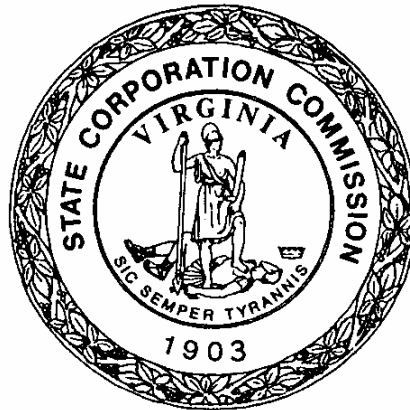


**COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION**



**SPECIAL REPORT OF THE
DIVISION OF COMMUNICATIONS**

**PREPARATION FOR AND RESPONSE TO HURRICANE ISABEL BY
VIRGINIA'S TELECOMMUNICATIONS PROVIDERS**

September 20, 2004

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Executive Summary

The purpose of this report is to present the results of an analysis performed by the Virginia State Corporation Commission Staff (“Staff”) of the telecommunications industry’s preparation for and response to Hurricane Isabel. The report addresses the severity of the storm’s impact on the telecommunications infrastructure and consumers; analyzes the individual challenges faced by telecommunications providers; and presents corrective actions to make their respective systems and processes less vulnerable to catastrophic events in the future.

In general, and primarily from a technical standpoint, we believe that the industry was well prepared and responded adequately to Isabel and its aftermath. Companies took the steps necessary to ensure that materials and personnel were either in place or staged prior to the storm’s arrival. Industry work crews and their contractors worked diligently under adverse circumstances to restore service. Of course, there were difficulties that probably could not have been anticipated. The sheer massiveness of the damage to commercial power was a major factor in restoring of telephone and other services. Where back-up generators were deployed, many were stolen. In some cases, fuel for vehicles was difficult to locate.

While these issues were eventually overcome, there was a persistent information problem, primarily in terms of communicating with the public, which led to most of the customer dissatisfaction. The industry, as well as the Staff, should have taken a more proactive role in communicating with the public before, during, and after the storm. For example, there should have been alerts issued regarding cell phone batteries and having available at least one telephone not reliant on commercial power. Companies should

have made the public aware of any special services offered, such as call forwarding and voice mail. The Staff has now prepared a standard press release for issuance in advance of potential disasters.

The utility industry should have spent more time communicating with each other and with local government emergency management authorities to ensure that alternate channels of communication were in place. In Isabel's aftermath, both the industry and the Staff could have disseminated information to the public regarding the companies' bill crediting policies. More importantly, as commercial power was restored relatively quickly to almost two million energy customers, total telephone restoration took three times as long to complete. As the days turned into weeks, customers lost patience. However, when given an explanation of the reason for the delay, customers almost always understood. Finally, the companies and the Staff will need to adapt to the needs of the media for information. To this day, the Staff does not know how many telecommunications customers were affected by Isabel.

In the end, it will be important not to forget the lessons learned from Isabel. The adage "time heals all wounds" seems appropriate from a customer standpoint. In the weeks following the storm, as we traveled around the state in its attempt to gauge customer reaction and receive input, there were almost no comments made regarding telephone service. We predict that the lack of public sentiment will hold only until the next Isabel makes landfall.

Introduction

On Thursday, September 18, 2003, Isabel made landfall near Drum Inlet, North Carolina as a category two¹ hurricane. As it reached Virginia, Isabel had weakened from hurricane strength to that of a tropical storm (although category one level wind gusts were reported in Southeastern Virginia)². Tidal surges above normal tide levels were in the five to six foot range in the Hampton Roads area and over eight feet at the Richmond City locks. Rainfall averaged four to seven inches in Eastern and Central Virginia and from eight to twelve inches in the Shenandoah Valley and in Northern Virginia. One tornado was reported in the Ocean View section of Norfolk. The storm continued to weaken as it moved through Pennsylvania and points northward into Canada where it was finally absorbed into a larger weather system.³

Isabel's classification as a tropical storm notwithstanding, the damage estimate for insured property in Virginia was \$925 million. Ten deaths were directly attributed to the storm.⁴ President Bush declared Virginia a major disaster area, which enabled federal assistance. The tidal surge, wind, and heavy rainfall, on top of already saturated soil, combined to make the devastation quite dramatic and widespread for telephone providers and their customers.

