

## **EEI Emergency Response Award Winners -- 2008**

### **1) Hurricane Dolly** (South Texas – July 2008)

Hurricane Dolly was a category 2 hurricane, with winds of over 100 mph, causing considerable damage to trees, service drops, and overhead feeder lines. Rainfall ranged from 15 to 26 inches.

**Winner: AEP – Texas.** AEP – Texas restored power to over 200,000 customers in one week by repairing 9,000 miles of distribution line and replacing over 1,000 poles. The company also had to restore transmission service to South Padre Island by restoring 24 transmission circuits and repairing 58 transmission structures.

### **2) Hurricane Gustav** (Mid-South – September, 2008)

Hurricane Gustav was a category 2 storm with 110 mph winds, and struck the Louisiana coast southwest of New Orleans.

**Winner: Cleco Power.** In less than 24 hours, over 90% of Cleco's 270,000 customers were without power, as the storm de-energized 90% of their distribution lines (10,000 miles repaired), 45% of the transmission lines, and 23% of the transmission substations. This was the largest outage in company history. With the help of over 3,000 assisting workers from 19 states (plus Canada), service was restored in one week (days before Hurricane Ike).

**Winner: Entergy Corp.** Entergy Corporation faced outages of almost 1 million—the second largest number in company history. The company repaired over 50,000 miles of line, and replaced 11,700 poles. They brought in 15,000 workers from 27 states to assist, and after restoring 93% of the customers, had to evacuate restoration workers as Hurricane Ike struck. The company also had to restore two transmission “islands” involving 3 generating stations and 40 substations. Total cost might be as high as one-half billion dollars.

**Winner: Marubeni Caribbean Power Holdings.** The company's Jamaica Public Service Company unit lost power to 70% of their customers as the tropical storm Gustav passed over the south coast of the island. Due to the difficulties of having support flown in, the company repaired the system without aid in one and one-half weeks, with no reported vehicle or personnel accidents.

### **3) Hurricane Ike** (Mid-South – September, 2008)

Hurricane Ike had 110 mph winds and was over 300 miles wide, striking Galveston Island on September 13, and causing the largest power outage in Texas history. It was a strong Category 2 storm, with a category 5 storm surge of 12 feet, and was one of the costliest storms in U.S. history.

**Winner: CenterPoint Energy.** With 86% of its distribution circuits affected and 2.15 million customers out, the company was on the brink of a black start. They restored service to 95% of its customers by adding 11,000 hosted workers from 35 states to its normal complement of 3,000. While over 6,000 poles were replaced, this is less than 1% of total company poles—a testament to the strength of the system.

**Winner: Cleco Power.** The company had restored power to 84,000 customers in three days, with significant outages even before the storm reached land. One substation was inundated by heavy rainfall. Frequent tornado warnings complicated recovery work.

**Winner: Entergy Corp.** Coming before the completion of Gustav repair work, Ike was the fourth worst storm in Entergy history, with over 700,000 outages. Damage to nearby companies required them to recall their workers from Entergy. The company had practiced just such a “one-two punch” the prior spring. Restoration largely overlapped with Gustav recovery, and involved 9,000 assisting workers from 35 states and Canada.

**Winner: Southwestern Electric Power Company.** The company lost service to 69% of their feeders, and 39% of their customers. By employing 1600 workers from 13 states, they restored 95% of their customers in four days. The company held thrice daily conference calls with representatives from safety, distribution, transmission, forestry, supply chain, fleet, telecommunication, customer services, customer solutions, communications, meteorology, and upper management.

**Winner: Texas - New Mexico Power Company.** The company lost service to virtually all its Gulf Coast customers, including several refineries, as all local circuits were affected. Restoration costs were equivalent to the company’s 2008 O&M budget. Crews worked 200,000 man-hours to restore the system with zero personnel or vehicle accidents.

#### **4) Hurricane Ike** (Ohio – September 2008)

As the remains of Hurricane Ike moved across the state, forecasts in Ohio were for scattered showers with wind gust up to 40 mph. What actually occurred was several hours of hurricane force winds, causing extreme damage to trees and lines.

**Winner: AEP-Ohio.** With many of its crews helping with hurricane restoration in the south, the company responded to a surprise hurricane knocking off-line almost half its 1.5 million customers. The company replaced 500,000 feet of wire, using crews from as far as Canada, the Carolinas, and Minnesota. The company web site provided real-time maps of outages. AEP also covered repair costs for low income customers, and donated \$100,000 to relief agencies.

