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APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR AUTHORITY TO CHANGE RATES	§ § § §	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

City of Houston and Houston Coalition of Cities' Initial Brief

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To the Honorable Administrative Law Judges ("ALJs"):

The City of Houston and Houston Coalition of Cities ("COH/HCC") respectfully submit the following initial brief in the above referenced matter and, in support thereof, respectfully show the Public Utility Commission of Texas ("Commission" or "PUC") the following:

I. Introduction/Summary [Preliminary Order (PO) Issues 1, 2, 3]

In this proceeding, CenterPoint Energy Houston Electric, LLC (the "Company" or "CEHE") proposes to increase its base rate revenues by $194 million overall, and its retail base rates by $188.86 million. Under the mandate of Public Utility Regulatory Act ("PURA")[1] Section 36.003,[2] this Commission must determine whether the requested revenue level, or a lower level, is just and reasonable; it must determine the reasonableness of each and every item of CEHE's cost of service and return on invested capital.

PURA Section 36.006 explicitly states that "[i]n a proceeding involving a proposed rate change, the electric utility has the burden of proving that . . . the rate change is just and reasonable."[3] The burden of proof is on CEHE, as the applicant, to present substantial evidence on each of the items in its cost of service study.[4] This burden remains on CEHE—it does not shift, even if all other parties remain silent on an expense. If CEHE fails to present substantial evidence on an issue, its requested revenue related to that issue must be denied.

This Commission has not reviewed CEHE's rates in a full base rate case proceeding since 2010. In the interim, CenterPoint has increased the rate charged to its customers by millions of

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[1] Public Utility Regulatory Act, Tex. Util. Code § 11.001 *et seq.* ("PURA").

[2] *Id.* at § 36.003.

[3] *Id.* at § 36.006.

[4] *Id.*

dollars through its transmission cost recovery factor ("TCRF"), its distribution cost recovery factor ("DCRF") and other recovery mechanisms. Despite these facts, the test year expenses submitted by CenterPoint to justify its exorbitant rate request contain numerous expenses at levels that dwarf the average expense levels over the last nine years, and even the last three years.

CenterPoint in its direct testimony, and/or its rebuttal testimony fails to provide any reasoned or supportable explanation for these substantial increases in costs. With regard to its substantial increases in capital additions and operation and maintenance expenses ("O&M"), the Company provided only cursory testimony to explain or justify significant increases.

Moreover, the information the Company did provide to justify these significant and unprecedented increasing in capital addition and O& M expenses, refutes these very arguments they proffered to support the increases. The Company, however, provided cost benefit analysis to support the prudence and reasonableness of these increased costs.

In addition to the excessive nature of many of the test year expense levels, several of the items included in CEHE's cost of service are contrary to this Commission's established precedent. For example, CEHE includes significant incentive compensation expense associated with financial-based performance. This Commission (as well as numerous other State Utility Commissions) has consistently held that such financial-based incentive compensation costs are not includable in rates.

The Company's proposed cost allocation and rate design also contains certain flaws. These flaws include the manner in which CEHE allocates FERC Accounts 587 and 597. CEHE erroneously assigns these account to the distribution function, when they more appropriately should be assigned to the meter function. Similarly, in allocating costs among the classes, CEHE inappropriately assigns FERC Accounts 303.02, 389–398, 920, 1650, 1823, 2282, 2283, 2540,

9210, 9250, 9260, 9301, 9302, 9310, 9350 and Federal Income Tax Accounts 4073 and 4081 to O&M. While most, if not all, of these expenses are functionalized using a payroll allocator, CEHE does not use a payroll allocator to allocate these accounts to customer classes. This is contrary to cost causation principles and the practice of other utilities.

CEHE's allocation of O&M costs to the Lighting Classes is also contrary to the evidence presented during the hearing on the merits. All of the evidence in the record demonstrates that replacement of standard mercury lights with LED lights will eliminate the need for O&M expenses in this class. CEHE's own studies support this conclusion.

The Company's proposed modification to the residential rate design is also flawed. CEHE'S proposed 53 percent increase in the residential customer charge is contrary to cost-causation principles and far in excess of the customer charge imposed by most of the other Texas utilities.

The proposal to charge a customer charge on a per meter instead of per customer basis is likewise unsupported by ratemaking principles or Commission precedent. As the evidence in the case demonstrated, no other Texas utility charges a customer charge on a per meter basis.

In addition to the specific adjustments raised by COH/HCC witnesses, COH/HCC supports and recommends the adjustments and disallowances raised by Texas Cities Utilities Coalition ("TCUC") and Gulf Coast Coalition of Cities ("GCCC") witnesses on Rate of Return, depreciation, and other Cost of Service issues. Once the cumulative adjustments proposed by COH/HCC, TCUC, and GCCC are incorporated, the result is a base rate decrease for CEHE of $130 million. Moreover, for the reasons set forth below, COH/HCC recommends that $32.5 million be refunded to distribution customers for unreasonable and imprudent DCRF costs.

For the reasons discussed in COH/HCC's direct testimony, and as demonstrated by CEHE's witness testimony on cross-examination at the hearing, the rates proposed by the Company are excessive, unreasonable, and contrary to PURA Section 36.003. COH/HCC respectfully requests that the Commission adjust CEHE's revenue requirements to the application as specified in COH/HCC's direct testimony. COH/HCC also respectfully requests that the additional adjustments proposed by TCUC and GCCC be adopted.

II. Rate Base [PO Issues 4, 5, 10, 11, 12, 15, 16, 17, 18, 19]

A. Transmission and Distribution Capital Investment [PO Issues 4, 5, 10, 11, 12]

COH/HCC recommends that $2.6 million in indirect corporate costs be removed from the Company's rate base and new rate base rates and, further, be refunded through the Company's DCRF charges over a one-year period through a DCRF credit rider. As noted by COH/HCC witness Norwood, PUC Substantive Rule 25.243 explicitly provides: "Distribution invested capital does not include: . . . indirect corporate costs."[5] Nevertheless, CEHE improperly includes $2.6 million of indirect corporate costs in its past DCRF charges. These indirect corporate costs were clearly identified as such by CenterPoint in response to discovery.[6] Therefore, this Commission should order the Company to refund these indirect corporate costs (and associated carrying charges) and the imprudent project investments discussed below in Section II.A.1, through a DCRF credit rider—the total impact being $32.5 million (plus carrying charges).[7] COH/HCC recommends that the refund be over a one-year period, using DCRF credit factors that reflect cost allocations and billing units consistent with the Company's approved DCRF.[8]

[5] COH/HCC Hearing Exhibit No. 1, Direct Testimony of Witness S. Norwood, 6:1–13, 19:19–20:7.

[6] *Id.* at COH/HCC Hearing Exhibit No. 1, Exhibit SN-13, Attachment 2 (attached hereto as Attachment 3).

[7] *Id.* at 21:9–15.

[8] *Id.* at 21:16–22:3.

1. Capital Project Prudence

COH/HCC recommends the $111.5 million invested in the Underground Cable Assessment and Life Extension Program (Project No. ABCA) and Major Underground Rehabilitation Program (Project No. CE1B) (the "Programs") be disallowed and removed from rate base. Due to the fact that these costs are already included in the DCRF, pursuant to PUC Substantive Rule 25.243, they must also be refunded to distribution customers. The Company failed to meet its burden of proof to demonstrate that all of these expenditures are reasonable and prudent—specifically, the two Programs COH/HCC recommends be disallowed.

The Company's Plant in Service balances by the end of the test year are $4.3 billion more than 2010, after CEHE's last base rate case.[9] Roughly 37 percent of CEHE's major investments were for distribution system reliability improvement—approximately $866 million of the $2.34 billion in capital distribution assets from the last rate case through the test year.[10]

The Company's main justifications for this extraordinary increase in Plant in Service (raised for the first time in rebuttal testimony) relate to alleged need to increase CEHE's system reliability and for load growth. Neither of these alleged justifications was supported by the evidence. As explained by COH/HCC witness Scott Norwood, and based on CEHE's own testimony, CEHE's load growth averaged only 1 percent and the Company's services were already extremely reliable (as stated on page 9 of Mr. Norwood's direct testimony, CEHE's service reliability was approximately 99.98% over the last 3 years). Stated another way, CEHE's investments into the Programs was not prudent: the benefit, if any, to customers were extremely small and certainly not justified by the exorbitant cost of the investments.

