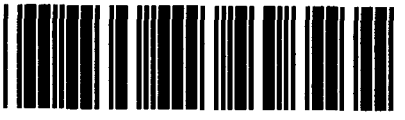
Control Number: 32182



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PROJECT NO. 32182

PUC INVESTIGATION OF METHODS TO IMPROVE ELECTRIC AND TELECOM INFRASTRUCTURE THAT WILL MINIMIZE LONG TERM OUTAGES AND RESTORATION COSTS ASSOCIATED WITH GULF COAST HURRICANES	§	PUBLIC UTILITY COMMISSION OF TEXAS

2006 JAN 17 PM 9:50

INITIAL COMMENTS OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

Contact: DeAnn T. Walker
CenterPoint Energy
(512) 397-3032
(512) 397-3050 (Fax)
deann.walker@CenterPointEnergy.com

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PROJECT NO. 32182

PUC INVESTIGATION OF METHODS TO IMPROVE ELECTRIC AND TELECOM INFRASTRUCTURE THAT WILL MINIMIZE LONG TERM OUTAGES AND RESTORATION COSTS ASSOCIATED WITH GULF COAST HURRICANES	**§**	**PUBLIC UTILITY COMMISSION OF TEXAS**

INITIAL COMMENTS OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

On December 23, 2005, the Public Utility Commission of Texas ("the Commission") filed eleven questions in this Project and invited interested persons to comment on those questions. Eight additional questions were submitted to utilities that sustained more than minimal damage from Hurricane Rita. CenterPoint Energy Houston Electric, LLC ("CenterPoint Energy") appreciates the opportunity to participate in this Project and submits the following comments.

I. RESPONSES TO QUESTIONS FOR WORKSHOP

1. ***If your company provided service in the areas affected by Hurricane Rita, please provide your company specific information on the number of customers affected, the minimum, maximum and average outage duration for the customers affected.***

On Saturday, September 24, 2005, at 6:00 AM, CenterPoint Energy experienced a peak of approximately 719,000 customers without power. In the course of the event, the minimum outage duration was one minute (for a circuit), the maximum outage duration was 5 days, 23 hours and 9 minutes (for a fuse), and the average duration for all customers affected was 813 minutes (CAIDI for the event).

2. ***Please provide information on additional non-company resources deployed in the area for the restoral effort.***

- Transmission
  - All repairs were performed by CenterPoint Energy personnel.

- Distribution utilized a total of 1,502 contractors.
  - Tree Trimming – 461 local contractors and 624 contractors from outside of the Houston area for a total of 1,085 contract workers.
  - Line Construction – 257 local contractors and 160 contractors from outside of the Houston area for a total of 417 contract workers.

3. ***Please provide information on the types and physical quantity of facilities affected by the hurricane in your service area.***

- The following types of distribution outages occurred:
  - Total number of circuits locked out: 639
  - Partial circuits locked out: 145
  - Fuses blown: 3,066
  - Transformer outages: 1,755
  - Single customer outage cases: 1,399

- The following distribution facilities were affected:
  - Spans of overhead primary down: 878
  - Spans of overhead secondary down: 1,069
  - Drops down: 1,044
  - Poles down: 222
  - Failed overhead transformers: 223
  - Failed URD transformers: 43
  - Failed Disconnects: 156

- The following transmission facilities were affected:
  - one 138kV wood single-pole structure (90' class H3) was broken
  - one 138kV conductor of one span (0.1 circuit miles) of 795 AAC kcmil conductor was broken

a) ***What percent of those facilities were replaced using existing inventory,***

- Distribution
  - The majority of the replaced distribution facilities utilized existing inventory.

- Transmission
  - 100% of the affected transmission facilities

b) What percent of those facilities had to be newly procured?

- Distribution
  - In addition to existing inventory, CenterPoint Energy triggered the purchase of a preset number of poles, transformers, wire and hardware, etc. in advance of the storm as part of the activation of the Emergency Operation Plan ("EOP"). This was in anticipation of a category 5 hurricane. When it became evident, on the day of the storm, that the brunt of Hurricane Rita was east of CenterPoint Energy, 70% - 80% of the order was canceled.

- Transmission
  - 0% of the affected transmission facilities

c) Are the facilities replaced meet the existing standards or exceed the standards to ensure survivability in the event of another hurricane of category 4 or higher?

