



2009 Frequently Asked Questions about CenterPoint Energy's Hurricane Preparations

1. What did CenterPoint Energy learn from Hurricane Ike to prepare for this year's hurricane season?

CenterPoint Energy was pleased with the ability of its system to withstand a storm like Hurricane Ike. The company's electric infrastructure is built to meet, and in many cases along the coast, exceed the National Electrical Safety Code and the damage to its electric infrastructure was minimal. For example, of the million plus wood electric distribution poles in the system, less than one percent had to be replaced. Uprooted trees and flying debris, however, damaged or severed power lines throughout CenterPoint Energy's 5,000 square-mile service territory.

Since Ike, CenterPoint Energy has removed most of the dead or stressed trees that were in its easements, which should help to limit the damage from the next storm. Unfortunately, there are still potential threats to the company's lines from dead or stressed trees in customer's yards. So, as CenterPoint Energy's foresters identify large damaged or diseased trees that they believe could pose a threat to power lines, the company is asking customers if they can be taken down. This, along with planting the right tree in the right place should help.

In addition to CenterPoint Energy's preparation, the company is urging customers to have a personal emergency plan in case the power goes out, just like they do. This is extremely important, especially for customers who rely on electricity for life-sustaining equipment. Widespread power outages are an expected outcome in a hurricane and it is vital that customers be prepared to be without electricity for an extended period while CenterPoint Energy works to make repairs and restore service.

2. What else did CenterPoint Energy learn after Hurricane Ike?

What CenterPoint Energy learned in the restoration process after Hurricane Ike was that they did not have a comprehensive, and up-to-date list of key facilities that are vital to the safety and welfare of the communities' it serves. CenterPoint Energy has worked with local governments and utility districts and developed a process to ensure that its key facilities list is updated regularly. Many of these facilities have also added backup generators.

CenterPoint Energy has also changed its approach to staging sites. Staging sites are large work areas where the company can mobilize anywhere from several hundred to 1,000 emergency assistance lineman and tree trimmers who come from other cities and states to assist in a major restoration effort. CenterPoint Energy has 12 service centers, with assigned geographic territories from where its crews work every day. Prior to Ike, the CenterPoint Energy emergency plan called for the addition of 4 very large staging sites, each of which could accommodate as many as 3,000 workers. During the Hurricane Ike restoration, this approach was changed because the company quickly learned that with 11,000 additional resources (linemen and tree trimmers), the ability to move around the city safely and effectively was hampered by traffic congestion. Under the




company’s current emergency plan, it plans to establish as many as 16 staging sites in addition to their existing 12 service centers. In an urban area like the Houston metropolitan area, CenterPoint Energy needs to be able to stage crews and move them into affected areas more efficiently.

3. What should customers do to prepare for this year’s hurricane season?

Customers need to have an emergency plan for their families, just as CentePoint Energy does. This is extremely important especially for customers who rely on electricity for life-sustaining equipment. Just as CenterPoint Energy plans to have generators, fuel, food, hotel rooms and outside workers ready to assist with restoration, the company encourages customers to have battery-powered radios, flashlights, food, portable generators, etc.

The specific damage that will be caused by any particular hurricane cannot be predicted ahead of time. Consequently, the length of time it will take to restore services to any particular location is also unpredictable. As a hurricane approaches, customers need to make preparations to be without power for a period of time consistent with the severity of the storm. As a rule of thumb, the company suggests that customers be prepared to be without service in accordance with the following guidelines:

Hurricane Outage Preparation Guide		
		Prepare to be without power for:
Category 1	winds 74-95 mph	7 to 10 days
Category 2	winds 96-110 mph	2 to 3 weeks
Category 3	winds 111-130 mph	3 to 5 weeks
Category 4	winds 131-155 mph	4 to 6 weeks
Category 5	winds 156 mph and up	6 to 8 weeks



Of course any specific location could have power restored sooner or later than the guidelines suggest.

4. What has CenterPoint Energy done as a result of the recommendations that were noted in the City of Houston’s Task Force Report on Electric Service Reliability?

There were several reviews conducted after Hurricane Ike. In addition to the comprehensive assessment that CenterPoint Energy conducted, the City of Houston Task Force and a consultant engaged by the Texas Public Utility Commission conducted studies as well. The results of all three studies are similar and the company is assessing both the short and long term recommendations of each.