[9] *Id.* at 13:18–14:4.

[10] *Id.* at 16:7–11.

As provided by CEHE's own witnesses, the Company's load growth from 2009 to 2018 was 1 percent, which is below the Company's norm.[11] Even further, in more recent years, the Company's load growth was anywhere between zero and even a reduction.[12]

In addition to the Company experiencing little to nonexistent load growth, the Company's investments are traditionally measured by a cost/benefit analysis to gauge whether major investments benefit customers economically and are the lowest reasonable cost alternative.[13] It was only in response to discovery requests that CenterPoint provided any support for the prudence of these capital additions. As explained by Norwood, CEHE's discovery responses only provided results from the Company's Asset Investment Strategy ("AIS") software, which does not measure the economic benefit of a given investment to customers.[14] The software ranks capital investment projects on a Value-to-Cost ("V/C") ratio basis wherein value is determined based on four benefits: load at risk (the primary benefit), reliability, design criteria, and supplemental.[15] It is undisputed, as recognized by the Company, that the four categories utilized by the AIS software to determine value do not represent the expected economic benefit to CEHE's customers.[16]

The Company provides no justification for such Programs and, its only attempt at justifying the cost was in response to discovery responses—responses that related exclusively to the Company's AIS software.[17] Further, only after several requests by COH/HCC for additional

[11] Tr. at 197:10–15; 212:15–18.

[12] *Id.* at 213:5–17.

[13] COH/HCC Hearing Exhibit No. 1, Direct Testimony of Witness S. Norwood, 15:4–15.

[14] *Id.* at 14:5–15:15.

[15] *Id.* at 14:11–17.

[16] *Id.* at. 15:4–15.

[17] Tr. at 1157:22–1167:4.

information did CEHE provide, for the first time in rebuttal testimony, that its capital project investments were necessary for alleged load growth and reliability concerns.[18] In his testimony, Narendorf attempts to minimize the Company's reliance on AIS, stating that the tool is not used to evaluate project prudence.[19]

However, when presented with CEHE's response to City of Houston Request for Information 1-22,[20] which requests the cost/benefit analysis and other information to support the prudence of major projects, Narendorf admitted that no evidence, other than analysis from AIS and information unrelated to prudence, was provided in response.[21] Further, when presented with CEHE's response to City of Houston Request for Information 15-2,[22] which requested the Company to identify any testimony, exhibit, or workpaper supporting the prudence of the projects, Narendorf referenced only one page of his testimony.[23] Further, Company witness Randal Pryor—whose testimony was presented to support the reasonableness of capital projects—acknowledged and confirmed that in his direct testimony, the only information he provided to support the program, was found exclusively on two pages.[24]

CEHE's AIS software fails to produce information that would justify the costs of these programs. An investigation of investments in the Programs, which total $111.5 million and are

[18] *Id.*

[19] *Id.* at 1158:18–1159:9.

[20] COH/HCC Hearing Exhibit No. 10, attached hereto as Attachment 1.

[21] Tr. at 159:2–162:24.

[22] COH/HCC Hearing Exhibit No. 33, attached hereto as Attachment 2.

[23] Tr. at 1163:14–1165:3.

[24] *Id.* at 1107:22–1108:20.

the Company's fifth and sixth most expensive projects,[25] prove to be "superficial and deficient."[26] The AIS software rendered low V/C ratios of 0.02 and 0.04 for the Programs, indicating very load at risk benefit.[27] In addition to the clearly low V/C ratio, CEHE acknowledges that there is no direct correlation between the Programs' capital investments and SAIDI impacts.[28]

To the contrary, the Company's own witnesses presented ample evidence that the exorbitantly high costs were not necessary for reliability or load growth. The Company's SAIDI performance for eight of the last ten years was better than the PUC standard, and CEHE consistently received the lowest annual penalties among major ERCOT utilities.[29] Based on SAIDI performance, CEHE's reliability performance has been exceptional, averaging approximately 99.98 percent over the last three years.[30]

The Company acknowledges that underground cables are more reliable than overhead distribution circuits.[31] Pryor recognized that underground cables are more expensive than overhead cables due, in part, to the increased reliability of cables.[32] From 2010 through 2018, underground cable failures contributed only five minutes per year to the Company's SAIDI.[33] The

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[25] *Id.* at 195:9–15; 1108:21–1109:3.

[26] COH/HCC Hearing Exhibit No. 1, Direct Testimony of Witness S. Norwood 16:13–17:8.

[27] *Id.*

[28] *Id.*

[29] Tr. at 1247:11–25.

[30] *Id.* at 1248:22–1249:3.

[31] *Id.* at 1115:17–25.

[32] *Id.* at 1116:1–20.

[33] *Id.* at. 1147:7–1148:20.

impact, if any, of the investments to improve underground circuits is almost indiscernible.[34] Given the Company's above-average reliability, the prudence of capital projects invested for the purpose of improving reliability must be analyzed in this context.

The magnitude of any increase in reliability would be minimal, and certainly would not justify the exorbitant costs for the two underground Programs, in light of the current 99.98 percent reliability index (and *an even higher* reliability for underground cables).

CEHE clearly failed to provide information sufficient to support the prudence of the Projects. To the contrary, the necessity of the underground programs is outshined by the pristine reliability of the Company's underground service, with an estimate of one outage every three years.[35] In addition to the high underground reliability, the Company's SAIDI as a whole, from 2008 to 2014, averaged under 100 minutes per year—significantly below the Commission's standard.[36] Even after 2014, only two years were above the standard, which was due to major Company developments.[37] Moreover, load growth, the other major justification for this excessively high cost investment in these two Programs, does not support the reasonableness and prudence of the Programs. COH/HCC recommends the investments in the Projects be disallowed and removed from rate base. COH/HCC further recommends that the Company be required to refund the imprudent Projects' costs that have already been collected from customers through the Company's past DCRF charges, through a DCRF credit rider.

[34] *Id.*

[35] *Id.* at 1116:21–1117:4.

[36] *Id.* at 214:20–215:16.

[37] *Id.* at 215:17–216:13.

2. Capital Project Accounting/Capitalization Policy Changes

N/A.

3. Land Costs

N/A.

B. Line Clearance Project

N/A.

C. Prepaid Pension Asset

N/A.

D. Accumulated Deferred Federal Income Tax [PO Issue 17, 19]

N/A.

E. Cash Working Capital [PO Issue 15]

N/A.

F. Other Prepayments

N/A.

G. Regulatory Assets and Liabilities [PO Issues 18, 19, 59]

1. Unprotected Excess Deferred Income Tax (UEDIT)

N/A.

2. Hurricane Harvey

COH/HCC support the recommendations of CEHE and GCCC witness Lane Kollen on this issue.

3. Medicare Part D

N/A.

4. Texas Margin Tax

N/A.

5. Smart Meter Texas

N/A.

6. REP Bad Debt

N/A.

7. BRP Pension and Postretirement

N/A.

8. Other Regulatory Assets and Liabilities

N/A.

H. Capitalized Incentive Compensation

COH/HCC recommends that 83 percent of CEHE's annual incentive plan costs be excluded from rate base. The plan must be adjusted to reflect a target level, remove amounts directly tied to financially-based performance measures, and remove amounts indirectly tied to financially-based performance measures.[38] The Company's formal, written compensation package is comprised of four components: base salary, short-term incentives ("STI"), long-term incentives ("LTI"), and benefits.[39] In spite of Commission precedent, CEHE seeks to recover 100 percent of its heavily financially-based STI and LTI plan costs from customer rates.[40] This is in contrast to years of PUC orders disallowing such costs to be reimbursed by utilities out of ratepayers' pockets.[41] More specifically—in every case wherein the reasonableness and necessity

[38] *See* COH/HCC Hearing Exhibit No. 2, Direct Testimony of M. Garrett, 30:12–31:4.

[39] *Id.* at 7:1–15.

[40] *Id.*

[41] *Id.*

of financially-based incentive plans were contested, the Commission excluded those expenses. Curiously, despite this consistent ruling, as the Company concedes, a vast majority of the rate costs it seeks are based on financial measures.[42] COH/HCC simply recommends that the Commission continue to disallow these financially-based incentives an exclude them from customer rates.