- Distribution
  - The distribution facilities replaced were rebuilt using existing standards. There are no standards that would ensure survivability for certain conditions, including severe hurricane, tornados, certain floods or storm surge.

- Transmission
  - The transmission facilities replaced meet the National Electrical Safety Code ("NESC") standards. The facilities are not designed for any specific category of hurricane.

4. ***What lessons were learned in the process that would improve restoral time or reduce cost of restoral in the future?***

CenterPoint Energy conducted an internal After Action Review ("AAR") of the procedures used by the Company in preparation for and response to Hurricane Rita. The restoration effort for Hurricane Rita was immense and involved many people. The AAR is a process to systematically identify improvement opportunities. It was important to obtain feedback on the restoration effort for Hurricane Rita because it was the first test of the EOP in many years, and CenterPoint Energy wanted to identify improvements for the EOP.

CenterPoint Energy has been conducting AAR's for large storms for approximately three years based on a process that was established with the assistance of

American Productivity and Quality Center ("APQC"), which was used to help organize the AAR after Hurricane Rita. An initial AAR workshop was held to organize the effort. Teams were established to conduct AAR's for 19 functional areas that were identified. Each team had a facilitator, a process expert and a recorder, as well as team members. A total of 257 people participated on the teams.

For each stage of the EOP restoration process, the AAR teams asked the four questions:

(1) What was supposed to happen?
(2) What actually did happen?
(3) Why were there differences?
(4) What can we learn?

Additionally, the teams asked how the responses would change under a "worse storm" scenario. Each team's deliverable product was a series of Lessons Learned and associated recommendations for their functional area. A total of 230 lessons learned were identified and were prioritized by the teams as high, medium or low priority. Also, screening criteria were applied to the lessons learned to identify common themes for an executive presentation, as well as for EOP implementation priority.

The AAR process identified the following key lessons learned:

1) Update the EOP Manual to address new functions and requirements

2) Create a Web-based EOP roster system and improve roster assignment process to align with skills

3) Clarify and reinforce communications on EOP assignments to employees by defining the essential employees and improvements to the Storm Hotline

4) Enhance EOP training and drills and require mandatory attendance

5) Incorporate storm levels and evacuation plans into the EOP

6) Establish a central database to manage and track logistics support, mutual assistance, contractors and employees

7) Review, revise, and enforce conference call protocols

8) Improve coordination and provision of base logistics services

9) Establish a consistent and accurate process to communicate information to customers concerning estimated outage times

10) Re-evaluate the EOP activation timeline and adjust trigger points as appropriate to allow adequate time for certain low cost preparation activities

11) Communicate accurate information on priority restorations of critical customers to all parties through the use of a common system or process

12) Evaluate and improve preparing materials to be used during the storm restoration process

13) Develop a comprehensive EOP for the gas and electric divisions of CenterPoint Energy to address common logistics support and avoid duplication of efforts.

Interviews with executives of CenterPoint Energy that were involved in the preparation and restoration for Hurricane Rita were also conducted. The interviews resulted in a number of recommendations, some of which had a common theme with the lessons learned. These recommendations included:

1) Modify the EOP to allow flexibility depending upon the severity of the storm

2) Clarify EOP Roster and assignments

3) Update and brief executives annually on the EOP

4) Update EOP drill to reflect the new reality

5) Revise Logistics planning to accommodate evacuations and competing efforts

6) Evaluate and identify optimum facility locations for the command center post and dispatching that considers the impact of a major storm

7) Develop executive level reporting metrics and process to closely track restoration efforts

8) Consider developing a backup communications tower

9) Evaluate alternatives for "hardening" the system to make it less vulnerable to a storm

10) Work with the Cities and Counties to shape communications and mitigate negative public perception

Seven working teams, under the auspices of the EOP council, have been established to further validate and implement the lessons learned, and the work is currently underway. A timeline has been established to maximize results by the start of the hurricane season for 2006, which is June 1.

In addition to the foregoing information, CenterPoint Energy has previously submitted the following lessons learned:

1) The annual EOP drill was beneficial.

2) Having an on-site representative at the emergency centers for the City of Houston and Harris County was successful.

