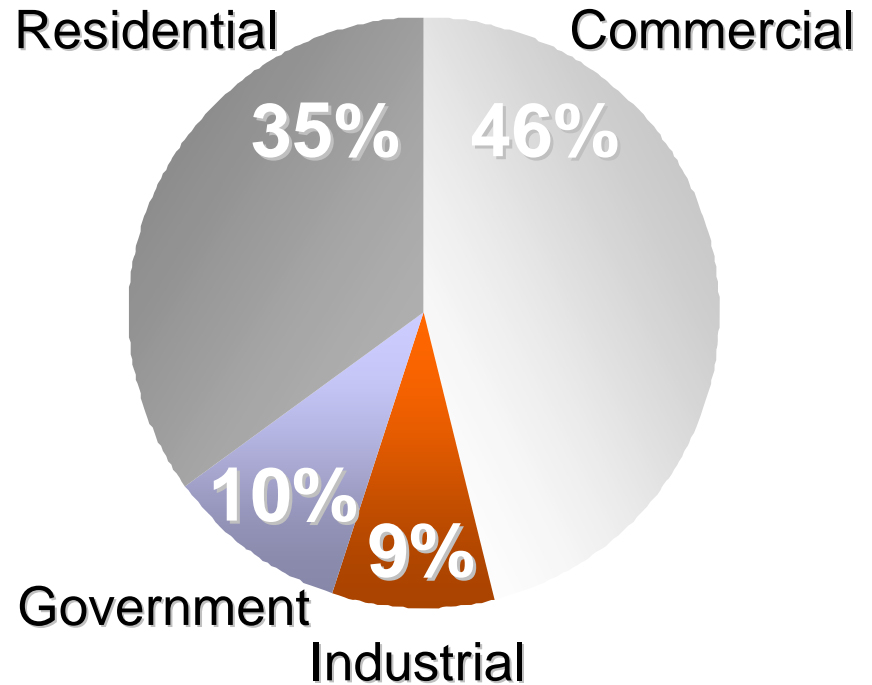
M. W. Maxwell
Vice President – Emergency Preparedness and Security

Pepco Holdings Inc at a Glance

Service Territory



Diversified Customer Mix*



* 2004 MWh Sales

Pepco Holdings Inc at a Glance



- 737,000 customers
- 640 square-miles / 2 million population
- 26,902,000 megawatt hours of electricity delivered in 2004
- Regulated by the DC PSC, MD PSC



- 501,000 electric customers; 118,000 gas customers
- 6,000 square-miles / 1.28 million population
- 13,902,000 megawatt hours of electricity delivered in 2004
- 21,600,000 thousand cubic feet of gas delivered in 2004
- Regulated by the MD PSC, Del PSC, VA PSC



- 524,000 customers
- 2,700 square miles / 998,000 population
- 9,874,000 megawatt hours of electricity delivered in 2004
- Regulated by the NJ BPU

Key Issues / Best Practices for Disaster Preparedness

- Development of an All Hazards Approach
 - Companies must be prepared to respond and manage any type of crisis whether manmade or natural
- Developing core competencies around Crisis Management, Emergency Management and Communication
 - Executive commitment
 - Drills and Exercises – Internal and External
 - Lesson learning capacity
 - Plan development and management
 - Human resource utilization
- Enhancing external partnerships with key players – Community Continuity
- Information flow - at the right time, in the right amount and to the right players in an event
- Understanding the limits / responsibilities / expectations of the private vs public sectors
- Defining / managing critical infrastructure information
- Understanding the limitations of cost recovery, emergency related cost, performance standards, and prudence

Disaster preparedness has become a headline issue for utilities

■ Terrorist attacks

- NYC: September 11, 2001 WTC attacks
- Madrid: March 11, 2004 train bombings
- London: July 8, 2005 subway bombings