The studies all concluded that further “hardening” of the system in other than limited areas was not necessary and that burying existing above-ground lines was cost prohibitive. Each study emphasized improved vegetation management practices which CenterPoint Energy is implementing. The company agrees with the Mayor’s Task Force assessment that the best payback will come from investment in grid automation measures that can reduce both the number and length of outages.

5. What is the method by which power is restored by CenterPoint Energy?

CenterPoint Energy restores power in a systematic manner. First, service is restored to key facilities vital to public safety, health and welfare, and downed power lines are secured. Next, repairs are made to major lines (circuit feeders and laterals) and fuses that restore power to the greatest number of customers in the least amount of time. Third, repairs are made to transformers in back yards, which typically serve 10 or fewer customers. Finally, repairs are made to individual service lines or electric drops to homes.

Power is restored in a systematic manner by working our way out from what the company calls substations or junction points throughout its service territory. CenterPoint Energy has 269 (there were 267 when Hurricane Ike hit) of these substations that receive power from the large steel transmission towers and step down the voltage so that customers can receive it through neighborhood distribution lines that deliver power to businesses and homes. Each substation may have 8 to 10 distribution circuits and each distribution circuit (usually serves more than 1,000 customers) will have numerous laterals (usually serves fewer than 100 customers).

At some point in the process, CenterPoint Energy begins restoration work along individual circuits. This is somewhat akin to working on a string of Christmas tree lights. No matter how badly one wants the 20th light in the string to turn on, that won’t happen until all nineteen previous lights in the string are working.



6. How will CenterPoint Energy communicate with customers about when power is expected to be restored after the next hurricane?

CenterPoint Energy will communicate with customers through the local media and the company website. While there are significant limitations in the accuracy of zip code information, zip codes will continue to be used to communicate the status of its restoration efforts. CenterPoint Energy has made changes designed to produce more accurate and timely service restoration estimates, but the company's system was not designed by zip code. A substation in one zip code may feed circuits that cross several different zip codes. Outage data is aggregated by the location of the underlying problem, not by individual service addresses. While technology will change this in the future, zip code based outage maps currently serve as an approximate depiction of the location of actual outages.

In addition to news media communications, the CenterPoint Energy website will be an additional source of information - 24 hours a day. Prior to landfall of the next major storm, the company will make a broad estimate of the expected duration of the total system recovery. This high-level estimate will remain in place for the first 3-4 days after the hurricane makes landfall while company personnel makes a more detailed damage assessment and begins the restoration process. On day 3 or 4 of the recovery, CenterPoint Energy should be able to begin making restoration projections by zip code.

Power is restored in a systematic manner. First, emphasis is placed on restoring service to key facilities vital to public safety, health and welfare, and securing downed power lines. Next, repairs are made to major lines and fuses that restore power to the greatest number of customers in the least amount of time. Third, repairs are made to transformers in back yards, which typically serve 10 or fewer customers. Finally, repairs are made to individual service lines or electric drops to homes.

In the power restoration process, the company assigns crews to substations or junction points, which serve specific areas of the CenterPoint Energy service territory. The company has 269 (there were 267 when Hurricane Ike hit) substations that receive power from the large steel transmission towers and step down the voltage so that customers can receive it through distribution power lines that deliver power to businesses and homes. And each substation may have 8-10 distribution circuits or major power lines coming out of it and in most cases these circuits cross several zip codes.

7. How is it decided whose power is restored first, especially when it comes to customers with special needs or those customers who are on the critical care list?

Power is restored in a systematic manner. First, emphasis is placed on restoring service to key facilities vital to public safety, health and welfare, and securing downed power lines. Next, repairs are made to major lines and fuses that restore power to the greatest number of customers in the least amount of time. Third, repairs are made to transformers in back yards, which typically serve 10 or fewer customers. Finally, repairs are made to individual service lines or electric drops to homes.



Actual service restoration times will vary depending on the damage to the specific circuit serving an individual location. The extent of damage to a specific circuit cannot be predicted ahead of time.

Any customer who depends on electricity for life-sustaining equipment needs to have a family emergency plan, whether it's to evacuate or have a back-up generator.