3) EOP needs to include plans for impacts caused by mandatory evacuation of the service area. Food and supplies are unavailable for several days prior to landfall and several days after landfall. Traffic congestion causes mobility problems that need to be taken into account. The utility needs to be "self sufficient" for several days before and after the landfall of a hurricane. Labor resources need to be in place prior to landfall because of mobility problems.

4) For restoration efforts, rely on electric utilities whose system is not also damaged by the same disaster. For purposes of hurricanes, the list of available resources should be expanded to include utilities not along the coastal areas.

5) Process for securing regulatory approvals for storm restoration should be streamlined. Regulatory entities should define hurricane restoration as an emergency condition for which approvals are not required. For instance, upon a natural disaster, such as a hurricane, ERCOT Protocols should be waived without further action.

6) Enhanced data exchange and coordination between electric utilities. For instance, Entergy and CenterPoint Energy could participate in each other's storm drills in which a block load transfer for both entities is practiced.

5. ***What, if any, additional costs would be associated with improvements from lessions learned identified above? To what degree, if any, might they be offset by more timely restoral of services?***

CenterPoint Energy continues to address the lessons learned from Hurricane Rita; the costs associated with implementation of the lessons learned have not been determined at this time.

6. ***How might your company's physical infrastructure be modified or replaced to enhance its ability to withstand severe hurricanes?***

CenterPoint Energy has not identified specific modifications that should be made to the physical infrastructure of its transmission and distribution system. It is important to note that solutions for major weather events will be different for each individual utility depending on the geographic location of the system and the type of system that exists. For instance, the system improvements needed in a compact urban area, such as that served by CenterPoint Energy, are different from a service area that has significant distances between the loads that are served, such as Entergy's system. Therefore, any enhancements to the TDU's system should be specific to the service area. Such an approach would focus on implementing cost effective methods for each TDU and would follow the model established by the National Electrical Safety Code ("NESC").

There are additional actions that can be taken by the transmission and distribution utility that will improve the reliability of the system. CenterPoint Energy already utilizes the following practices:

- Replacement of equipment to comply with current construction standards during daily operations of maintaining the system;
- Proactive five-year inspection and maintenance cycle for all transmission circuits in which all components (grounding, structures, conductors, insulators, etc.) are inspected and maintained or replaced based on condition and rights-of-way are inspected for encroachments;
- Treatment of wood poles on a 10-year cycle to retard rot;
- Targeted painting program for galvanized structures in highly corrosive areas to avoid loss of steel;
- Investigate outages for root cause determination and potential mitigation;

- Obtain sufficient rights-of-way to maintain structural and vegetation clearances from the transmission and distribution facilities; and,
- Proactive vegetation management through adequate tree trimming.

Lastly, it is important to note that no transmission and distribution system can be constructed to withstand all weather related events. CenterPoint Energy's experience in mutual assistance in Florida, Mississippi, and Louisiana has been that some weather events will destroy structures no matter the construction methods used. Each event will have its own impacts to the system. Some of the additional concerns to the wind loading requirements are issues such as tidal surges (e.g. devastation, salt-water damage to pad-mount equipment), flood currents (floating debris impacting structures), weakened soils from excessive rain (e.g. leaning poles, falling trees), tornados, flying debris, and falling trees from high winds (e.g. 80 foot pine trees falling into rights-of-way).

7. ***How does the cost of the modifications and replacements identified above compare with that of replacing storm-damaged infrastructure in the past?***

As stated, CenterPoint Energy has not identified specific projects in order to "harden" its transmission and distribution system; therefore, a comparison of costs cannot be made. In addition, CenterPoint Energy notes that the costs to repair the system due to past weather events has been dependent on the time frame of the storm and the amount of damage received. It would be very difficult to compare such costs.

8. ***Has your company modified the planning, engineering and construction practices since Hurricane Rita for deploying facilities in the Texas Gulf coast region, if so how, please provide details.***

CenterPoint Energy has not modified its planning, engineering, and construction practices since Hurricane Rita.

9. ***How should the cost identified in the responses to the previous questions be recovered? Should the cost be recovered from general body of ratepayers, from the ratepayers in the affected areas, or from some other source?***

CenterPoint Energy supports the recovery of costs identified with "hardening" the transmission and distribution system in a timely manner. The costs should be recovered

from the same class of consumers as with all other recoverable costs incurred by a TDU. There are three methods in which a TDU could be allowed to timely recover such costs. First, in future rate proceedings, the Commission should remain cognizant of the magnitude and severity of damages sustained by Gulf Coast electric utilities in establishing future storm reserve account funding levels. Second is the use of a rider or surcharge. The Commission can review the costs in a docketed proceeding that is similar to proceedings held for the review of rate case expenses. CenterPoint Energy believes that such costs should be surcharged over a fixed time period for recovery.