The Company attempts to muddy the water regarding treatment of financially-based incentive plans by dubbing prior Commission decisions as "inconsistent"[43] and relying heavily on a new and immaterial gas-utility act—House Bill 1767 ("the Amended Gas Utility Act"). As for the inconsistency allegation, a survey of litigated cases since 2005 indicates that the Commission has consistently disallowed any and all utilities to recover its financially-based incentive plan expenses.[44] Most recently, the Commission's Order on Rehearing in Southwestern Electric Power Company's ("SWEPCO") rate case reinforced its long-standing precedent, stating it "has repeatedly ruled that a utility cannot recover the cost of financially-based incentive compensation."[45] This is "because financial measures are of more immediate benefit to shareholders and . . . are not necessary or reasonable to provide utility services."[46] The Commission has been consistent in disallowing financially-based incentive compensation costs and consistent in disallowing such expenses for the primary reason that they more immediately benefit shareholders.[47]

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[42] *Id.*

[43] *See* Direct Testimony of CEHE Witness J. Reed, 16:11–22.

[44] *See* COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 12.

[45] *Id.* at 10:11–11:2 (citing *Application of SWEPCO for Authority to Change Rates*, Docket No. 46449, Finding No. 194, Order on Rehearing at p.34 (March 19, 2018)).

[46] *Id.* (emphasis added).

[47] *Id.* at 14:6–15:4 (citing *Application of Entergy Texas, Inc. for Rate Case Expenses Pertaining to PUC Docket 39896*, Docket No. 40295, Order at 2 (May 21, 2013)).

Regarding the Amended Gas Utility Act, CEHE's reliance on the statute is totally misplaced. It has absolutely no applicability to electric utilities and this Commission, which is governed by the Public Utility Regulatory Act. From the plain language of the Amended Gas Utility Act, it applies only to gas utilities, subject to the Gas Utility regulatory Act, regulated by the Railroad Commission, not the Public Utility Commission. In fact, there is absolutely no reference to electric utilities or the Public Utility Commission.

CEHE attempts to suggest that the presumption laid out—generally, that the Railroad Commission presumes employee compensation and benefits to be reasonable and necessary—also applies to electric utilities.[48] This is despite the Amended Gas Utility Act's exclusive application to gas affiliates in Texas.[49] This is highlighted by House Bill 1766, which bears substantially the same language as the Amended Gas Utility Act, but was to apply to electric utilities:

House Bill 1767	House Bill 1766
Subsection (b): When establishing a gas utility's rates, the regulatory authority shall presume that employee compensation and benefits are reasonable and necessary if the expenses are consistent with recent market compensation studies.[50]	Subsection (b): When establishing an electric utility's rates, the regulatory authority shall presume that employee compensation and benefits are reasonable and necessary if the expenses are consistent with recent market compensation studies.[51]

The significance of House Bill 1766 is that, while it appears to mandate the same presumption for electric utilities as the Amended Gas Utility Act does for gas utilities, House Bill 1766, as

[48] Tr. at 442:14–24.

[49] *Id.* at 438:24–439:7.

[50] *Id.* at 1351:20–1352:3.

[51] *Id.* at 1352:4–9.

recognized by CEHE witness John Reed, never advanced to a legislative vote and, therefore, was never passed by the Legislature.[52]

In spite of this, Company witness Reed opines that the Amended Gas Utility Act applies in this case because "the incentive compensation programs are the same. The company is the same, and some of the employees are the same."[53] On rebuttal cross-examination, however, Reed admitted that the Amended Gas Utility Act does not reference electric utilities;[54] gas utilities are subject to the Gas Utility Regulatory Act and electric utilities are subject to the Public Utility Regulatory Act;[55] and gas utilities are regulated by the Railroad Commission, not the Public Utility Commission.[56] The Company's position is in direct contravention to the Legislature's clear passing of one presumption for gas utilities, and the failure for it to do the same for electric utilities.[57] It is well-laid jurisprudence that if the Legislature wanted a statute to include or exclude a certain meaning, "it would have just said that."[58] The Legislature was presented with an opportunity to mandate a presumption on electric utilities and it declined to do so—the Legislature's intentional abstinence from passing House Bill 1766 shows that it did not intend for the Amended Gas Utility Act presumption to extend to CEHE, in any scenario.

Finally, the Company also asserts that incentive plans should be reimbursed because incentive pay is required to attract qualified personnel. As explained by COH/HCC witness Mark

[52] *Id.* at 1353:6–14.

[53] *Id.* at 1355:13–20.

[54] *Id.* at 1359:16–24.

[55] *Id.* at 1359:25–1360:11.

[56] *Id.*

[57] *See id.* at 1352:4-1353:11.

[58] *Cadena Commercial USA Corp. v. Tex. Alcoholic Bev. Comm'n*, 518 S.W.3d 318, 329 (Tex. 2017).

Garrett, this misses the point because "[t]he question for regulators is not about what the company should pay; the question for regulators is about what ratepayers should pay."[59] A utility could just as easily fund an incentive program from its earnings received above the rates recovered—such compensation is clearly not a reasonable and necessary component to deliver utility services.[60]

III. Rate of Return [PO Issues 4, 5, 7, 8, 9]

A. Return on Equity [PO Issue 8]

COH/HCC support the recommendations of TCUC witness J. Randall Woolridge on this issue. Woolridge recommends 9.0 percent as the primary Return on Equity in this case.

B. Cost of Debt [PO Issue 8]

COH/HCC support the recommendations of TCUC witness J. Randall Woolridge.

C. Capital Structure [PO Issue 7]

COH/HCC support the recommendations of TCUC witness J. Randall Woolridge on this issue. Woolridge recommends a capital structure of 40 percent common equity and 60 percent debt in this case.

D. Overall Rate of Return [PO Issue 8]

COH/HCC support the recommendations of TCUC witness J. Randall Woolridge.

E. Financial Integrity [PO Issue 9]

N/A.

IV. Operating and Maintenance Expenses [PO Issues 4, 5, 21, 22, 25, 26, 28, 29, 33, 35, 36, 38, 39, 54, 55]

[59] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 26:2–27:3.

[60] *Id.*; *see also id.* at 27:5–20 (citing to *Application of AE Texas Central Company for Authority to Change Rates*, Docket No. 33309, Proposal for Decision at 95 (August 30, 2007)).

COH/HCC recommends that CEHE's requested level of O&M expenses be reduced by $44.3 million for a total allowable O&M cost (excluding ERCOT charges) of $606.4 million. CEHE's claimed O&M expenses[61] have increased by 37.4 percent since its last rate case, resulting in an additional $177 million in costs.[62] Moreover, the test year O&M request of $650.7 million is 12.5 percent higher than the Company's average O&M expenses over the four years preceding 2018.[63] Again, CEHE has failed to meet its burden to establish the reasonableness of this excessive level of O&M expenses. The Company attempts to support the increase in cost on the basis that it is necessary, in part, for increased reliability and to meet load growth.[64] However, as demonstrated above, the abnormally low load growth experienced by CEHE, with virtually no growth in energy sales over the last several years, and the minimal potential improvement to CEHE's current exceptional reliability performance do not justify the abnormally large increase in test year O&M expense when compared to CEHE's O&M spending in 2017.[65]

The vast majority (79 percent) of the increase occurs in seven FERC accounts that increased at an annual rate of 18.9 percent over the average.[66] CEHE witness Pryor confirmed that more than 50 percent of the Company's totally capital investment since 2010 has been for either reliability improvement or service restoration, which includes the replacement of failed equipment.[67] CEHE represents that the increase in expenses is also due to the need to address

[61] The expenses referenced here do not include ERCOT transmission charges from third parties.

[62] Direct Testimony of CEHE Witness R. Pryor, 7.

[63] COH/HCC Hearing Exhibit No.1, Direct Testimony of Witness S. Norwood, 10:4–12.

[64] *Id.* at 7:4–13.

[65] *Id.*

[66] *Id.* at 10:13–11:7; 13:1–14.

[67] Tr. 158:9–159:21.

reliability concerns. However, as provided by COH/HCC witness, Norwood, "CEHE's system reliability performance, as measured by System Average Interruption Duration Index ("SAIDI"), has been generally good since 2010."[68] CEHE's distribution service reliability performance is also evidenced by the drastically low number of customer complaints.