■ Blackouts

- Northeastern North America: August 14, 2003
- Los Angeles: September 12, 2005



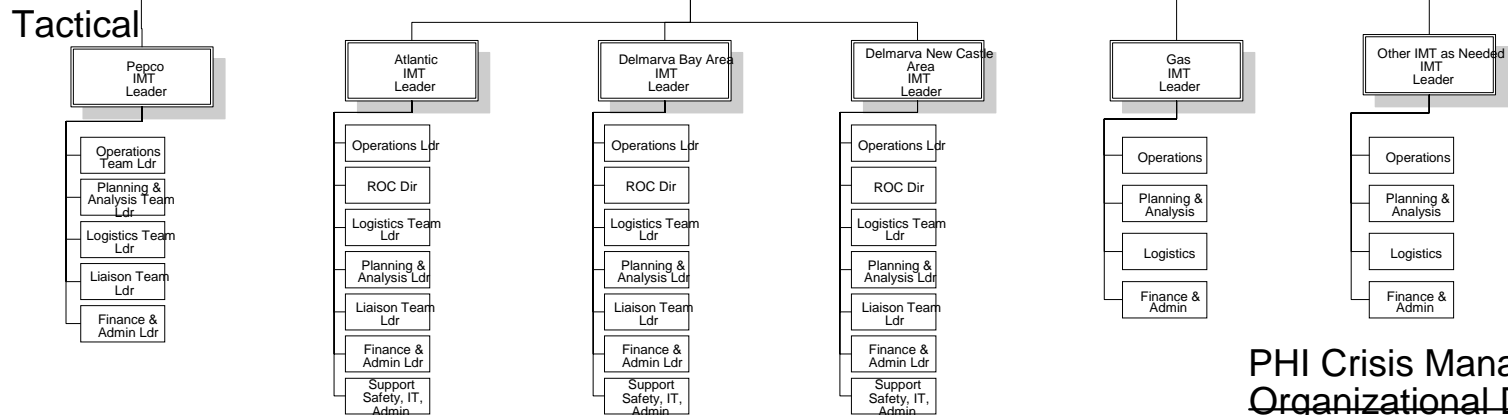
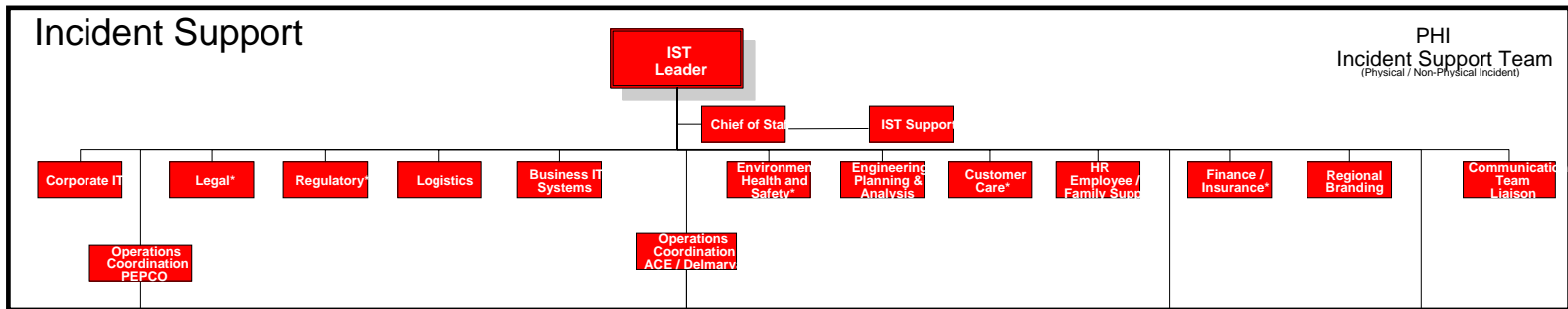
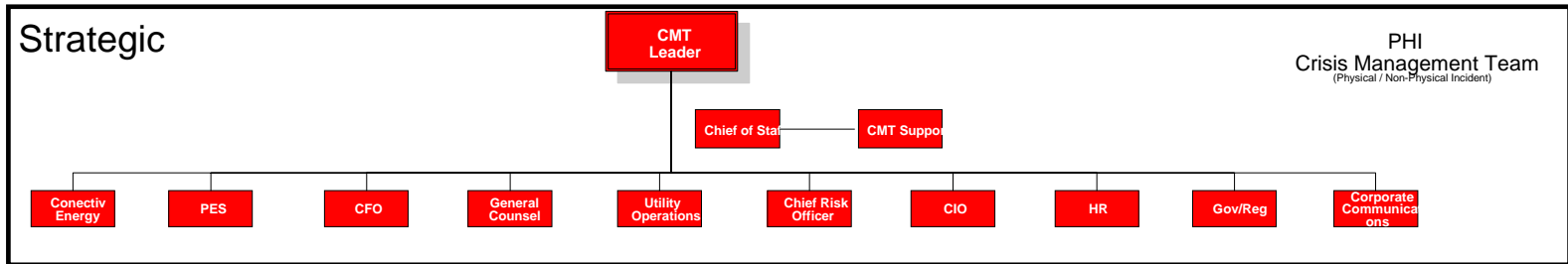
■ Hurricanes