¹ Categorizations are based on the Saffir-Simpson Hurricane Scale.

² There were unofficial reports of higher wind gusts and some wind gusts went unreported because of damage to wind gauge instruments and loss of power.

³ The weather related statistics and damage estimates were taken from the National Oceanic and Atmospheric Administration/National Weather Service's Tropical Cyclone Report regarding Hurricane Isabel as revised on January 16, 2004.

⁴ Id.

Impact to Telecommunications Industry and Customers

Isabel inflicted catastrophic damage to the industry's key assets. For example, Verizon Virginia and Verizon South ("Verizon"), by far the state's largest provider of telecommunications services, experienced the loss of commercial power to 93, or 29 percent, of its host central offices and 1,560, or 43 percent, of its remote central offices. An additional 713, or 20 percent, of its remote central offices lost service because of flooding, road inaccessibility, or restrictions on access placed by power companies. In the end, 1,813 poles were replaced and 4,836 spans of cable were replaced, repaired, or reattached. Verizon's peak maintenance load reached over 39,000 jobs as compared to the normal daily workload of 2,500. In many locations, Verizon had to rebuild its network from scratch. This would later be the primary cause for the majority of Commission complaints. Customers who saw little or no damage to telephone facilities in their immediate vicinity were often unaware of the total obliteration of the facilities feeding their respective neighborhood or business. Generally, when commercial power and cable television/telephony connections are restored, which may involve the reconnection of as few as two or three conductors, entire areas or neighborhoods are returned to service. However, with traditional telephony copper-based cables, which can encompass up to 2,400 pairs of wires (2,400 customers), each copper pair has to be reconnected individually to restore service to each affected customer.⁵ Where an entire section of cable required replacing, the work was essentially doubled, since each cable pair had to be spliced at both ends of the new cable section. This is not to minimize the effort required to restore power and cable company networks, but only to shed light on

⁵ Under normal circumstances, industry cable splicers can link 100 cable pairs per hour.

the difference in restoration intervals among the various types of networks currently in place.

Cox Virginia Telecom (“Cox”), with the majority of its Virginia customers located in eastern Virginia, reported that 6,000 spans of cable (150 miles) were either damaged or lying on the ground. More than 13,000 individual customer connections were damaged or broken. Over 95 percent of Cox’s power supply locations lost commercial power. Cox’s underground facilities received significant damage from flooding.⁶ Cox estimated that Isabel cost the company between \$15 and \$20 million.

Comcast Communications of Virginia (“Comcast”), which, like Cox, is both a cable television and telecommunications provider, reported that 90 percent of its customers lost service. During the course of the 18 days following the storm, Comcast repaired over 5,000 individual spans of aerial cable and 5,000 house drops. 250 temporary generators were deployed (of which 60 were stolen). In the Richmond area alone, damage from Isabel cost Comcast over \$10 million.

Sprint, with most of its customers located outside of the primary path of destruction, did not experience widespread damage to its network. Even so, damage to its network from downed poles and trees was estimated at \$1.3 million.

Based on company reports to the Staff, approximately 186,000⁷ customers experienced the loss of telephone service as the result of Isabel and its aftermath. All

⁶ The benefits to be derived from burying facilities will be the subject of a study resulting from House Joint Resolution No. 153.

⁷ This is based on actual out-of-service conditions for customers of Verizon, Cox, Sprint, and Comcast. Verizon’s outage report included only those customers who reported trouble conditions. Verizon claimed that it did not know, and had no business need to determine, how many customers lost service as a result of the storm. In a presentation made to the General Assembly, however, Verizon officials indicated that approximately 220,000 of its customers lost service. Using this number for Verizon, approximately 308,000 customers lost telephone service.

known telephone outages were restored by October 22, 2003, some five weeks following the storm's arrival. We received approximately 500 Isabel-related complaints. The majority of the complaints had to do the date of expected service restoration.