The purported 'reliability concerns' explanation, however, is completely rebutted by the Company's own reports regarding its performance. CEHE reports only 120 customer complaints per year over the last five years related to outages or adequacy of service.[69] With 2.5 million customers, the complaints represent less than 0.005 percent of CEHE's customer base.[70] Despite its average customer service reliability of 99.98 percent,[71] the Company still provides customers an optional Premium Rollover Service tariff for customers who want higher service reliability.[72] Not surprisingly, given the very high level of reliability provided by CEHE - only 13 (0.0005 percent) of CEHE's 2.5 million customers have opted into the premium reliability service.[73]

The Commission has historically required utilities to demonstrate that costs sought to be recovered through a rate case are reasonable, necessary, prudently incurred, and reflect the expense's status as recurring.[74] CEHE witness Pryor was unable to identify specific portions of his own testimony wherein he compared historical levels of O&M expenses to those of the test

[68] COH/HCC Hearing Exhibit No. 1, Direct Testimony of Witness S. Norwood, 8:4–7.

[69] *Id.* at 9:13–20.

[70] *Id.* at. 9:13–10:2.

[71] *Id.* at 9:1–5.

[72] *Id.* at. 9:13–10:2.

[73] *Id.*

[74] *Id.* at. 12:4–22.

year for capital investment programs.[75] Even further, Pryor opined, if the Company did experience a 1 percent in annual load growth, which would not be high for an electric utility company.[76] As provided by CEHE witness Dale Bodden, CEHE's load growth from 2009 to 2018 was, in fact, 1 percent.[77] CEHE witness Martin Narendorf testified that 1 percent load growth would even be below the norm for the Company.[78] Notably, while the load growth averaged 1 percent over the preceding decade, most recently, from 2015 through 2018, Bodden testified that the load growth was "essentially zero" and even included a reduction in load growth in some years.[79]

Nevertheless, Pryor acknowledged that, other than for the narrow category of vegetation management, his direct testimony and workpapers are vacant on the topic of the Company's historical 1 percent load growth in comparison to CEHE's proposed O&M and/or capital expenses.[80] Narendorf testified that he provided no analysis related to the historical 1 percent in load growth and that he did not even consider O&M expense levels from 2010 through 2017.[81] Stated another way, for the strong majority of the O&M expenses requested by the Company, only one small portion of its request was generated with historical numbers in mind. Instead, the Company relied almost exclusively on data from the single test year, which Company witness Pryor admits was "significantly higher than the previous years."[82] Pryor further agreed that an

[75] Tr. at 172:25–174:24.

[76] *Id.* at. 177:25–178:22.

[77] *Id.* at. 212:15–18.

[78] *Id.* at. 197:10–15.

[79] *Id.* at. 213:5–17.

[80] *Id.* at. 180:3–8, 183:25–184:9.

[81] *Id.* at. 201:6–14; 202:18–23.

[82] *Id.* at. 1119:4–18.

expense that is abnormally high for a chosen year and not likely to reoccur would be an expense that should be excluded.[83] CEHE provides no specific reasons for the cost increases and no explanation for why the costs are reasonable, necessary, and prudently incurred or, least of all, that they are likely to recur in the future.

A. Transmission and Distribution O&M Expenses [PO Issue 21]

N/A.

B. Labor Expenses

N/A.

1. Incentive Compensation

a. Short-Term Incentive Compensation

COH/HCC recommends that the Company's request for annual short-term incentive plan costs be reduced by 83 percent for a total decrease to the proposed adjustment by $14,759,000. The majority of CEHE's STI plan costs are tied to financially-based performance measures. This is undisputed by the Company and the only question that remains to this point is how much of its STI plan is tied to financially-based performance measures and, as explained above, how much of its STI plan costs should not be included in rates. The Company divides its company goals into two categories: financial versus operational. CEHE witness Lynn Harkel-Rumford testified that its financial goals are overall core operating income and consolidated earnings per share, which comprise 55 percent of its goals.[84] In other words, it is undisputed that at least 55 percent of CEHE's STI plan costs are based on financial goals.[85] These financial measures comprised 69

[83] *Id.* at 1120:20–1121:11.

[84] *Id.* at. 306:25–308:5.

[85] *Id.*

percent of the Company's payouts in 2018.[86] CEHE's STI plan is funded *only* when the Company reaches a specific overall core operating income—what the Company terms a financial trigger.[87] In other words, the STI plan will be not be funded until operating income is equal to or exceeds a pre-determined amount for each year's plan.[88]

In contrast, a utility's shareholders are paid a proportion of the company's profits regardless of the profited amount. CEHE is no different. The consequence and significance of a financial trigger for CEHE's STI plan is that shareholders will always be taken care of first and employees will only be paid if and when the Company achieves its discretionary goal.[89] While CEHE witness Harkel-Rumford provides that the STI plan "directly and materially" benefits customers,[90] that—true or not—does not defeat the import of a financially-based incentive plan, which is that it will still benefit shareholders *more*.

In addition to the 69 percent financially-based payout recognized by the Company, an additional 14 percent of CEHE's STI plan is based on financial measures due to O&M expenditures being more appropriately classified as a financial, rather than operational, goal.[91]

b. Long-Term Incentive Compensation

COH/HCC recommends that the Company's request for annual long-term incentive plan costs be completely excluded from rates, for a 100 percent total decrease to the proposed

[86] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 25:1–23.

[87] *See* Tr. at 302:15–23, 303:22–25.

[88] *Id.* at. 302:1 –21; *see also* COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 8:16–9:3.

[89] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 8:16–9:3.

[90] Direct Testimony of CEHE Witness L. Harkel-Rumford, 26:12–15, 27:1–18.

[91] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 25:14–23.

adjustment by $11,250,000. In addition to STI plans, CEHE's senior management are provided a LTI plan to award individuals with CNP performance units and restricted stock units.[92] Both stock options are financially-based and should be excluded as such. Performance units are based on operating income and shareholder returns—financial-based measures.[93] Restricted units are awards held over years to encourage the recipient to increase the financial value of his or her shares over the vesting period.[94] The degree of compensation for these units is dependent on the appreciation of CNP's stock price over a vesting period—in other words, the financial growth of the Company.[95] As argued for CEHE's STI plans that are financially-based, CEHE's LTI plans must also be excluded. The Company could, again, just as easily fund its LTI plans from the "ample additional funds."[96]

2. Executive Employee Related Expenses

COH/HCC recommends that the Company's supplemental retirement plan benefits be completely excluded from rates, for a 100 percent total decrease to the proposed adjustment by $1,783,000. Disallowing these expenses will require shareholders, and not ratepayers, to bear the burden for supplemental pension plans.[97] This is because retirement benefits in excess of annual compensation limits, and beyond the Company's general pension plans, are paid through supplemental plans that are not a deductible tax expense under the Internal Revenue Code.[98] As

[92] Direct Testimony of CEHE Witness L. Harkel-Rumford, 30.

[93] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 33:11–34:5.

[94] *Id.* at. 33:11–34:5.

[95] *Id.* at. 34:7–19.

[96] *Id.* at. 38:19–39:22.

[97] *Id.* at. 43:6–21.

[98] *Id.* at. 42:6–19.

previously, and repeatedly, recognized by the Commission, non-qualified executive retirement benefits . . . are not reasonable or necessary to provide utility service to the public, not in the public interest, and should not be included in . . . cost of service."[99]

3. Payroll Adjustments

COH/HCC recommends that the Company's post-teat year estimated Competitive Pay Adjustment ("CPA") adjustment be removed, for a total decrease to the proposed adjustment by $3,192,000 for direct payroll and for a total decrease to the proposed adjustment by $1,522,000 for allocated payroll from CNP. The Company's payroll adjustment has three parts.[100] First, CEHE annualized 2018 pay increases for exempt employees, non-exempt employees, and bargaining employees.[101] Second, CEHE applied a 3 percent CPA, a prospective increase, to 2019 pay raises. Finally, CEHE proposed a STI adjustment for pay increases and average level of goal achievement from the last three years.[102] As provided by COH/HCC witness Garrett, the first two components of CEHE's approach are flawed.