- 2003: Isabel hits from Richmond to Philadelphia
- 2004: Charley, Frances, Ivan, Jeanne hit FL, AL
- 2005: Dennis, Katrina, Rita hit Gulf; Ophelia hits NC, Wilma hits Florida



***Increasingly, utilities are being scrutinized – after the fact –
for their response to emergencies***

Develop and “All Hazards” incident command structure



As of May 1, 2005

PHI Crisis Management
Organizational Diagram

The ability of a utility to be prepared, respond to and restore service in a major event rapidly has become a critical performance factor – the questions are what is prudent? and for what are we preparing?

Central to the EP goal is the concept of 'Community Continuity'

■ What is 'community continuity'?

- It is a recognition that some customers have a larger role in the essential functions of the community (e.g., schools, business)

■ Who is involved in community continuity?

- 'All response is local'
- EMA
- Government agencies (Fed, state, county, local)
- Essential services (fire, police, transit, street lights)
- Utilities (electric, gas, water, telephone, pipelines)
- Media and regulators
- Community groups (Council of Governments, community and homeowners' associations)

■ What is PHI's expected role?

- Communication
- Where does it end? And how does PHI manage expectations about its role with these groups?

Community
Continuity

EMA's

Govts.

Regulators

Utilities

Services

Media

Groups



The key for utilities is to recognize that their key external stakeholders and customers need information to know how to rebuild the community and plan their lives

PHI will develop its external partnership with EP players

Communication Activities

		Meetings/ Education	Plans/ Procedures	Drills/ Exercises	Major Event
Entities	EMA	Key	Key	Key	Key
	Services	Supporting	Supporting	Key	Supporting
	Media and Regulators	Supporting	Key	Situational	Situational
	Community Groups	Key	Situational		Situational