Industry Preparation and Response

In an attempt to analyze the industry's preparation for and response to Isabel, the Staff sent a series of questions to the industry members most affected by the disaster. A summary of the responses follows:

- 1. Please provide specific information concerning policies and actions on workforce, supplies, equipment, and emergency power in connection with Isabel.**

Verizon

Verizon, as the Commonwealth's largest local telephone service provider, maintains a Business Continuity and Emergency Management Plan. The Network Operations section identified in this plan is responsible for enhancing the company's ability to prepare for, respond to, and recover from major interruptions to business operations in the event of a natural disaster. Verizon's Business Continuity Planning process requires each business unit to define the work centers and people who perform these functions and to develop plans to continue operations should the centers or people be rendered unable to perform their function.

Specifically, Verizon increased its repair and construction workforces by over 40 percent and added almost 90 independent contractors in its effort to deal with the aftermath of Isabel. Almost 800 generators were deployed to provide back-up power to the company's remote systems.

Cox

Cox Communications conducted workforce assessments prior to Isabel's arrival and during the recovery phase. This assessment resulted in plans to utilize contractors

and Cox field personnel. In order to support the significant network damage and customer restoration, Cox's recovery plans included employing equipment from other operational systems. So that its customers could still receive timely information and support, Cox routed residential and commercial customer calls to call centers throughout North America.

Cox regularly assessed supplies and equipment prior to the storm and during the recovery phase. Specifically, a standby switch was ordered to prepare for an event in which a switch lost functionality. Cox reported that it has invested over \$25 million in standby generators. Emergency maintenance was completed on its generators and, in certain cases; temporary portable generators were delivered to critical areas of the network.

Sprint

Sprint's Emergency Preparedness and Disaster Recovery Plan outlines various duties for key personnel and defines areas of responsibility should a disaster occur. The plan's intent is to allow and encourage maximum organizational flexibility in responding to disasters such as Isabel. In the event of a natural disaster, Sprint's Disaster Recovery Team convenes to discuss and review topics such as equipment requirements, AC power failures, systems working on generators, and systems working on batteries. During these meetings, workforce requirements are discussed and general responsibilities reviewed. In addition, the team assesses the need for extra personnel and contractors.

Comcast

Comcast, a provider of residential and business digital telephone service, reported that it deployed 250 generators during and after Isabel. In addition to its workforce of

600 employees, the company brought in hundreds of contract restoration teams from other parts of the country. According to Comcast, buildings housing transmission equipment and operations centers are powered by standby generators capable of indefinitely supporting normal operations.

Comcast's objective was to return to normal operations as soon as possible. The company held advance meetings with its employees. The purpose of these meetings was to review safety procedures and establish expectations of operations and attendance. During the meetings, areas of responsibility for assessing damage were instituted. Contract construction crews and house drop replacement teams were made available for deployment within a day's notice. Comcast reported that it ordered enough materials to replace 10 miles of cable. Additionally, critical vendors were advised of the probability of the need for priority shipment of materials once the initial stock was exhausted.

2. Provide the specifics of planning and preparation prior to Isabel.

Verizon

Verizon contacted Dominion Virginia Power (“DVP”) in order to arrange for direct communications to identify power outages, associated hazards and expected time for restorations. Verizon tested and fueled all motor vehicles and generators, inspected the equipment in central office cable vaults, and verified its supply of back-up batteries. Additional portable generators were obtained from its national staff and the company communicated with its logistics organization for the delivery of extra poles, cable, and pedestals. Poles, cable inventory, and work center supplies were stocked and prepared to move to other areas if necessary.

According to Verizon, morning and evening conference calls were held. Verizon reviewed its list of critical remote central office sites and assigned technicians to respond to those sites when power was lost. The company increased staffing at its Alarm Center. Various safety practices were covered with local supervisors and technicians. Verizon made contact with its contractors to ensure that additional generators and high capacity water pumps would be available if needed. There was also communication about additional help if needed for recovery. Lodging was established for volunteers who would cover critical positions.

Cox

Cox began its recovery planning one week prior to Isabel's arrival. This included daily conference calls with key employees to ensure that communication and coordination processes were in place. An around the clock "war room" was set up with back-up power, telephones, computers, and conference bridge lines to support the forthcoming recovery efforts.