**Winner: Dayton Power & Light.** The company lost 68% of its customers in this storm, which was twice as bad as prior worst storm. They restored service to 6 hospitals in the first 7 hours. Seventeen hundred workers spent 12 days, putting in 16 hour days to get the job done. There were only two minor injuries: a strained back and a twisted ankle.

**Winner: Duke Energy.** This was the worst storm the company had seen in the 171 years it has been doing business in the Midwest. One million customers (or 63% of its Midwestern customers) were out of power due to the tremendous number of downed trees and limbs. The company recalled workers sent south, brought in many more from the Carolinas, and repaired 100 miles of distribution in nine days.

**Winner: FirstEnergy Corporation.** The company repaired a half million feet of primary distribution line in 6 days to recover from its largest outage ever. Since so many local resources were in use, or deployed to the south, the company called in workers from as far away as Massachusetts and New Hampshire. The company handles 690,000 calls with only one person receiving a busy signal. One Million customers. One week. One team.

### **5) Southwestern Ice Storm** (December 2007)

Gulf moisture and high plains winds combined to create one of the worst ice storms in state history, with anywhere from ¼ to 2 inches of ice. Conditions were especially bad in the Tulsa metro area.

**Winner: OG&E Electric Services.** The worst storm in company history left 40% of customers off line in very cold conditions. To keep internal and external audiences informed, the company produced a Daily Briefing Sheet overnight for next day use. There was only a single incident requiring a doctor's care. The company coordinated free meter base distribution through FEMA in five cities, and called to check on the families of the linemen out working in the storm. The community returned the love, tying bags of cookies on the lineman's truck's door handles.

**Winner: Public Service Company of Oklahoma.** As strong thunderstorms produced freezing rain, this became the most destructive and costliest storm in PSO's 95 year history. Many customers experienced multiple outages as icing continued and trees fell. With half their customers out, the company restrung 1 million feet of distribution line. The company provided 1500 daily safety briefings for work crews, and sent safety messages sent to field personnel via their cell phones. The company helped the city of Tulsa create "Operation Power Up" to expedite and pay for electrician work to repair individual's homes.

**Winner: Westar Energy.** The storm impacted half the company's distribution feeders, with most customers having to be restored twice due to the rolling nature of the outages. The company employed over 2000 poles, drawing workers from 20 different states, as far away as New Mexico, Wyoming, South Dakota, Ohio and Alabama. The company utilizes a zone-management technique for decentralizing repairs.

### **6) New England Ice Storm** (December 2008)

This storm saw very heavy levels of precipitation, primarily falling as freezing rain. Ice accumulated up to 1.25 inches or more in areas reaching from New York to New Hampshire.

**Winner: Central Vermont Public Service.** This storm was twice as bad as the prior worst-ever storm. The greatest damage was in the Southern District, a rugged and rural area with 5 customers per line mile. Cell phone service was completely unavailable due to terrain and weather. The company employs 93 lineworkers, but pulled together a team of over 600 workers (6 forestry employees managed 75 tree crews). After restoring power in 6 days with zero accidents, CVPS assisted its neighbors in recovery.

**Winner: National Grid.** The company faced outages of 1.1 million, or 34% of its customers, in New York and New England. Ice thawing from heavily laden branches caused trees to snap upward, creating new outages. More than 190 miles of wire was issued to repair 1100 feeders. Repairs were made in 7 days, using crews from as far away as Arkansas, South Carolina, and Nova Scotia. In order to keep the public informed, the company conducted over 800 media interviews.

**Winner: Northeast Utilities.** NU began planning early, and additional crews were secured from others well before the storm began. Wind gusts of 40-50 mph, additional icing, and up to a foot of new snow hindered efforts. Eventually 400,000 customers were without power. The company deployed five new storm trailers, containing communications and computer equipment, and completed the restoration on December 24.

## **7) Other Events**

### **Interstate Power & Light Company (Alliant Energy)-- 500-Year Flood, Summer 2008**

Fueled by extensive snow melt and heavy spring rains, the Iowa, Mississippi, and Cedar Rivers crested at very high levels: the Cedar was 19 feet over flood stage, and 11 feet over the prior high water record, set in 1851. Company headquarters was flooded 8 to 10 feet, and many employees sacrificed their own vehicles to move equipment that would be needed to restore power. Two generating stations were flooded out, as well as over a dozen substations. The company installed 24 temporary diesel or gasoline fired generators, and built a temporary 34 kV substation in three days. Over 700,000 man-hours were spent to prevent worse damage and restore what was damaged, and costs exceed \$200 million.

