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SOAH DOCKET NO. 473-25-11558
PUC DOCKET NO. 57579

APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR APPROVAL OF ITS 2026-2028 TRANSMISSION AND DISTRIBUTION SYSTEM RESILIENCY PLAN	**§ § § § §**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

April 4, 2025

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CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PUC DOCKET NO. 57579
SOAH DOCKET NO. 473-25-11558

PUBLIC UTILITY COMMISSION OF TEXAS
REQUEST NO.: PUC-RFI03-01

QUESTION:

Several of the measures proposed in CenterPoint's System Resiliency Plan (SRP) include the following list of evaluation metrics: (1) Percent of planned asset installations completed by county, (2) Percent of change in predicted damage based on the event type, (3) Normalized total system restoration performance during Resiliency Events pre- and post-completion of mitigation projects based on the event type, and (4) Normalized restoration performance of predicted high damage concentration area compare to Normalized total system restoration performance pre- and post-completion of mitigation projects during Resiliency Events based on the event type.

a. Please elaborate further on metric (3) above. In particular, please provide additional detail around the normalization process and how this metric will demonstrate the effectiveness of measures to which it is applied.

b. Please elaborate further on metric (4) above. In particular, please provide additional detail around the normalization process and how this metric will demonstrate the effectiveness of measures to which it is applied.

c. Under 16 TAC 25.62(c)(2)(C)(iii). the resiliency plan must include an estimate or analysis of the expected effectiveness of each measure using the selected evaluation metric or criteria. For each of the following measures included in the SRP, how does the above list of evaluation metrics demonstrate the effectiveness of the proposed measure, relative to the baseline of not implementing these measures? Is there any way to estimate the amount of improvement in performance of the system (e.g., in terms of avoided costs, avoided outages, decreased restoration time) that is directly attributable to the implementation of each measure?

i. Distribution Circuit Resiliency (pp. 1235-1236)
ii. Strategic Undergrounding (p. 1240)
iii. Restoration IGSD (p. 1245)
iv. Distribution Pole Replacement/Bracing (p. 1248)
v. Vegetation Management (p. 1251)
vi. MUCAMS (p. 1275)
vii. Mobile Substations (p. 1278)
viii. Loadshed IGSD (pp. 1284-1285)
ix. Distribution Capacity Enhancement/Substations (p. 1290)
x. Major Underground (MUG) Reconductor (p. 1293)
xi. URD Cable Modernization (pp. 1295-1296)
xii. Contamination Mitigation (p. 1299)
xiii. Digital Substation (pp. 1304-1305)
xiv. Wildfire Mitigation (p. 1309)

ANSWER:

a. In order to compare performance of the system during different resiliency events, normalization needs to be applied to account for various intensities of the resiliency events (for example, wind speed and area of impact), availability of resources, delays due to external factors (i.e. road closures due to widespread flooding) and other external constraints. The normalization that needs to be applied will depend on the specific resiliency event and the specific measure the metric is for.

b. See (a) above.

c. The methodology and metrices can determine predicted improvements as well as actual results when resiliency events occur. While each resiliency measure is identified as an individual project, the metrics defined will help determine individual installations which provide maximum effectiveness as well as an aggregate modeled benefit from all measures implemented. The concept of the metrics relates to the percentage of installations that have occurred, and the anticipated benefit seen as pointed out within 16 TAC 25.62(c)(2)(C)(iii). Portions (1) and (2) of the metrics will provide an analysis based on the percentage of units for each measure installed, providing an understanding of the penetration of this measure as well as a percent reduction of predicted damage based on modeling to provide a wholistic view of the overall impact of all improvements seen within the SRP. When multiple measures lead to the same measurable improvement in metrics, it is not feasible to directly attribute to one measure or the other. This is why predicting the damage and comparing actual performance against the predicted damage gives the best measure of performance.

   i. We will provide the specific percentage complete per county as well as the aggregate modeled analysis including the potential benefit (metrics 1 and 2). We will also provide the normalized results post events (metrics 3 and 4).
   ii. We will provide the specific percentage complete per county as well as the aggregate modeled analysis including the potential benefit (metrics 1 and 2). We will also provide the normalized results post events (metrics 3 and 4).
   iii. We will provide the specific percentage complete per county as well as the aggregate modeled analysis including the potential benefit (metrics 1 and 2). We will also provide the normalized results post events (metrics 3 and 4).
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   xiii. We will provide the specific percentage complete per county as well as the aggregate modeled analysis including the potential benefit (metrics 1 and 2). We will also provide the normalized results post events (metrics 3 and 4).
   xiv. We will provide the specific percentage complete per county as well as the aggregate modeled analysis including the potential benefit (metrics 1 and 2). We will also provide the normalized results post events (metrics 3 and 4).