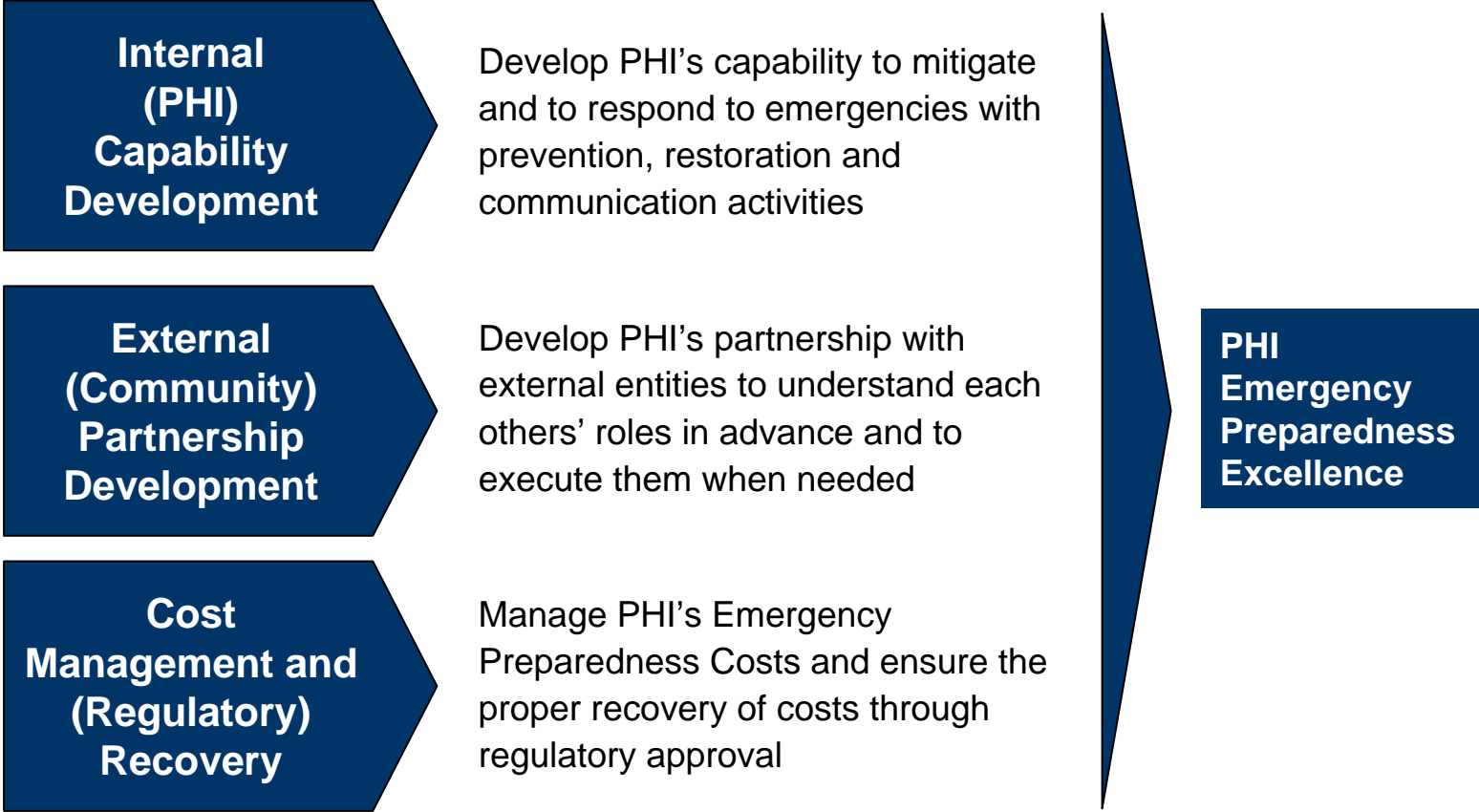
Target of Communication

- Key
- Supporting
- Situational

- During 'major event', coordination of response should be primarily the responsibility of EMA
- During all other times, PHI must engage in wide-ranging coordination efforts with numerous organizations
 - PHI EP must prioritize the level of involvement with these entities

This is where PHI can ensure that other entities understand the vital yet limited role of the electric utility in the larger job of community continuity

For PHI to achieve its EP leadership aspiration, it must move forward significantly on three major fronts



The effort to achieve EP leadership will touch almost everyone in the company, as all re-examine the internal and external roles.