Regarding the first part, an annualization that applies a nominal mid-year pay increase should be measured to be representative of year-end expense levels.[103] As for the second part, a projected additional increase for future pay based on a nominal increase rate ignores offsetting

[99] *Id.* at. 44:7–45:25 (citing *Application of SWEPCO for Authority to Change Rates*, Docket No. 46449, Findings of Fact Nos. 202–204, Order on Rehearing at 34 (March 19, 2018); *Application of SWEPO for Authority to Change Rates,* Docket No. 40443, Findings of Fact No. 227, Order on Rehearing at 40 (March 6, 2014); and *Application of Entergy Texas, Inc. for Authority to Change Rates*, Docket No. 39386, Findings of Fact Nos. 140–142, Order on Rehearing at 25–26 (November 2, 2012)).

[100] *Id.* at. 48:1–10; *see also* Direct Testimony of K. Colvin, 13:8–14:18.

[101] *Id.*

[102] *Id.*

[103] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 48:12–49:22.

factors.[104] Various factors impact payroll expenses that render a nominal pay raise-associated increase an unknown and unmeasurable change: (1) normal employee turnover, (2) workforce reorganization, (3) productivity gains, and (4) capitalization of ratio changes.[105] In addition to these factors, it is not appropriate to go beyond the test year to identify potential offsetting cost decreases.[106] The revenue requirement components should be synchronized to the same points in time. As such, COH/HCC recommends rejecting a post-test year adjustment.

4. Pension and Other Postemployment Benefits (OPEB) Expense

N/A.

5. Other Benefits

COH/HCC recommends that the Company's non-qualified compensation expenses in the form of executive salaries in excess of $1 million be excluded from rates, for a 100 percent for a total decrease to the proposed adjustment by $1,143,619. The 2017 Tax Cuts and Jobs Act rendered salaries in excess of one million dollars non-deductible.[107] Such salaries are not necessary to provide utility services—they are designed to attract and retain employees, all of whom must put the interest of the Company first due to their duties of loyalty and care.[108] CEHE identified $1.43 million in non-deductible salaries.[109]

[104] *Id.*

[105] *Id.*

[106] *Id.*

[107] *Id.* at. 46:1–18.

[108] *Id.*

[109] *Id.* at. 46:1–18.

C. Depreciation and Amortization Expense [PO Issue 25]

COH/HCC support the recommendations of GCCC witness Lane Kollen and TCUC witness David J. Garrett on this issue. Kollen recommends, based on Garrett's proposal, that transmission depreciation expense and revenue requirement be reduced by $5.491 million and reductions in the distribution depreciation expense and revenue requirement of $31.025 million.[110] COH/HCC also supports the recommendations of GCCC witness Kollen on amortization expense.

D. Affiliate Expenses [PO Issue 35, 36]

N/A.

1. Vectren Issues

2. Compensation for Use of Capital

3. Service Company Pension and Benefit Costs

4. Affiliate Carrying Charges

E. Injuries and Damages

N/A.

F. Hurricane Harvey Restoration Costs [PO Issues 54, 55]

N/A.

G. Self-Insurance Reserve [PO Issues 16, 33]

COH/HCC recommends the self-insurance expense proposed adjustment be reduced by $2,570,000. CEHE proposes an annual reserve accrual of $7.685 million. Since its last rate case, the Company's reserve account has a $5.79 million deficit.[111] As such, the Company's proposed increase includes $4.11 million to eliminate the reserve deficiency and the remaining portion to

[110] Direct Testimony of GCCC Witness L. Kollen, 50:11–23.

[111] COH/HCC Hearing Exhibit No. 2, Direct Testimony of Witness M. Garrett, 53:1–10.

provide for average annual losses for a target reserve of $6.55 million within three years.[112] This proposal will result in significant overfunding of the reserve—potentially by $20.55 million—if the Company does not file another rate case at the end of the next three years.[113] This is because the deficiency was resultant of the eight years between the current and last rate case. As such, a reasonable reserve should likewise be established over an eight-year period.[114] Over such period, $1.543 million would be amortized per year, for a total accrual of $5.118 million per year when combined with the $3.575 million for average losses.[115]

H. Vegetation Management

COH/HCC recommends that CEHE's costs included in rates be based on the average expense from the years 2014-2017—$2,683,000. Since 2011, CEHE has spent $222.5 million on tree trimming and removal, averaging an annual cost of $27.8 million for the last eight years.[116] For seven of the eight years, CEHE maintained these costs to remain below $30 million each year.[117] The only year to exceed $30 million was the test year, wherein CEHE expended $35,020,000.[118] Instead of setting the prospective rates for tree trimming and removal based on the past eight years, COH/HCC recommends the average from 2014 through 2017 be used, as recommended for consistency with other O&M expenses.[119]

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[112] *Id.*

[113] *Id.*

[114] *Id.* at. 54:4–12.

[115] *Id.*

[116] *Id.* at. 51:1–8.

[117] *Id.* at. 51:10–52:1.

[118] *Id.*

[119] *Id.* at. 52:1–5.

I. Smart Meter Texas Expense

N/A.

J. Loss on Sale of Land

N/A.

K. Federal Income Tax Expense [PO Issues 28, 29]

N/A.

L. Taxes Other Than Income Tax [PO Issue 26]

N/A.

1. Ad Valorem (Property) Taxes

2. Texas Margin Tax

3. Payroll Taxes

V. Wholesale Transmission Cost of Service [PO Issue 4, 5, 6, 37]

N/A.

VI. Billing Determinants [PO Issue 4, 5, 45]

N/A.

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1. Weather Normalization

2. Energy Efficiency Program Adjustment

VII. Functionalization and Cost Allocation [PO Issues 4, 5, 43, 44, 46]

A. Functionalization

COH/HCC support the recommendations of TCUC and GCCC recommended adjustments related to functionalization and class cost of service allocation. In addition, as presented by COH/HCC witness Garrett, CEHE fails to properly allocate its costs into the appropriate FERC business function. Specifically, CEHE's allocation of FERC Accounts 587, related to operation

of meters, and 597, related to the maintenance of meters, should not be assigned to the distribution function, as provided by the Company. As provided by COH/HCC witness Kit Pevoto, both accounts pay Company employees to operate and maintain meter services and, thus, are more appropriately assigned to the meter function.[120]

1. Texas Gross Margins Tax Expense (and associated accounts)

COH/HCC support the recommendations of CEHE on this issue, which are consistent with the Commission's order on the Company's last rate case, Docket No. 38339, and its orders preceding that case. The only party that takes issue with prior precedent is Commission Staff, whose witness Brian Murphy presents a proposal that must be rejected as flawed for numerous reasons. Murphy essentially accounts for Account 565 twice—double-counting the $546.7 million figure in his proposal. This is plainly seen in the presentation of the comparison of his proposal to CEHE's regarding the functionalization of Texas Margins Tax, arguing that the Company's proposal would uplift certain transmission costs to wholesale that should be assigned to retail.[121] Murphy illustrates:

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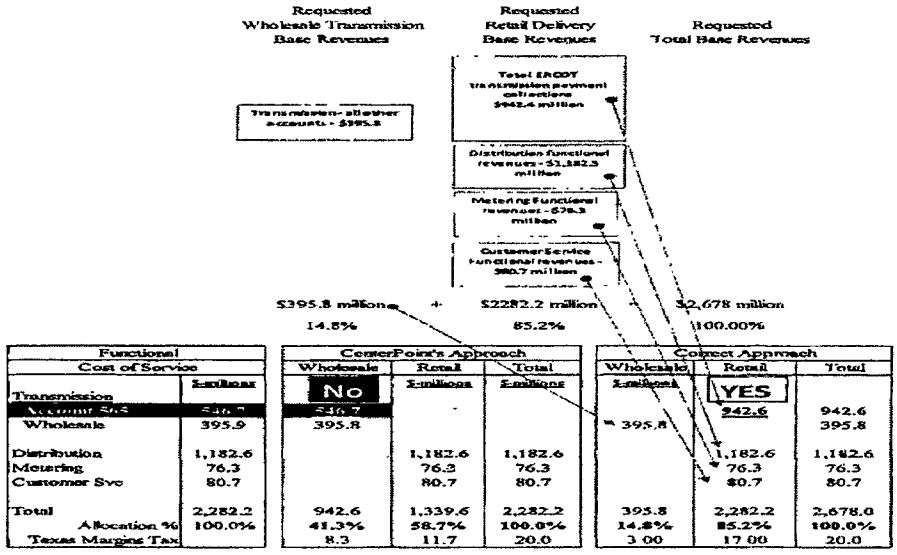
[120] COH/HCC Hearing Exhibit No. 3, Direct Testimony of Witness K. Pevoto, 10:14–11:10.