Select field personnel from eight Cox locations in various parts of the country were placed on alert and prepared to be in Hampton Roads. In addition, accommodations were made for these employees placing them in strategic areas throughout the vicinity. Cox filled the gasoline tanks of its fleet vehicles and placed them in different locations to minimize potential damage and facilitate access. Equipment was moved to a secured site so that, if necessary, operations could be established at an alternate location. The company also coordinated with DVP to maximize its effectiveness as commercial power was restored.

Sprint

Sprint began its general hurricane preparedness in August. This was followed by a more Isabel-specific plan in the week of September 12, 2003. On a corporate level, the company began to contact suppliers of both labor and materials and, in the process, repositioned materials to depots closer to its Mid-Atlantic territory. Locally, it tested and serviced generators, ordered additional supplies, placed employees on alert, set up command centers, and identified command center staffing.

Comcast

Comcast implemented the critical activities it had earlier outlined. This checklist of critical activities focused on specific items relating to employees, facilities, and recovery. Comcast established primary points of contact and assigned individuals to assess the damage in critical areas. Comcast updated its emergency contact list, which included contractors on call as well as utility company contact information. Additional system technicians and service technicians were placed on call. This provided the dispatch organization the additional human resources for outages and service calls as needed. Comcast verified its cable and electronics inventory levels and placed auxiliary vehicles at both its Chesterfield and Richmond systems. To ensure proper operation, Comcast tested its test equipment, generators, and fiber splicing kits.

3. Provide your company's service restoration priority plan in connection with Isabel.

Verizon

According to Verizon's Disaster Recovery Plan, its service priority is as follows: Verizon communications necessary to manage emergency event recovery,

Telecommunications Service Priority (TPS)⁸ service, essential government services, public safety service, network infrastructure, priorities of Federal, State, and Local Governments, and other services.

Cox

Cox generated reports resulting from "ride-outs," which assisted the company in determining its service restoration priorities. The reports also aided with the direction for recovery crews as well as restoration for customers. After the storm, a full assessment was performed on each part of the company's network. Cox's first priority was powering its centralized locations. A priority plan was executed to restore the main fiber and coaxial network. As a result of this plan, service was restored to 80 percent of the company's commercial customers within the first three days following the storm. Once 100 percent of the physical network damage was repaired, Cox began replacing and repairing individual customer connections.

Sprint

Sprint maintains a priority restoration list which is customer specific.

Comcast

Comcast's restoration priorities were driven by the availability of commercial power, and presence of "life-line" service. Restoration teams closely monitored the progress of DVP and started its restoration in areas that were determined to be safe. Damage assessment teams determined which repairs would impact the greatest number of telephone customers. Those repairs were made before less penetrated areas.

⁸ The Telecommunication Service Priority (TSP) System is a service, which provides for priority installation and restoration of National Security Emergency Preparedness (NSEP) telecommunications services specified by the Federal Government.

4. Provide your company's customer communication plan in connection with Isabel.

Verizon

Primarily, Verizon utilized media interviews to communicate with its customers regarding Isabel.

Sprint

In disaster situations, Sprint's External Affairs Department utilizes liaisons that relay information to the news media. This group is responsible for public announcements to the media regarding customer service. They also make the media aware when normal operations have resumed.

Cox

Cox used proactive media relations to make its customers aware of the extent of the company's network damage. This outreach included press releases, media interviews, marketing messages, as well as radio spots. The company's automated answering systems were modified to provide customer information on billing credit and extra long wait times. In addition, Cox was in daily contact with its commercial customers. According to Cox, these efforts helped to set realistic expectations regarding service restoration.

Comcast

Comcast reports that its customer communications included regular contact with print and electronic media. The company also tailored outbound messages for callers on hold.

5. Provide your company's media communication plan in connection with Isabel.

Verizon

Verizon's Emergency Operations Center (“EOC”) serves as a single source of information both internally and externally. Through information received from critical control centers, the EOC compiles an information package that supports decision-making by senior managers. The compiled data also facilitates the distribution of information to Media Relations and Employee Communications.

Before Isabel’s arrival, Verizon's Media Relations team reached out to Virginia media to make certain that they had contact numbers. This group issued news releases, which included tips for consumers to help maintain services. In addition, an Isabel section was published on Verizon’s website.