PHI will develop its internal capabilities for emergency preparedness

PHI Emergency Readiness Index

- Develop an annual comprehensive review of emergency readiness
 - Score given (e.g., '85') based on level of readiness of utility to respond to emergencies
 - Relative to most-probable-worst case and with the 'army you have', not what you would like to have
 - Putting metrics in place that serve the public interest

Integrate EP into Asset Management

- Work with Asset Management group to integrate "community continuity" into analysis of various asset management alternatives:
 - Security (e.g., new generation)
 - Reliability (e.g., transformer replacement)
 - Backup supply (e.g., redundancy)



Improve Situational Awareness

- Build state-of-the-art system management 'war room' to optimize communication and response to emergencies
 - Unintrusive access to all key systems
 - Information availability is critical

Building internal capability is key, but companies that stop there will miss the mark without also developing external and regulatory components

Every utility needs to assess its emergency preparedness function

Key Observations (in PHI's view)

- Emergency preparedness is increasingly important
- Community continuity is a community job – not just the utility's
- Internal preparedness is only a partial solution
- Leadership in EP will require a planned effort involving the entire company and its partners
- Information flow to the right parties is critical
- Crisis management competency is critical

Key Questions (for any utility)

- When was the last time your EP plan was really tested?
- When was the last time someone in your company talked to each major local official about EP?
- Does everyone in your company know their "second job", i.e. their role in emergencies?
- Does your company have a clear understanding with your regulator about rate recovery of emergency-related costs?

Questions?

Michael W. Maxwell

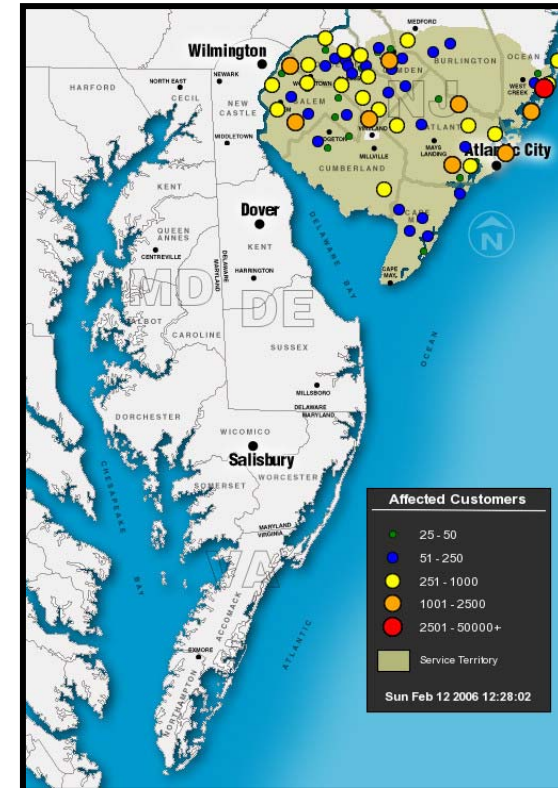
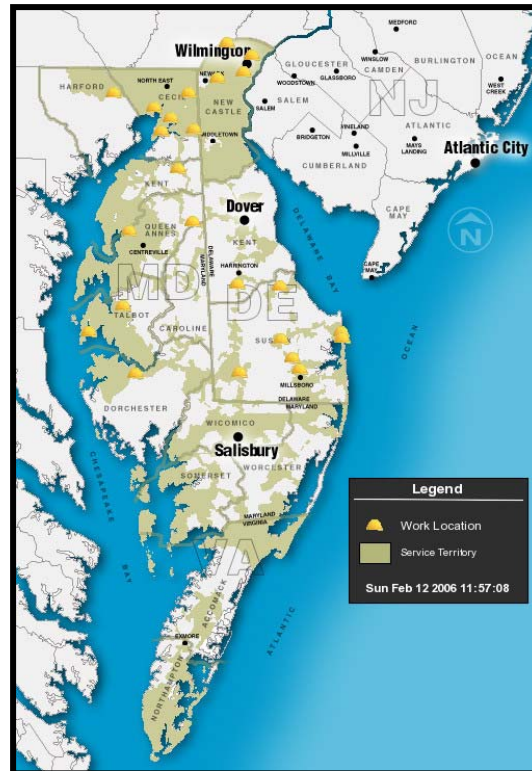
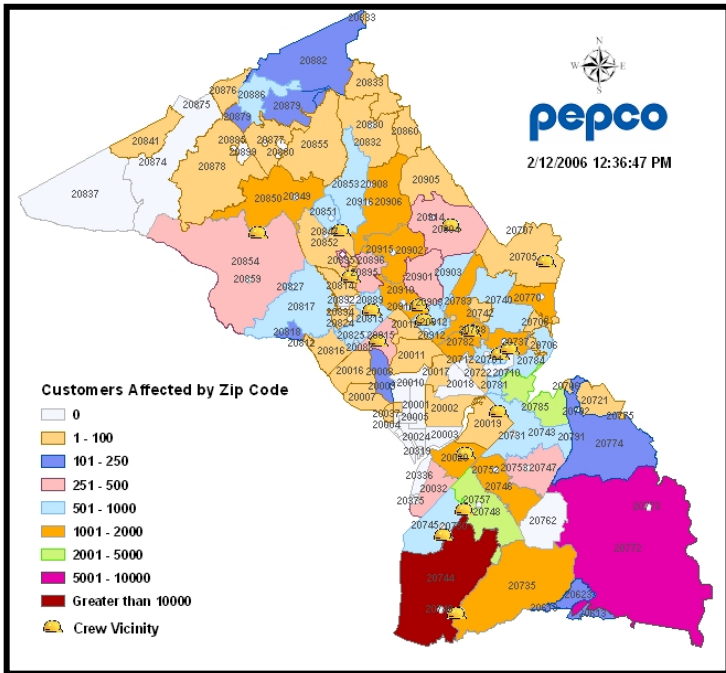
VP, Emergency Preparedness and Security