SPONSOR:
Eric Easton

RESPONSIVE DOCUMENTS:
None

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PUC DOCKET NO. 57579
SOAH DOCKET NO. 473-25-11558

PUBLIC UTILITY COMMISSION OF TEXAS
REQUEST NO.: PUC-RFI03-02

QUESTION:

Under 16 TAC 25.62(c)(2)(C)(iii), the resiliency plan must include an estimate or analysis of the expected effectiveness of each measure using the selected evaluation metric or criteria. Please refer to page 1322 of the SRP, which describes the performance metrics that will be tracked in relation to the Spectrum Acquisition Resiliency measure.

a. How does tracking these metrics demonstrate the effectiveness of the measure without a comparison of similar values before implementation of this measure?
b. Is there any way to estimate the amount of improvement in performance of the system (e.g., in terms of avoided costs, avoided outages, decreased restoration time) that is directly attributable to the implementation of this measure?

ANSWER:

a. Tracking these metrics demonstrates the effectiveness of the measure without a comparison of similar values before implementation of this measure because the intent of the measure is to maintain future levels of reliability and resiliency, along with accommodating new communication demands on the power grid. The spectrum acquisition is the long-term solution to support the multitude of utility use cases to satisfy the T&D systems and functions. This is based on global standards with an active ecosystem and well-aligned with long-term trends in communications technology. Current modeling predicts that additional spectrum is needed to support future capacity needs. The future holds a more complex and dynamic power grid and more end points that will deliver information. The investment needed to secure a resilient future is the ownership of radio spectrum that will meet future needs and technologies. As such, in order to measure the effectiveness of this measure, we will use the performance metrics to measure and project the communication demands as we move forward. More detail on the trend analysis was provided in response to OPUC-RFI04-14.

b. It is possible to estimate the future communication demands and against current capacity. For the detailed assessment report provided by Burns and McDonnell please see HCC-RFP04-01 Attachment 1E - CNP_Assessment_20240329_ExternalFINAL.pdf.

SPONSOR:
Ron Bahr

RESPONSIVE DOCUMENTS:
None

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PUC DOCKET NO. 57579
SOAH DOCKET NO. 473-25-11558

PUBLIC UTILITY COMMISSION OF TEXAS
REQUEST NO.: PUC-RFI03-03

QUESTION:

Under 16 TAC 25.62{c)(2)(C)(iii), the resiliency plan must include an estimate or analysis of the expected effectiveness of each measure using the selected evaluation metric or criteria. Please refer to page 1338 of the SRP, which describes the performance metrics that CenterPoint plans to use for tracking the effectiveness of the Network Security & Vulnerability Management resiliency measure.

a. How does tracking these metrics demonstrate the effectiveness of the measure without a comparison of similar values before implementation of this measure?
b. Is there any way to estimate the amount of improvement in performance of the system (e.g., in terms of avoided costs, avoided outages, decreased restoration time) that is directly attributable to the implementation of this measure?

ANSWER:

a. Baseline metrics will be established for all cyber related resiliency measures pre-implementation.

b. By implementing the Network Security & Vulnerability Management measure, the company will improve its overall cyber security posture thereby reducing the likelihood of cyber incidents. This, in turn, minimizes the costs (financial and customer impacting down time) associated with incident response efforts. The actual cost avoidance could be derived by estimating the reduction in the likelihood of attacks these measures provide compared to the costs of an individual cyber incident.

SPONSOR:
Chris Ford

RESPONSIVE DOCUMENTS:
None

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
PUC DOCKET NO. 57579
SOAH DOCKET NO. 473-25-11558

PUBLIC UTILITY COMMISSION OF TEXAS
REQUEST NO.: PUC-RFI03-04

QUESTION:

Under 16 TAC 25.62(c)(2)(C)(iii), the resiliency plan must include an estimate or analysis of the expected effectiveness of each measure using the selected evaluation metric or criteria. Please refer to page 1346 of the SRP, which describes the performance metrics that CenterPoint plans to use for tracking the effectiveness of the IT/OT Cybersecurity Monitoring resiliency measure.

a. How does tracking these metrics demonstrate the effectiveness of the measure without a comparison of similar values before implementation of this measure?
b. Is there any way to estimate the amount of improvement in performance of the system (e.g., in terms of avoided costs, avoided outages, decreased restoration time) that is directly attributable to the implementation of this measure?

ANSWER:

a. Baseline metrics will be established for all cyber related resiliency measures pre-implementation.

b. By implementing the IT/OT Cybersecurity Monitoring measure, the company will improve its overall cyber security posture thereby reducing the likelihood of cyber incidents. This, in turn, minimizes the costs (financial and customer impacting down time) associated with incident response efforts. The actual cost avoidance could be derived by estimating the reduction in the likelihood of attacks these measures provide compared to the costs of an individual cyber incident.

SPONSOR:
Chris Ford

RESPONSIVE DOCUMENTS:
None

CERTIFICATE OF SERVICE

I hereby certify that on April 4, 2025, notice of the filing of this document was provided to all parties of record via electronic mail in accordance with the Second Order Suspending Rules, filed in Project No. 50664.

Terence Glenn Russell
Terence Russell