Cox

To keep the general public informed of the recovery progress, Cox engaged in regular communications with print and broadcast media. Local franchise authorities were daily updated on the telephone recovery rate.

Sprint

Sprint's regional media relations manager is the single point of contact for news media. The company provides local radio and television stations with public service announcements that explain the current situation, during and after a disaster situation. These announcements serve as a way to remind customers of the efforts being made on their behalf. Sprint distributes news releases and media alerts and sends out periodic

updates with general information. This information includes areas affected and numbers of outages. It also outlines additional personnel and equipment being used.

Comcast

Comcast's Vice President/General Manager served as key contact for media communications. The company's public relations firm issued several press releases, which detailed its restoration activity and progress.

6. Provide your company's Virginia State Corporation Commission communication plan in connection with Isabel.

Verizon

Emergency contact information for Verizon's President and his designates are known to the Commission. Verizon's officials were kept current on developments through information provided to them by its Emergency Operations Center. This information allowed the company to inform the Staff of any serious matters that arose during and after the storm.

Cox

During the recovery phase, the company supplied the number of out-of-service customers, on a daily basis, until all outages were cleared. Also, Cox provided the Commission with its final disruption report that was sent to the FCC.

Sprint

Sprint communicated outage updates to the Commission on a daily basis.

Comcast

Although Comcast did not develop a formal communication plan, the company states that it is committed to maintaining open communications links with the Commission in the event of a disaster.

- 6. Please provide your company's industry coordination program in connection with Isabel.**

Verizon

Verizon has had highly effective mutual aid agreements in place for many years. These agreements are with other state phone companies and local utilities.

Cox

Cox coordinated and communicated with regional managers at DVP in order to identify locations that were being restored. As a result, Cox technicians were able to follow the power company and restore its customer's services. Due to Cox's coordination with DVP on restoration efforts, the company was able to resolve barriers quickly that could have delayed customer restoration.

Sprint

In general, if a Sprint pole needs replacing and other utilities are attached to that pole, the company would notify the other utility so that its facility attachments can be transferred to the new pole.

Normally, if a Sprint pole needing replacing has power attached, the power company will replace the pole and transfer the power attachments to the new pole. Once the power company completes its work, Sprint representatives transfer Sprint's attachment. If other utilities are attached, they will be notified and advised to transfer

their attachments. The power company will either bill Sprint for the pole's replacement or Sprint will replace the used poll.

Comcast

To coordinate with other utilities, Comcast utilized the National Joint Use Notification System. This national web based notification tool allows utility companies to obtain current information on shared concerns. This system was used to identify pole placements, attachments, and to perform other storm-related jobs.

- 7. Provide your company's internal coordination program in connection with Isabel.**

Verizon

Verizon's Emergency Operations Center provides its Business Unit Control Centers with late-breaking information on the current situation in the event of an emergency. The business units are then able to communicate the realities to individual customers who request information.

Cox

Cox kept a conference bridge open on a continuous basis. This gave employees the ability to identify issues and made it easier for different departments to communicate. The company also held three conference calls a day with decision makers in an effort to determine the status of restoration and assess priorities. In an effort to increase morale, employees were given regular updates, which included motivational messages.

Sprint

Sprint shared information between departments through a series of daily conference calls. These calls took place from the week of September 12, 2003, until September 29, 2003, and included participation from every effected department.

Comcast

Comcast's intranet system was used as the primary means of communicating information internally. On this site, employees were made aware of area outages as well as the status of DVP's restoration efforts. Employees could also obtain information on temporary power supplies and back-up generators. Comcast also held leadership "huddles" three times a day in order to provide updates and, if necessary, redirect the restoration process

8. Please provide your company's local, state, and federal emergency management communication and coordination plan in connection with Isabel.

Verizon

Verizon's network has been classified as part of the so-called "critical infrastructure" by the federal government. For this reason, there has been an increase in the focus on threats to the company's facilities. Verizon is affiliated with numerous federal government organizations that concentrate on national security and emergency preparedness communication policy. The company maintains interfaces with state, county, and city emergency management agencies. The Virginia contacts are pre-assigned and reside in the state. The local contacts are generally the Verizon account representative for the county or city.