PHI Power Delivery

mwmaxwell@pepco.com

202-872-3055

Sample Outage Maps provided on the Web



PHI OMS Webview - Internal

PHI OMS Web View Statistics - Microsoft Internet Explorer provided by Pepco Holdings Inc.

Address: http://cp-wpp-ts02:8080/webreports/WebViewPHI/WebViewPHI.jsp

Print: 02-12-2006 12:40:42

Show Order Summary

Summary for PHI by Region

	Atlantic Region	Bay Region	New Castle Region	Pepco Region
Customers Out:	32930	3222	2554	53509
Customers Restored (24Hrs):	81946	24669	22932	96255
Total Feeder Lockouts:	6	0	4	28
Confirmed Feeder Lockouts:	1	0	0	
Customers Out >6 Hours:	28513	2340	1133	38927
Customers Out >24 Hours:	0	0	0	0

Customers Out by Company, State and County

Atlantic City Electric		Delmarva Power			Pepco	
New Jersey	Virginia	Maryland	Delaware	District of Columbia	Maryland	
Atlantic: 7734	Accomack: 0	Caroline: 268	Kent: 265	District of Columbia: 2749	Montgomery: 11801	
Burlington: 247	Northampton: 0	Cecil: 695	New Castle: 1915	Prince George: 36959		
Camden: 3429		Dorchester: 0	Sussex: 1826			
Cape May: 717		Harford: 60				
Cumberland: 1802		Kent: 66				
Gloucester: 5275		Queen Anne's: 767				
Ocean: 7551		Somerset: 0				
Salem: 6213		Talbot: 22				
		Wicomico: 2				
		Worcester: 0				
Total: 32968	Total: 0	Total: 1770	Total: 4006	Total: 2749	Total: 50760	

Local intranet

Summary of Order / ETR Status

Order Summary - Microsoft Internet Explorer provided by Pepco Holdings Inc.