### **CitiPower and Powercor Australia -- Wind Storm, April 2008**

An intense cold front pushed through the State of Victoria, with winds gusting to over 75 mph, causing one-quarter million outages. Extensive damage was created by winds toppling drought-stressed vegetation. The company utilized mobile computers in field vehicles to promote prompt reporting and dispatch. Restoration was completed in three days with only a minor “fender-bender” accident.

### **Commonwealth Edison Company -- August Blast II Thunderstorms, 2008**

These intense thunderstorms (not to be confused with August Blast I, in 2007) impacted the entire ComEd service territory. The storm included three confirmed tornadoes, winds of 70-95 mph, and 88,000 lightning strikes. Over one half million customers were affected: by planning the work and working the plan, 87% were restored in one day. This was accomplished even though workers were “storm-weary” after eight major storms earlier that summer. Use of pre-packaged service material kits and a single point of contact for feeders maximized safety and minimized outage duration.

### **Georgia Power – Tornadoes, Spring 2008**

Thirty-three tornados impacted Georgia in the spring of 2008, requiring the repair or replacement of 1300 distribution poles, 50 transmission structures, and two cooling towers. Almost 1 million Georgians were without power at some point. The company mobilized thousands of workers and none of the outages was longer than three days—in fact 87% of the customer outages were 12 hours or less.

### **Pacific Gas and Electric -- January Winter Storm / Summer Wildfires - 2008**

A “super storm” in January dropped rainfall of up to 13 inches, snowfall of over two feet, and wind gusts exceeding 100 mph. In addition to replacing poles, the company repaired 567 transformers in real-time, returning them to service. Then, summer lightning storms ignited 2000 wild fires. These fires burned for much of June and all of July and destroyed over 100 homes. The fires threatened 8 company hydro plants, several key transmission paths, and over 12,000 miles of distribution. PG&E worked closely with fire agencies, pretreating thousands of at-risk poles with fire retardant. In fact, they even treated the Paradise town Hospital as flames threatened it.

### **Southern California Edison -- Wildfires / Wind Storm – November 2008**

SCE experienced three separate wind and fire events in November of 2008, which destroyed almost 1000 homes, and required the replacement of hundreds of poles and transmission structures. The company maintains a highly trained fire-management team, which works closely with fire agencies, communicating hazard, gaining crew access, coordinating backfire and aircraft operations. In addition the company deployed its mobile command center to coordinate on-site efforts. Dozens of SCE lineworkers and transmission employees assisted in fighting fires, saving several homes and the Lambert and Brea substations.

## **8) Emergency Assistance Awards**

### **American Electric Power -- Nineteen Storms, 2007-2008**

AEP provided assistance to 18 companies in 15 states for 23 distinct events. AEP provided almost 3,000 workers and 350,000 man-hours on over 100 days.

### **Baltimore Gas & Electric -- Hurricanes and Ice Storm, 2008**

BG&E provided 750 workers and 220,000 man-hours over 80 days

### **CenterPoint Energy -- Ice Storm, 2007 & Hurricanes Dolly & Gustav, 2008**

CenterPoint provided over 400 men and 60,000 man-hours over 31 days.

### **Entergy Corporation -- Tulsa Ice Storm, 2007 & Hurricane Dolly, 2008**

Entergy provided 600 workers and 150,000 man-hours over 18 days.

### **FirstEnergy Corporation -- Hurricane Gustav, September 2008**

FirstEnergy provided 300 employees and 50,000 man-hours over 8 days.

### **Georgia Power -- Hurricanes Fay, Gustav, Hanna, & Ike, 2008**

Georgia Power provided 3000 workers and 370,000 man-hours over 26 days.

### **Indianapolis Power & Light -- Ice, Wind, and Hurricane Ike, 2007-2008**

IPL provided 200 workers and 18,000 man-hours over 50 days.

### **Kansas City Power & Light -- Ice, Wind, and Hurricanes Gustav & Ike, 2007-2008**

KCPL provided 135 workers and 30,000 man-hours over 59 days.

### **Northeast Utilities -- Hurricane Ike, Ohio, 2008**

NU provided 117 employees and 13,000 man-hours over 7 days.

### **Progress Energy -- Hurricane Ike, Ohio & Texas, 2008**

Progress Energy provided 900 workers and 220,000 man-hours over 16 days.

### **Xcel Energy -- Hurricane Ike, Texas & Arkansas, 2008**

Xcel provided 392 workers and 73,000 man-hours for 18 days.