Cox

To ensure there were no issues with E911 connectivity or switch congestion, Cox for the first two weeks communicated with the Virginia Department of Emergency Management (“VDEM”) on a daily basis. Cox utilized existing communications channels to maintain contact and provide updates to local governments holding its cable franchises. In addition, Cox provided local city and county emergency management officials with a single point of contact should consumers call with any questions.

Sprint

Sprint's Public Affairs Managers are the primary interface between local and state authorities and the public. These managers maintain contact with the emergency groups and keep them updated on any developments.

Comcast

Comcast did not develop such a plan.

- 9. What was your company's bill credit policy in connection with Isabel? How did your company inform customers of its bill credit policy in connection with Isabel?**

Verizon

Verizon gave credit to its customers on an "as requested" basis. The credit, equal to the pro-rated charge for local service, was issued if the outage was for more than 24 hours. No credit was issued if the customer who was out of service did not call the company.

Cox

Cox's residential customers were offered credits on a daily pro-rated basis. Cox informed its customers about its bill credit policy through channels such as newspaper articles and radio. In addition, the company's automated answering system featured information regarding Cox's policy, and customers were able to apply for credits via the Web.

Sprint

Sprint issued a press release to inform its customers that they would receive pro-rated adjustments for service interruptions. Moreover, Sprint's Call Center representatives were advised to issue pro-rated adjustments for time out-of-service, at the customer's request.

Comcast

Comcast informed the media of its credit policy. When customers called for service repair, they were informed as to the amount of credit.

10. Did your company offer features or services to Isabel-related out-of-service customers? If so, how did you communicate the availability of these services to customers?

Verizon

Verizon offered call forwarding or voice mail services to its customers who were affected by an Isabel-related out-of-service condition. These options were communicated when contact was made with Verizon's repair center and were based on individual customer needs and circumstances.

Cox

Cox made call forwarding available to its residential and commercial customers. Wireless phones were offered to commercial customers when available. Also, where possible, generators were offered to commercial customers to continue power at their business locations.

Sprint

A number of Sprint's business customers requested the remote call forward feature. The company's marketing department coordinated these efforts and the orders were completed by its Network Operations Center.

Comcast

Comcast did not offer any features to out-of-service customers.

11. How did your company determine the number of customers whose telephone service was impacted by Isabel?

Verizon

Instead of focusing on the number of individual customers without service, Verizon tracked trouble reports on the basis of the number and locations of remotes, cables, pairs, and various other network elements. Verizon reports that tracking service outages on a per customer basis would not have been beneficial to the company's efforts to restore service to those customers.

Cox

Cox was able to determine the number of customer outages because of its network extensions to the customer's home. Customer out-of-service situations were identified

using a software program that generated outage reports. In addition, switch reports were used to identify outages that involved commercial customers.

Sprint

Sprint was able to capture the number of customers that were out-of-service based on customer reports to its repair center.

Comcast

Comcast was able to identify the number of affected customers utilizing status-monitoring equipment. This equipment, which communicates with each network interface device at the customer's location, determines whether the line is active or inactive.

Role of the Commission

Prior to the event, the Staff readied itself to handle an increased volume of customer complaints. We assumed the industry would communicate their respective restoration efforts and policies to the public. Collectively, as the result of our post-Isabel review, we realize now that both the industry and the Staff must be more proactive in communicating directly with the public. The print media, television, radio, and websites can provide the conduit for such communication. The public, as well as the industry, look to the Staff to help facilitate communication when normal channels fail. Following the storm, we attended town meetings held around the state in an effort to gauge customer sentiment regarding Isabel's effect on the public as well as their reaction to the industry's performance.

In addition, as a result of the Isabel experience, the Staff has modified its proposed service quality standards to better reflect what is expected of the industry as it prepares for and responds to emergencies.

A LEC shall make reasonable preparations to continue operations and restore service outages resulting from fire, major electric power failures, other emergencies, and acts of divine providence. A LEC's employees or agents shall be instructed to follow predetermined emergency procedures to prevent or minimize interruption or degradation of service. A central office shall have access to adequate facilities to provide emergency electric power. A LEC shall determine the necessary reserve power capacity requirement based on its operating experience with its energy provider. If a central office does not have power generation equipment installed, a LEC shall design and maintain sufficient battery reserve, within the appropriate ampere hour rating, to allow time for delivery and setup of portable generators.

