



**Subject: 2013 Hurricane Season**

**Date: May 1, 2013**

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### **Background:**

The 2013 hurricane season officially begins June 1, 2013. Entergy's utility companies in Louisiana are prepared should a major storm hit the state. The companies follow a well-tested restoration process that is designed to restore power to customers as quickly, as safely and as economically as possible.

### **Key Messages:**

- Storm restoration is difficult, dangerous work and it takes time to do safely.
- Safety is always our top priority.
- There is no magic bullet or failsafe way to prevent power outages from occurring during a major storm.
- All of our existing equipment and facilities meet or exceed national standards.
- The company reminds customers to stay away from downed power lines and to call 1-800-9OUTAGE toll-free to report electric or gas outages.
- Customers can visit the Entergy Storm Center website at [entergystormcenter.com](http://entergystormcenter.com) for the latest updates and outage information.
- We are the only utility in the country to have won the Storm Restoration Award from the Edison Electric Institute in each of the last 15 years – no one does power restoration better than Entergy.

### **Changes since Hurricane Isaac:**

- From a behind-the-scenes perspective, we've improved the way we gather information from our field employees so that we can keep View Outages as up-to-date and specific as possible. And that will help improve the way we communicate to customers.
- In the past, we've tried to wait until all damage assessments were complete before we offered estimated restoration times. But our assessments take time to complete and customers want information as soon as they can get it. Going forward, we are going to offer some generalized restoration estimates so that customers have information to use as part of their decision-making process.

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- We'll take a look at models and historical information for comparable storms and use that to provide an estimate on how many days we think it will take before all customers are restored.
- As assessments are completed after the storm passes, we'll be able to update those restoration estimates.
  
- We have also improved the way that our View Outages map will work during major storms. Now, customers will be able to see alert boxes that will provide information for parishes and specific neighborhoods. You'll even be able to check on specific street addresses using the new Push Pin feature.
  
- Another change we've made is to improve the way our websites, especially [EntergyStormCenter.com](http://EntergyStormCenter.com) and View Outages, operate on a mobile device. For many customers, their cell phones have become the primary way that they access information. We want to make sharing information about restoration efforts as easy as possible.
  
- Another improvement is in the way that we proactively communicate with customers. We'll offer phone calls and text alerts when we have new information to keep customers informed about our restoration efforts.

## **Pre-Storm Preparations:**

### **General maintenance**

- In the spring, we conduct full-scale drills to ensure that each employee knows and is able to perform their assignment. We also use the drills as a chance to implement and practice process improvements and lessons learned from previous storms.
  
- We have a comprehensive maintenance plan that we work through each year.
  
- We routinely use infrared cameras to inspect lines and look for "hotspots" or areas that might be susceptible to failing so that we can do preventive maintenance.
  
- Each year we do proactive maintenance on our worst-performing circuits.
  
- When we have damage after a storm, we replace like-for-like. For example, if a wooden pole is damaged, we will replace it with the best available wooden pole.

### **Tree-trimming**

- We proactively trim trees on a four-year cycle.
  
- In most areas that Entergy serves, trees can be trimmed anywhere from 6-10 feet away from power lines. In New Orleans, however, according to city ordinance we are only allowed to trim four feet away from our lines.
  
- So far this year, we have already trimmed vegetation along more than 200 miles of our power lines in the city. Our goal for 2013 is to trim along 320 miles, which is roughly a quarter of our more than 1,400 miles of power lines.

## **Poles**

- We also inspect Entergy-owned utility poles in the city on a 12-year cycle.
- We own more than 52,000 wooden poles in New Orleans. We have a goal of inspecting 4,300 poles each year. Over the last three years, we have actually inspected an average of 6,600 poles per year.
- During those inspections, on average, we find that fewer than 2 percent of inspected poles need to be replaced.
- It is important to note that we don't own every single utility pole in the city. Some are owned by other companies (BellSouth, for example) and some may be owned by the city.

## **The Restoration Process:**

### **After the storm passes**

- Once it is safe to do so, assessment teams hit the affected area to determine the scope of the storm's damage. This assessment helps determine how many additional workers are needed, where those crews need to be sent, the additional equipment needed and what work actually needs to be done. Depending on the size and scope of the storm and its resulting damage, this assessment period can take more than a day to complete.
- Once restoration work begins, we follow a standard restoration process:
  - We restore power from the source-out, meaning the first thing we check are the power plants that generate power.
  - The next step is to check the transmission lines that bring power from the plants into the city. This work is often done outside of the city limits, so you may not necessarily see the crews that do this work.
  - Next is to ensure that all substations are functioning so that power can reach the distribution lines that bring the power into your neighborhoods.
  - After the substations are back online, we work on what we call backbone feeders – these are the major power lines that transport power across the city and into local areas. Getting these lines up and running often helps us determine where local problems are. At this point in the process, you still may not see trucks in your neighborhoods.
  - We place a priority on getting power restored to emergency services such as hospitals, police and fire stations and media outlets.
  - We then prioritize work in order to get the largest number of customers on as possible. For example, if we have the choice between working a job that will bring power back to 1,000 people and a job that will bring power back to 100 people, we will choose the job that brings power back to 1,000 people first.
  - Finally, we work on jobs that restore power to individuals or small groups of customers. These jobs often take longer to complete.
- Additional notes on the restoration process:
  - Just because you don't see trucks on your street or in your neighborhood doesn't mean we aren't working to restore your power. The issue affecting your home or business may be in a substation or with a feeder that could be miles away from you.

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- Occasionally we will restore power to an area only to find another issue. This may require us to turn off the power again in order to complete additional repairs.
- We will also do some quick fixes in some areas in order to get the power flowing to as many customers as possible. We then have to go back, take customers out of service, and do more long-term repairs. When this happens, we make every effort to notify customers that they won't have service for a short period of time.
- Some customers may see that the other side of their street has power but their side doesn't. This could mean that the two sides of the street are on different parts of the grid.
- Some customers aren't able to receive power due to damage at their home or business and need a qualified electrician to make repairs before service can be provided.
- Generally speaking, when we have damage after a storm, we replace like-for-like. For example, if a wooden pole is damaged, it is replaced with the best available wooden pole.

### **Out-of-state crews:**

- You may occasionally see trucks parked in our staging areas. There are a few reasons why this may be the case:
  - Restoration workers are required to have eight hours of rest every day. If an out-of-state crew has been driving all night to get to the area and arrives early in the morning, trucks may sit in a staging area for part of the day while the workers get their required rest.
  - Similarly, if a crew works late into the night or early morning, their trucks may be parked while the workers get their rest.
  - Some trucks/crews have highly specialized job functions and may not be needed at that particular time.
  - It takes time each day for the crews to load equipment and to receive their work orders.
  - Crews may be waiting for one part of a job to be completed before they can do their part. From an efficiency standpoint, it often makes more sense for those crews to wait in the staging area until the work area they will be going to is clear.

### **Putting lines underground**

- Putting lines underground is very expensive. To put all of the power lines in the city underground would cost approximately \$1.5 billion and would double monthly bills for our customers.
- Even underground lines are no failsafe – there are parts of the city that have underground lines and even they lost power during Hurricane Isaac.
- With underground lines, it often takes longer to restore power.
- It is also more expensive to restore power to underground lines.

### **Post-Katrina restoration**

- The company received what are known as CDBG funds after Katrina to help cover restoration costs. This money was meant to repair and replace the existing system, which was devastated by the storm – not necessarily to “harden” the system.
- The company received \$200 million in CDBG grants but repairs cost more than \$400 million.
- The City Council audited – and approved - our spending of those CDBG dollars.

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