[121] Tr. at 854:11–855:5.



122

A look at Murphy's table, indicates his assignment of Account 565 to retail, which was assigned by the Company as a wholesale cost.[123] Murphy testified that the $546.7 million amount presented by CEHE is also the wrong amount, in addition to being a retail, and not a wholesale, cost.[124] While adamant that he generated a different amount, Murphy recognized that the $942.6 million in costs suggested by him is equal to the sum of the $395.8 million and $546.7 million wholesale costs presented by the Company.[125]

2. Miscellaneous General Expense (account 930.2)

COH/HCC recommend that the costs of FERC Account 930.2 be allocated based on payroll because its expenses are either payroll related or non-payroll but a general expense that cannot be directly assigned, COH/HCC witness Pevoto's second category. As explained below in Section VII.B., payroll allocation adheres more closely to cost causation principles. It is also widely used

[122] Direct Testimony of Staff Witness B. Murphy, 30:1–2.

[123] Tr. at 855:6–856:13.

[124] *Id.* at. 855:23–856:5.

[125] *Id.* at. 856:21–857:19.

such that its use would be consistent with most Texas utilities. As admitted by Company witness Matthew Troxle, both AEP and SWEPCO use a payroll allocator for miscellaneous and administrative and general expenses.[126] The accuracy of a payroll allocator is further supported by its common use in practice—namely, it is consistent with commonly relied-on cost-allocation study guidelines: those published by the National Association of Regulator Utility Commission ("NARUC") in its Electric Utility Cost Allocation Manual (the "NARUC Manual"). The NARUC Manual is well-known among, and closely followed by, industry cost allocation and rate design experts. Nevertheless, CEHE does not, and did not, utilize a payroll allocator for any of its costs allocated among the classes.

3. Unprotected Excess Deferred Income Tax

COH/HCC support the recommendations of CEHE and GCCC witness Lane Kollen on this issue. CEHE and GCCC recommendation provides that the credit included in the UEDIT is related to distribution and, thus, should be assigned entirely to such function.[127] COH/HCC recommends that the Commission reject Staff's recommendation, which is inconsistent with the Commission's prior orders. Staff recommends a methodology that is arbitrary and unsupported by sufficient evidence: assigning a portion of the UEDIT to the transmission function.[128] Staff's proposed assignment is based on an allocation ratio it pulls from miscellaneous data.[129] Namely, Staff relies on UEDIT refund amounts from Docket No. 48065 (a transmission rate case)[130] and Docket No.

[126] *Id.* at. 1036:17–1037:15, 1038:13–1042:7.

[127] COH/HCC Hearing Exhibit No. 4, Cross-Rebuttal Testimony of Witness K. Pevoto, 10:25–26:3.

[128] *Id.* at. 11:4–12:4.

[129] *Id.*

[130] *Application of CenterPoint Energy Houston Electric, LLC to Revise it Wholesale Transmission Rates.*

48226 (DCRF proceeding)[131] but does not provide for why the proceedings, or the data, relate to one another or can be used together as a reasonable base for allocating the UEDIT credit here between distribution and transmission functions.[132] Ultimately, Staff proposes that 25 percent of the UEDIT be allocated to the transmission function.[133]

B. Class Allocation

COH/HCC recommends that FERC Accounts 303.02, 389–398, 920, 1650, 1823, 2282, 2283, 2540, 9210, 9250, 9260, 9301, 9302, 9310, 9350 and Federal Income Tax Accounts 4073 and 4081 ("Subject FERC Accounts") be allocated to CEHE's Texas retail customers based on payroll rather than O&M expenses. CEHE's proposal allocates the Subject FERC Accounts based on total O&M expenses. However, as provided by COH/HCC witness Pevoto, in order to allocate the accounts based on cost causation principles, the Subject FERC Accounts should be allocated based on a payroll allocator.[134] This is because all of the Subject FERC Accounts fall into one of two categories: (1) payroll-related with occurrences based on personnel operation or (2) general plants or expenses. The general accounts are better measured by payroll because, since they cannot be directly assigned to a particular function or rate class, payroll expenses indicate how common facilities and equipment are used.[135]

[131] *Application of CenterPoint Energy Houston Electric, LLC to Amend its Distribution Cost Recovery Factor.*

[132] COH/HCC Hearing Exhibit No. 4, Cross-Rebuttal Testimony of Witness K. Pevoto, 11:4–12:4.

[133] *Id.*

[134] *Id.* at. 12:2–13:11.

[135] *Id.*

Use of a payroll allocator is more consistent with cost-causation principles, as demonstrated by COH/HCC witness Pevoto. Moreover, such allocation is consistent with Commission precedent and the practice of more Texas utilities, such as SWEPCO and AEP.

1. Class Allocation of Transmission Costs

N/A.

a. "CenterPoint 4CP" versus "ERCOT 4CP" Class Allocation (separately for both transmission and for distribution)

b. Transmission and Distribution Demand Allocation Factors (4CP vs NCP class allocation (separately for both transmission and for distribution)

c. 4CP Rate Design versus NCP Rate Design (separately for both transmission and for distribution)

d. Moderating the Update to the 4CP Class Allocation Factor

2. Municipal Franchise Fees [PO Issue 27]

COH/HCC support the recommendations of CEHE on this issue, which is consistent with cost causation principles. The Commission has continuously approved the direct method to allocated municipal franchise fee expenses, which assigns municipal franchise fees to each retail class on its respective kilowatt hour usage within cities.[136] As provided by COH/HCC witness Pevoto, the direct method is a two part process: first, allocation, and the second, collection.[137] This is contrast to the method proposed by TIEC witness Jeffry Pollock, whose proposal differs in

[136] Tr. at 458:22–459:4.

[137] *Id.* at. 460:18–461:1.

relation to allocation and ultimately sets rates based on geographic location.[138] The result is different possible allocations for each geographic area, not one allocation factor for all cities.[139] Despite counsel for TIEC's assertions that the rate charged in each class is the same, the effect of Pollock's method is an estimated shift of $1,500,000 from the transmission class to residential customers.[140] The same proposal recommended by TIEC in this case was presented, and rejected, in CEHE's last rate case.[141] The proposal presented by the Company, and supported by COH/HCC, has previously been presented, and adopted, by the Commission.[142]

3. Transmission and Key Accounts

N/A.

4. Allocation of Hurricane Harvey Restoration Costs [PO Issue 56]

N/A.

VIII. Revenue Distribution and Rate Design [PO Issues 4, 5, 43, 49, 50]

A. Residential Customer Charge

CEHE's proposed T&D rate of $2.48 per residential class customer is excessive and an increase in customer rates, if any, should be gradual and proportionally equal to the base rate revenue requirement increase. The excessiveness of this rate is highlighted by its significant contrast to the current rate and to other ERCOT utilities.[143] The Company's proposed rate marks

[138] *Id.* at. 461:2–462:8.

[139] *Id.* at. 466:23–468:2.

[140] *Id.* at. 469:16–470:8.

[141] *Id.* at. 468:19–469:15.

[142] *Id.*

[143] COH/HCC Hearing Exhibit No. 3, Direct Testimony of Witness K. Pevoto, 28:8–29:4.

a 53 percent increase on its current charge, from $1.62 to $2.48.[144] The proposed rate is markedly higher than other utilities, such as Oncor's $0.90 and TNMP's $1.13 rates.[145]

In addition to the excessive proposed rate, even if an increase is warranted—for CEHE's proposed rate or otherwise—such increase should be applied gradually, as proposed by COH/HCC witness Pevoto. Pevoto recommends increasing the customer charge by no more than the percentage increase for the base rate revenue requirement for the residential class, or a $1.75, whichever is lower.[146]

B. Customer Charge on Per Meter Basis vs. Per Customer Basis

COH/HCC recommends that customers continue to be charged on a per customer basis and, as such, that CEHE's proposal to switch to per meter basis charging be rejected. In addition to the sheer excessiveness of the proposed T&D customer rate increase, CEHE's proposed charge to residential customers on per a meter basis is unsupported by witness testimony. Residential customers are currently, and have been historically, charged on a per customer basis.[147] Despite the status quo and repeated rate cases providing for charges on a per customer basis, CEHE provides no valid argument, reason, or justification to switch to a per meter basis charge. In fact, CEHE witness Troxle provided that the customer and meter charges are flat-based charges, regardless of the amount of consumption.[148]

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[144] *Id.*

[145] *Id.*

[146] *Id.* at. 29:5–17.