We also asked the industry for its assessment of the Commission's role.

In your view, what is the role of the Virginia State Corporation Commission in connection with events such as Isabel?

Verizon

Verizon feels that the Commission's role is to assure itself that the utilities are operating in the public interest and according to state law. The company also feels that, during times of crisis, it is the role of the Commission to maintain the public calm through its actions and public comments. According to Verizon, the Commission has a role in helping utilities perform their planning, implementation and recovery efforts, whenever possible.

With the exception of major failure by the utility, Verizon believes the Commission's active involvement during events such as Isabel should be minimal. While Verizon feels that the public reaction to the performance of utilities following Isabel was over blown in the media, it believes that the Commission's steps in scheduling public hearings around the state were helpful in evaluating performance. Verizon asserts that it was necessary to provide citizens with an opportunity to voice their concerns.

Cox

According to Cox, the Commission should assist utilities during a disaster by coordinating efforts between the companies, if the companies are unable to do so on their own.

Sprint

Sprint believes that the Commission could benefit Virginia consumers by communicating company refund policies. The company also feels that, if a customer has not allowed the companies a reasonable amount of time to repair a trouble, the Commission could advise the customer of the extenuating circumstances faced by all utilities.

Comcast

Comcast encourages the Commission to assist the utilities with coordinating their recovery efforts. Because many utilities are dependent on the initial efforts of the electric utility, Comcast feels the Commission should take the lead in recovery coordination by conducting planning meetings in anticipation of likely outages. The company also feels that the Commission should hold periodic summits to examine the progress during recovery. These meetings would identify successful efforts as well as serve as an indication of where coordination efforts could improve.

Findings and Lessons Learned

In advance of the storm, the Staff should have developed and released information to the public on how to prepare in the event of a telephone outage. The industry should have tested its communication plan with other public utilities in an effort to better coordinate and expedite recovery efforts. During the aftermath, industry members should have kept the public better informed of restoration activities.

The Staff and the industry should consider a variety of delivery channels for disseminating information to the public, the Staff, and each other. Television and the internet, while extremely powerful under normal circumstances, are of little value without electricity and connectivity. Industry web sites were rendered useless, not because of their lack of information, but because customers could not access the information (no power, no phone, no DSL, no dial-up, no internet). Established industry contact numbers went without answer in some cases as the employees normally assigned to take those calls were dispatched to assist with service restoration. While this was a notable goal, there must be a back-up communications channel to assist government emergency officials as well as other utilities in coordinating restoration efforts.

The public's tolerance of service outages seems related not only to the length of the outage, but to the level of communication received surrounding the outage. Automated voice response systems need to be modified so that, during extraordinary events such as Isabel, changes can be made to inform customers more accurately of the extent of the damage and the length of time needed to restore service. In some cases, customers were given standard, automated repair intervals, which, when not met, led to a great deal of customer frustration and confusion.

In addition, while certainly secondary to service restoration, customers need to understand the process for obtaining bill credits. With regard to Isabel, customers were often left with the ultimate *Catch-22*. In order to be eligible for a bill credit, customers had to call their respective providers. For those out of service, and with no cell phone or other means of communication, that was, of course, impossible. In the future, there needs to be a consistent means of fairly applying bill credits that do not rely solely on a customer's wherewithal to call during the time of an outage. The optimal scenario would be one where customers did not need to call at all. The company's billing and operations systems would be capable of diagnosing an out of service condition on its own and, subsequently, applying the proper bill credit. In the absence of such a solution, the approach ultimately taken by the industry seemed a reasonable surrogate. When customers called to receive their bill credit, they were taken at their word with regard to the length of time without service.

Interestingly, based on field visits made by the Staff, customers wanted to know more about the process of restoration. For example, as discussed previously, in some cases the facilities immediately surrounding a business or residence were unharmed. However, maybe just blocks away, the entire infrastructure was completely destroyed. Moreover, unlike power or cable networks, telephone customers in many cases are restored to service one at a time. Once customers understand the situation, they tend to become more tolerant of delays.