Address: http://cp-wpp-t02/webreports/OrderSummary/OrderSummary.html

ACE DPL: District Order Status, District ETR Status, County Order Status, County ETR Status

Pepco: County Order Status, County ETR Status

Print - Open Orders with Outages Summary as of 02.12.2006 12:34:93

Area	Orders	Open Orders with Outages Status							Emergency Orders				Reported by FB
		Total	NEW	ASGI	DISP	EBRT	ARRV	BIIPROG	WIRE DOWN	FIRE	ACCIDENT	DIG-III	
District of Columbia	88	76	4	0	0	0	0	0	52	6	0	0	0
% of Total Orders	12%	95%	5%	0%	0%	0%	0%						
Customers	2478	892	1570	0	0	0	0						
% of Total Customers	5%	36%	64%	0%	0%	0%	0%						
Montgomery County	267	256	7	0	2	2	0	83	10	0	0	0	0
% of Total Orders	39%	96%	3%	0%	1%	1%	0%						
Customers	11429	4965	3872	0	1009	984	0						
% of Total Customers	22%	43%	34%	0%	14%	9%	0%						
Prince Georges Co	344	311	26	0	3	4	0	163	6	1	0	0	0
% of Total Orders	50%	90%	8%	0%	1%	1%	0%						
Customers	37259	7866	25282	0	2703	1308	0						
% of Total Customers	73%	21%	69%	0%	7%	4%	0%						
District of Columbia	88	76	4	0	0	0	0	52	6	0	0	0	0
% of Total Orders	12%	95%	5%	0%	0%	0%	0%						
Customers	2478	892	1570	0	0	0	0						
% of Total Customers	5%	36%	64%	0%	0%	0%	0%						
Maryland	643	567	33	0	5	6	0	246	16	1	0	0	0
% of Total Orders	88%	93%	5%	0%	1%	1%	0%						
Customers	48658	12931	29154	0	4311	2292	0						

Order Summary - Microsoft Internet Explorer provided by Pepco Holdings Inc.

Address: http://cp-wpp-t02/webreports/OrderSummary/OrderSummary.html

ACE DPL: District Order Status, District ETR Status, County Order Status, County ETR Status

Pepco: County Order Status, County ETR Status

Print - Open Orders with Outages Summary as of 02.12.2006 13:04:06

Area	Orders	Open Orders with Outages - Duration until ETR																
		Total	Hone	Explored	<30Min	30Min-1Hr	1-2Hrs	2-4Hrs	4-8Hrs	8-12Hrs	12-24Hrs	24-36Hrs	36-48Hrs	48-72Hrs	>72Hrs			
District of Columbia	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Total Orders	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Customers	2255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2255	0	0
% of Total Customers	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Montgomery County	275	0	0	0	0	0	1	4	9	0	0	0	0	0	0	261	0	0
% of Total Orders	39%	0%	0%	0%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%	0%	96%	0%	0%
Customers	11182	0	0	0	0	0	13	2070	1056	0	0	0	0	0	0	8035	0	0
% of Total Customers	23%	0%	0%	0%	0%	0%	0%	19%	9%	0%	0%	0%	0%	0%	0%	72%	0%	0%
Prince Georges Co	368	0	4	0	0	0	0	0	0	0	0	0	1	0	0	362	1	0
% of Total Orders	52%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	96%	0%	0%
Customers	35344	0	363	0	0	0	0	0	0	0	0	0	1	0	0	34973	7	0
% of Total Customers	72%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	99%	0%	0%
District of Columbia	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0
% of Total Orders	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Customers	2255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2255	0	0
% of Total Customers	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Maryland	643	0	4	0	0	0	1	4	9	0	0	1	0	0	0	623	1	0
% of Total Orders	94%	0%	1%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	97%	0%	0%
Customers	46526	0	363	0	0	13	2078	1056	0	1	0	0	0	0	0	43008	7	0

Information Sharing / Situational Awareness – Emergency Management Agencies