[147] *Id.* at. 29:18–30:2.

[148] Tr. at 974:22–975:7.

In contrast, while the burden remains on CEHE, the arguments against charging on a per meter basis are nonetheless compelling. Under the Company's proposal, customers with multiple meters would receive multiple bills or, alternatively, retail electric providers would be required to consolidate the bills for the customers.[149] Company witness Troxle admitted that providing clear and understandable bills to customers is a consideration when setting rates.[150] Nevertheless, Troxle acknowledged that there would be some customer confusion in switching to per-meter charges.[151] Troxle also testified that while there would be no change in CEHE revenues, the revenue obtained from a multiple-meter customer would change.[152]

Based on these facts, it would be inappropriate to charge customers with multiple meters on a per meter basis. The Company has demonstrated no benefit to offset the increased costs to these customers and the increased confusion and complexity for REPs and their customers.

C. Transmission Service Rate

N/A.

D. Transmission Service Facility Extensions

N/A.

E. Street Lighting Service

As with CEHE's proposed T&D residential customer charge, its proposed T&D rates for light emitting diode ("LED") street lighting are also excessive and would result in a windfall to the Company. As provided by COH/HCC witness Pevoto, the Company has no O&M costs for

[149] COH/HCC Hearing Exhibit No. 3, Direct Testimony of Witness K. Pevoto, 30:3–13.

[150] Tr. at 1030:1–8.

[151] *Id.* at. 1029:19–25.

[152] *Id.* at. 1030:11–1031:2.

15 years after its conversion to LED lights, and such conversion costs are capital, not O&M, costs.[153]

Nevertheless, the street lighting rates proposed curiously include $2.73 million in operation and maintenance expenses.[154] Company Witness Julienne Sugarek testified that the LED lights are comprised of luminaires for which there is no bulb and last for 15 years and compared them to high-pressure sodium ("HPS") lights, for which the luminaire lasts 29 years but the bulbs have an average life of 5 years.[155] By Sugarek's own admission, LED lights require less maintenance expenses overall than those of HPS lights.[156] The Company's ten-year warranty for all purchased LED lights also means that CEHE would have no expenses for the first ten years to replace a bulb or replace an LED light.[157]

Sugarek estimates the Company will save $2.7 million in bulb replacement due to the installation of LED, which she acknowledges is the same exact amount as the recommended reduction proposed by COH/HCC witness Pevoto for street lighting O&M expenses.[158] Specifically, Sugarek testified that the conversion from standard to LED lights would reduce O&M by approximately $3 million.[159] Nevertheless, Company witness Troxle provides that the "vast majority" of the Company's proposed LED costs relate to replacing the HPS lights and installing

[153] COH/HCC Hearing Exhibit No. 4, Cross-Rebuttal Testimony of Witness K. Pevoto, 12:22–13:22.

[154] COH/HCC Hearing Exhibit No. 3, Direct Testimony of Witness K. Pevoto, 30:19–31:5.

[155] Tr. at 230:2–15.

[156] *Id.* at. 231:7–24.

[157] *Id.* at. 231:25–232:10.

[158] *Id.* at. 232:23–233:13.

[159] *Id.* at. 1239:13–1241:10.

the new LED lights.[160] Thus, between the life expectancy of the LED lights, in addition to the test year statistics indicating no LED lights had to be replaced, the Company's witnesses admit that none of the O&M costs would be incurred for the LED lights.[161]

Further, the lighting class is the only class for which CEHE allocates on the basis on something other than the number of customers.[162] For this service, the Company allocates more costs to customers with more lamps.[163] However, Company witness Troxle conceded they have no specific studies were conducted to analyze whether it does in fact cost more to serve classes of customers with more lamps.[164] Therefore, COH/HCC recommends that the Company's O&M expenses related to street lighting excluded, thereby reducing the Company's street lighting rates by $2.73 million.

F. Other Rate Design Issues

N/A.

IX. Riders [PO Issues 4, 5, 43, 51, 52]

N/A.

A. Rider UEDIT [PO Issue 51]

B. Merger Savings Rider

C. Other Riders

[160] *Id.* at. 1053:13–1054:25.

[161] *Id.*

[162] *Id.* at. 1046:11–1047:14.

[163] *Id.* at. 1047:5–14.

[164] *Id.* at. 1047:19–1048:23.

X. Baselines for Cost-Recovery Factors [PO Issue 4, 5, 43, 53]

N/A.

A. Transmission Cost of Service

B. Transmission Cost Recovery Factor

XI. Other Issues [including but not limited to PO Issues 13, 14, 20, 30, 31, 32, 40, 41, 42, 47, 48, 57, 58, 59]

N/A.

A. Contested Issues

B. Uncontested Issues

XII. Conclusion and Prayer

COH/HCC recommends a $131 million rate decrease and the cost allocation and rate design set forth by its witnesses' testimonies and this Initial Brief. COH/HCC also recommends that $32.5 million be refunded to distribution customers through COH/HCC's proposed DCRF credit rider. COH/HCC request all other relief, legal and equitable, to which they are justly entitled.

Respectfully submitted,

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By: 
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Houston Coalition of Cities

CERTIFICATE OF SERVICE

I hereby certify that on this the 9th day of July, 2019, a true and correct copy of the foregoing document was served upon the parties of record by email, facsimile and/or First Class Mail.


Alton J. Hall, Jr.

ATTACHMENT 1

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
2019 CEHE RATE CASE
DOCKET 49421-SOAH DOCKET NO. 473-19-3864

CITY OF HOUSTON
REQUEST NO.: COH01-22

QUESTION:

Provide cost/benefit analyses and other information supporting the prudence of each CEHE distribution capital project having a total cost of more than $5 million that was placed in service since 2009.

ANSWER:

See attachment COH01-22 Index Attachment 1.xlsx for an index of the benefit/cost analysis that has been performed for a number of the CEHE distribution capital projects that have a total cost of more than $5 million that have been placed into service since 2009.

The index will provide the Project Number and Description similar to what was provided in previous DCRF's, a simplified description that closely corresponds to the terminology utilized by the Company's Asset Investment Strategy ("AIS") decision tool, and the page number in the attached pdf that provides the corresponding Project Evaluation Forms ("PEFs") that are produced by the AIS tool. See COH01-22 Project Evaluation Forms Attachment 2.pdf.

The AIS decision tool produces non-monetized benefit/cost information for selected projects and programs as a way to optimize the Company's annual capital portfolio. This includes distribution, transmission, substation, telecommunications and major underground projects. The benefit/cost information is based on a metric that is determined by the "benefits" divided by the "cost" of the project to give a cost-weighted value. The benefits are determined by a calculation based on megawatts at risk, probability of outage, number of components involved, and the duration of exposure as measured by repair time, plus additional multipliers, based on drivers for the project such as design criteria, reliability, supplemental benefits and corporate risk alignment. Please note that not all investments are modeled in the optimization process, such as public improvements (facility relocations), service restoration, distribution revenue, non-program corrective maintenance, fleet/facilities, information technology projects, and other non-T&D capital work.

The attached file includes PEFs for work that meets the $5M threshold for those distribution projects and programs that were sponsored in 2014-2018. In cases where multiple years are involved, such as in a recurring program, PEFs are included for each year's submission.

Attachment 2 is voluminous and is provided as discussed below.

The requested information is voluminous and will be provided to the propounding party only in electronic format on CD. Please contact Alice Hart at (713) 207-5322 to request a copy of the CD. Please see index of voluminous material below.