Telephone service, because of the availability of emergency back-up power provided by the telephone companies, was not interrupted for the vast majority of customers who lost commercial electric service. In those cases where customers are

served by remote central offices, power to maintain telephone service is generally provided with batteries when commercial power is lost. As the batteries are depleted, they are restored to full power with the use of portable generators. In some cases, remote central offices were inaccessible because of storm damage and, therefore, batteries could not be recharged before they became depleted. Some portable generators were stolen – one at gunpoint. Given the enormity of the damage to commercial power, there were some cases where there was an insufficient supply of fuel, human resources, or generators to recharge remote central office batteries before they became depleted.

While there were challenges, there were also success stories. Cox and DVP set up channels of communication in advance of Isabel. In fact, given that communication was certain to be an issue, Cox, at least initially, had an employee stationed in the DVP command center so that communications with Cox’s command center could be direct and instantaneous. This advance planning proved to be an invaluable asset to both companies as they coordinated service restoral.

Following are the lessons learned by the industry:

In what areas do you believe that your company could improve in connection with Isabel?

Verizon

Verizon believes that it would have been better able to schedule and make efficient use of emergency response work crews if automatic waivers were granted for Department of Transportation Waiver for Commercial Vehicles. According to Verizon, better coordination and cooperation across state boundaries for incoming workers would

have alleviated last minute hunting for rest accommodations, and last minute work crew assignments.

Verizon indicates that, due to the extreme damage to DVP's outside network and safety concerns associated with working around downed power lines, its normal procedures for coordination with DVP did not work as well as in the past. Following Isabel, the company has worked with DVP to improve communication between the two companies. As a result, recovery efforts should be better coordinated in the future.

Another area of improvement for Verizon is its proactive communication with customers in the event that commitments are going to be delayed. After Isabel, there was more need for this type of communication. This was due to unpredictable access to neighborhoods and the discovery of adjacent unreported customer troubles. Verizon technicians' response to on-site requests for repairs had a negative impact on keeping customer commitments. For this reason, the company had difficulties providing accurate appointments and difficulties reaching customers to inform them when changes were necessary.

Verizon's media contacts were predominately reactive in nature. Had these contacts been more proactive, the company may have been better able to highlight alternatives for customers. In addition, Verizon indicates it is possible that the company would have been better served to come up with a method to estimate the number of customers out of service. This could have satisfied the needs of the media and the Staff.

Cox

Cox's biggest operational challenge after the hurricane was keeping its service vehicles filled with fuel. During a "post-mortem" meeting with DVP, Cox learned that

DVP had a prearranged vendor to service and fuel vehicles at night. Cox plans to develop a similar plan for its fleet.

Sprint

Sprint indicates that a major area of improvement would be the response time for additional contract help. Sprint's master contractors had difficulty locating qualified contractors in a timely manner, due to the vast geographical area that suffered damages and the number of utilities needing additional manpower.

Comcast

Comcast asserts that, given the circumstances surrounding Isabel, there are "fairly limited aspects" of its performance that require improvement. The company believes that, in addition to the possible loss of electricity, it could have anticipated the possible loss of water service as well. Because its initial assessment of the main portion its system did not reveal the full extent of the damage, Comcast feels it should have performed a more in-depth examination. Had this been done, recovery would have been more efficient. The company also believes that it could improve its communication with customers. The company will evaluate several methods to inform customers in the event of extensive outages. This communication will include the use of regular radio updates.

Conclusion

Whether it was communicating with customers, the Staff, or each other, there is agreement among the industry that the communications process needs to be vastly improved in the future. Earlier this year, the Staff held a cross-industry meeting where industry officials agreed to work together much more closely to establish multiple channels of communication. Local and state authorities held multiple meetings with interested parties to ensure that communication and restoration efforts will be better coordinated. For its part, the Staff has already prepared a press release with tips on how customers can prepare for disaster-related outages.

It is with some degree of irony that our biggest area of improvement is that in which we are supposed to be expert -- communications. The good news is that this problem is easily fixable. We have all learned a great deal from Isabel and her aftermath. It will be up to us to remember and gain from those lessons as we deal with future disasters.