While CenterPoint Energy does maintain a critical care residential customer list and emphasizes service restoration to these customers in a reasonable time following routine outages (normal storms, cars hitting poles, etc.), the company cannot provide assurance of priority restoration following a major emergency such as a hurricane. This critical care residential customer list is in reality a communications program. Due to the specific nature of the damage that may affect any particular part the system, the company cannot guarantee a continuous electrical supply to these residences. However, reasonable efforts will be made to provide these customers advance notice when CenterPoint Energy must disconnect service to perform line maintenance or in advance of a hurricane. These limitations are communicated with residential critical care customers regularly.

8. What are the major elements of CenterPoint Energy's Emergency Operating Plan?

The company has a comprehensive emergency operating plan that includes virtually every Houston employee even those that do not traditionally work in the field. CenterPoint Energy's goal is to safely restore service to its customers - quickly and efficiently.

With over 100 years of experience, the company prepares year-round, not only for hurricanes but for the smaller outages caused by the thunderstorms that are common in its service territory. The company holds a hurricane drill annually. Key employees attend industry workshops and exchange ideas with other industry leaders. CenterPoint Energy is part of electric utility mutual assistance programs and has access to thousands of linemen and tree trimmers from around the country. In addition to its own employees, the company had over 11,000 linemen and tree trimmers from 35 states and Canada that came to help restore power after Hurricane Ike. The company also provides assistance to other utilities across the country following natural disasters that affect them. On average, CenterPoint Energy sends linemen and support personnel 4-6 times annually to help other utilities restore power. The company also works closely with local community leaders and elected officials to ensure that it is aware of vital facilities that are critical to safety and welfare of the communities CenterPoint Energy serves.

The company's plan also includes a comprehensive list of vendors and contractors for lodging, staging sites, fuel, food and all its post-storm needs.

9. How will CenterPoint Energy prioritize power restoration to refineries in its service territory?

Refineries are primarily served through CenterPoint Energy's high voltage transmission lines and during Ike, the company's transmission system held up well. CenterPoint Energy builds its electric infrastructure to meet, and in many cases along the coast, to exceed the National Electrical Safety



Code. Its transmission infrastructure is composed of a combination of steel (14,494), wooden (7,309) and concrete (2,717) structures. Only 60 or less than 1 percent of the company's wooden structures had to be replaced following Ike and were primarily along the coast. None of its steel or concrete poles had to be replaced.

As the company prepares for this hurricane season, company officials are working closely with federal and state agencies to identify strategic assets that are critical to the national economy, including those assets that serve these refineries. During an actual event the company will be in communication with these agencies and will be prepared to respond based on the particular needs identified at that time.

10. What did it cost to restore power after Hurricane Ike and will customers have to pay?

CenterPoint Energy employees and mutual assistance crews did an outstanding job in the aftermath of Hurricane Ike. Fifty percent of the company's customers were returned to service in five days, seventy-five percent in 10 days. All customers that could receive electricity were restored within 18 days. However, it wasn't until the end of February that the company finished making all the permanent repairs to the electric system.

CenterPoint Energy filed with the Texas Public Utility Commission a request for \$678 million to cover the cost required to restore power and repair the system. Earlier this year, the Texas Legislature passed a bill that allows utilities to recover restoration costs approved by regulators using low-cost securitization bonds. These bonds benefit customers by spreading the costs over 10 – 15 years resulting in a small monthly surcharge. In the CenterPoint Energy case, the PUC authorized the company to recover \$663 million in restoration costs, of which \$643 million can be securitized. Based on current interest rates, the monthly surcharge will be less than \$2 per month for a customer using 1,000 kwh and is expected to be implemented sometime this fall. The surcharge is assessed to Retail Electric Providers and they determine how the surcharge is ultimately reflected on customer's bills. CenterPoint Energy benefits by recovering its costs in a timely fashion.

The company plans to seek recovery of the approximately \$20 million of the approved storm restoration costs that are related to transmission service through the transmission cost of service process.

11. How will the new smart meters help in the restoration process?

Beginning in August 2009, 45,000 smart meters will provide many exciting features, including improved outage information. Among other things smart meters will give CenterPoint Energy better information about the precise location of power outages, which in turn will help the company more quickly respond to outages. By January 2014, all 2.2 million customers should have these meters and CenterPoint Energy will be able to receive this notification from all points in its system.