The other methodology is the use of an interim cost of service update that would be similar to the current interim transmission cost of service update provided for in P.U.C. Subst. R. 25.192(g), which contains a mechanism for a transmission service provider ("TSP") that is within the Electric Reliability Council of Texas ("ERCOT") to update its transmission rates to reflect changes in its invested capital on an annual basis. The rule provides that "[t]he new rates shall reflect the addition and retirement of transmission facilities and include appropriate depreciation, federal income tax and other associated taxes, and the commission-allowed rate of return on such facilities as well as changes in loads." This is only a partial solution because the rule addresses transmission capital costs only and does not include transmission operating costs nor any costs associated with the distribution function of the TDU.

CenterPoint Energy recommends that the Commission modify the Substantive Rules to allow for the timely recovery of capital and operating expenses for transmission and distribution system replacement or repairs associated with "hardening" of the system. Many of the costs are associated with operating and maintenance expenses such as tree trimming. Additionally, the Substantive Rules should provide for relief associated with increases in distribution plant investment or operating costs.

10. ***What changes in depreciation practices are appropriate?***

As CenterPoint Energy has previously noted in its comments, there are various ways in which electric utility systems can be hardened against storms or otherwise made more reliable. Improved electric reliability is a major goal of the federal Energy Policy Act of 2005 ("the EPAct"), as reflected in provisions such as the creation of an Electric

Reliability Organization ("ERO") and mandatory electric reliability standards. In response to the EPAct, the Federal Energy Regulatory Commission ("FERC") issued a Notice of Proposed Rulemaking ("NOPR") on Transmission Investment and Pricing Reform. A component of the NOPR is 15 year depreciation of electric facilities, effectively reducing the life cycle of electric facilities. Shortening the life cycle of electric facilities is one way to harden facilities against storms and otherwise improve reliability. With the passage of the EPAct, this proposed change in depreciation practices will apply to virtually every electric utility outside of ERCOT. The Commission should strongly consider modifying the depreciation practices for ERCOT utilities to align with the practices proposed throughout the rest of the nation, particularly in light of the fact that ERCOT utilities are subject to the same reliability standards mandated by the EPAct as the rest of the country.

11. ***Should utility standards of construction in the coastal area be upgraded? Has your company provided input or planning to participate in the activities of standard setting organizations? If so provide details.***

CenterPoint Energy participates in the following organizations related to establishing standards for electric facilities, but does not have any recommendations as to proposed upgrades to the utility standards for construction in the coastal area:

- Edison Electric Institute – Review of updates by the Institute of Electrical and Electronic Engineers ("IEEE")
- American Society of Civil Engineers ("ASCE") – Addresses wind loading on structures.
- American Concrete Institute ("ACI") – Addresses guidelines and specifications for concrete design.

II. RESPONSE TO QUESTIONS CONCERNING HURRICANE RITA

1. ***Please provide the following information regarding transmission lines damaged by Hurricane Rita.***

- ***Total number of lines in the system and the number of lines sustaining damage***
  There are 307 transmission circuits in the system and only two sustained damage.

- ***Total number of structures in each type before the hurricane and number of structures repaired or replaced by voltage class***
  - ***Wood single-pole***
    There were 4,070 such structures. Only one 138 kV wood single-pole structure had to be replaced.
  - ***Wood (other)***
    There were 3,895 such structures. No replacements or repairs.
  - ***Steel single-pole***
    There were 1,098 such structures. No replacements or repairs.
  - ***Steel lattice***
    There were 12,554 such structures. No replacements or repairs.
  - ***Steel (other)***
    There were 212 such structures. No replacements or repairs.
  - ***Concrete single-pole***
    There were 2,032 such structures. No replacements or repairs.
  - ***Concrete (other)***
    There were 132 such structures. No replacements or repairs.

- ***Total number of feet/miles of conductor and amount repaired and amount replaced by voltage class***
  CenterPoint Energy has 1,077 circuit miles of 345 kV, 2096 circuit miles of 138 kV, and 458 circuit miles of 69 kV transmission facilities. Only one span (0.1 circuit miles) of 138 kV conductor had to be repaired.

2. ***Please provide the following information regarding distribution lines damaged by Hurricane Rita.***

- ***Total number of lines in the system and the number of lines sustaining damage***
  There are 1,419 distribution circuits in the system, and 639 experienced a circuit lockout as a result of Hurricane Rita.

- ***Total number of structures in each type before the hurricane and number of structures repaired or replaced by voltage class***
  - ***Wood single-pole***
    There were approximately 995,000 such distribution structures, and 222 poles were replace during Hurricane Rita.
  - ***Wood (other)***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.
  - ***Steel single-pole***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.
  - ***Steel lattice***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.
  - ***Steel (other)***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.
  - ***Concrete single-pole***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.
  - ***Concrete (other)***
    There are a minimal number of such poles on the distribution system, and none were damage during Hurricane Rita.

- ***Total number of feet/miles of conductor and amount repaired and amount replaced by voltage class***
  The following amounts of conductor were on the system:
  - 12 kV — 22,763 miles of overhead and underground conductor on system.
  - 35 kV — 13,766 miles of overhead and underground conductor on system.
  - 120/240 v — 8,362 miles of overhead and underground conductor on the system.

  There were 2,041 spans of overhead and underground conductor repaired/replaced for both 12 kV, 35 kV, and 120/240 volt. Therefore, assuming 180 feet per span, calculates to be approximately 69 miles of repaired/replaced conductor.

3. ***Please provide the following information regarding transmission only substations damaged by Hurricane Rita.***

- ***Number of substations sustaining damage and total number of substations in system***
  One transmission substation sustained damage. There are a total of 78 in the system.

- ***Number of substations sustaining control house damage due to:***
  - ***Flooding***
    0
  - ***Wind***
    One transmission substation sustained minor damage.
  - ***Flying debris***
    0
  - ***Other***
    0

- ***Number of substations sustaining damage to other equipment (including underground wiring) due to:***
  - ***Flooding***
    0
  - ***Wind***
    0
  - ***Flying debris***
    0
  - ***Other***
    0

4. ***Please provide the following information regarding distribution substations damaged by Hurricane Rita.***

   - ***Number of substations sustaining damage and total number of substations in system***
     Four distribution substation sustained damage. There are a total of 213 in the system.

   - ***Number of substations sustaining control house damage due to:***
     - ***Flooding***
       0
     - ***Wind***
       There was inconsequential damage to control houses at two substations.
     - ***Flying debris***
       0
     - ***Other***
       0

- ***Number of substations sustaining damage to other equipment (including underground wiring) due to:***
  - ***Flooding***
    0
  - ***Wind***
    There was damage to the perimeter fence at two substations.
  - ***Flying debris***
    0
  - ***Other***
    0

5. ***Please provide the number of distribution substations that were:***

   - ***Unable to serve load due to damage to the station from Hurricane Rita***
     None

   - ***Unable to serve load solely because of transmission line outage from Hurricane Rita***
     Line 93 had damage to a "B" phase wire resulting in an outage at the Hitchcock Substation. The outage was experienced two days after the Hurricane Rita event; therefore, the damage was considered residual damage due to the storm.

6. ***Please describe the extent of any damage sustained by each utility power plant (if applicable).***

Not applicable. CenterPoint Energy is a transmission and distribution utility and does not own any generating plants.

7. ***Please describe any damage sustained by transmission/distribution control center.***

CenterPoint Energy did not receive any damage to either its transmission or distribution control centers.

8. ***Please describe any damage sustained by the communication system (voice and data) that impacted the restoration after the storm.***

CenterPoint Energy did not receive any damage to its communication system.

III. CONCLUSION

CenterPoint Energy appreciates the opportunity to file these comments and looks forward to continued participation in this project.

Respectfully submitted,

SCOTT E. ROZZELL
Executive Vice President and General Counsel
State Bar No. 17359800
DEANN T. WALKER
State Bar No. 20696840
1005 Congress, Suite 650
Austin, Texas 78701
(512) 397-3032
(512) 397-3050 (fax)

ATTORNEYS FOR CENTERPOINT ENERGY