Date	Project Number	Short Title	Preparer	Page #
Undated	AB1C	300% and 10% Circuit Reliability Program	Dale Bodden	1-35
Undated	AB2G	Pole Maintenance Program (Poles)	Dale Bodden	36-57
Undated	AB48	Pole Maintenance Program (Bracing)	Dale Bodden	36-57
Undated	ABCA	Cable Assessment/Life Extension Program (CAP/CLEP)	Dale Bodden	58-74

COH/HCC
EXHIBIT 10

Undated	CE1B	Major Underground Rehab	Dale Bodden	75-98
Undated	DB18	City of Houston LED Streetlight Conversion	Dale Bodden	99-116
Undated	HLP/00/0014	Replace SCADA Logic Cages/RTUs	Dale Bodden	117-133
Undated	HLP/00/0075	Replace Failed Major Equip and Purchase Spares	Dale Bodden	134-152
Undated	HLP/00/0484	Substation Security Upgrades	Dale Bodden	153-169
Undated	HLP/00/0612	Fry Substation: Build 35kV Sub w/6 35kV Feeders	Dale Bodden	170-172
Undated	HLP/00/0875	Springwoods Substation: Build 35kV Sub w/8 Feeders	Dale Bodden	173-175
Undated	HLP/00/0884	Replace 12/35kV Square D Type FBS Breakers	Dale Bodden	176-181
Undated	HLP/00/0909	Replace 35/12kV Breakers	Dale Bodden	182-200
Undated	HLP/00/0941	Alexander Island Substation: Upgrade Transformers to 50MVA	Dale Bodden	201-204
Undated	HLP/00/0953	South Channel: New Substation 2-50MVA Trfs w/6 Feeders	Dale Bodden	205-207
Undated	HLP/00/0954	Sandy Point: New Substation 2-50MVA Trfs w/4-12kV Feeders	Dale Bodden	208-219
Undated	HLP/00/0956	Willow Substation: Add 2-100MVA Transformers w/4-35kV Feeders	Dale Bodden	220-223
Undated	HLP/00/0963	Springwoods Substation: Add 3rd 100MVA Trf and 4-35kV Feeders	Dale Bodden	224-227
Undated	HLP/00/0974	Tomball Substation: Add 3rd Transformer and 2 Feeders	Dale Bodden	228-230
Undated	HLP/00/0977	Jordan: New 35kV Substation	Dale Bodden	231-233
Undated	HLP/00/0978	Trinity Bay: Install 35kV Facilities (2 Trfs and 4-35kV Feeders)	Dale Bodden	234-236
Undated	HLP/00/1036	Tanner: New Substation w/2-100MVA Trfs and 6-35kV Feeders	Dale Bodden	237-247
Undated	HLP/00/1084	Village Creek: New Substation w/2-100MVA Trfs and 4-35kV Feeders	Dale Bodden	248-255
Undated	HLP/00/1087	Arcola Substation: Install 3rd 100MVA Trf and 3-35kV Feeders	Dale Bodden	256-259
Undated	S/101785/CE/FIBER	Fiber Rehabilitation, Telecom Core Network	Dale Bodden	260-281
Undated	S/101785/CN/FIBER	Post Ams WiMax and WiMax "Backhaul" Transport Growth	Dale Bodden	282-286
Undated	S/101785/CN/MPLS	Telcom Services MPLS Network Optimization	Dale Bodden	287-291
Undated	S/101785/CN/OPENSKY	Opensky VMDRS: Console Repl; Sys Growth; Post-project enhancements	Dale Bodden	292-308
Undated	S/101785/CN/TFSY	Fiber Expansion, v.10	Dale Bodden	309-336

Undated	S/101785/CN/TMSY	Microwave: New licensed sites; OC3 MW repl; Licensed network deployment	Dale Bodden	337-352

SPONSOR (PREPARER):
Dale Bodden/Randal Pryor (Dale Bodden/Randal Pryor)

RESPONSIVE DOCUMENTS:
COH01-22 Index Attachment 1.xls
COH01-22 Project Evaluation Forms Attachment 2.pdf

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) Tier 2 - CNP-12591

AIS Tracking Status: Submitted - Asset Management
Division: Distribution Power Delivery
Function: Distribution
Portfolio Name: CEHE 2018 Portfolio
Template Name: CEHE 2018 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Ernie Kaster
AIS Project: CNP-12591

Start Year: 2018
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
This project is designed to proactively locate partial discharge in URD cable and it"s components (terminations & splices) to identify potential areas of faults resulting in a reduction of URD failures and targeted equipment replacement.

Cash Flows	2018	2019	2020	2021	2022	Total
Capital Cost	$11,934,000	$1	$1	$1	$1	$11,934,004
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	254,209	3. Design Criteria	0
2. Reliability Benefit	39,720	4. Supplemental Benefits	12,710

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 5: Regulatory/Legislative - Proceedings and Matters	No
SI# 2: Emerging Technology	No	CR# 6: Technology - Systems	No
SI# 3: Long-Term Planning	No	CR# 7: Regulatory/Legislative - Operations	No
SI# 4: Workforce Leaders	No	CR# 8: Human Resources - Optimization	No
SI# 5: Safety	No	CR# 9: External Environment - Physical	No
CR# 1: Capital Availability	No	CR#10: ERCOT Operational Failure	No
CR# 2: Intentional Physical and Cyber Security Acts	No	CR#11: Disruptive Technologies	No
CR# 3: Sustainable Earnings Growth Strategy	No		
CR# 4: Critical Technology System Failure	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
306,640 / $11,934,004 = 0.03	0 / $11,934,004 = 0.00	= 0.03

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) Tier 2 - CNP-12591

General Questions

What type of load is at risk?
Answer: Distribution

If this project is not executed, and an outage results, will customers lose electric service?
Answer. Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: No

What is the base load at risk in MW per component or unit?
Answer: 0.4500

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.3207

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 734.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Average of 75 custs per ½ loop, with 6 KW per cust. Load per ½ loop = 75 x 6 = 450 KW. Intend to assess 720 ½ loops (360 URD loops). Number of URD fuse outages in 2014 caused by cable failure, busing failure, terminator failure, etc. per year / Number of URD fuses = probability of failure. The focus is on older loops with a history of failure, so need to double the probability. 5,180 outages / 32,306 fuses = 0.16034 x 2 = 0.32068 failures per year per component.*

Select the applicable Distribution Design Criteria, if any, that this project or program addresses. Use the space provided to suppo your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*
Answer: Provides improved service quality to clients / customers
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*

Select the Distr reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This program is focused on loops that experience the largest number of outages as well as those that are older. Currently we are only focused on the older loops that are 35+ years of age.*

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, Operate, and Maintain Imperative (2018)?
Answer: Yes
Justification:

Emerging Technologies Imperative (2018)?
Answer: No

Long Term Growth Imperative (2018)?
Answer: No

Employee Engagement and Talent Imperative (2018)?
Answer: No

Safety Imperative (2018)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) Tier 2 - CNP-12591

Corporate Risk Alignment

Capital Availability
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Critical Technology System Failure
Answer: No

Regulatory/Legislative - Proceedings and Matters
Answer: No

Technology - Systems
Answer: No

Regulatory/Legislative - Operations
Answer: No

Human Resources - Optimization
Answer: No

External Environment - Physical
Answer: No

ERCOT Operational Failure
Answer: No

Disruptive Technologies
Answer: No

Indirect Corporate Risk Alignment

Capital Availability
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Critical Technology System Failure
Answer: No

Regulatory/Legislative - Proceedings and Matters
Answer: No

Technology - Systems
Answer: No

Regulatory/Legislative - Operations
Answer: No

External Environment - Physical
Answer: No

ERCOT Operational Failure
Answer: No

Human Resource - Optimization
Answer: No

Disruptive Technologies
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) - CNP-12220

AIS Tracking Status: Submitted - Asset Management
Division: Distribution Power Delivery
Function: Distribution
Portfolio Name: CEHE 2017 Portfolio
Template Name: CEHE 2017 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Ernie Kaster
AIS Project: CNP-12220

Start Year: 2017
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
This project is designed to proactively locate partial discharge in URD cable and it"s components (terminations & splices) to identify potential areas of faults resulting in a reduction of URD failures and targeted equipment replacement.

Cash Flows	2017	2018	2019	2020	2021	Total
Capital Cost	$3,000,000	$13,000,000	$13,200,000	$13,700,000	$14,000,000	$56,900,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	1,938,816	3. Design Criteria	0
2. Reliability Benefit	302,940	4. Supplemental Benefits	96,941

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 3: Sustainable Earnings Growth Strategy	No
SI# 2: Technology Solutions	No	CR# 4: Technology - Systems	No
SI# 3: Long-Term Planning	No	CR# 5: Human Resources - Optimization	No
SI# 4: Execute Security	No	CR# 6: ERCOT Operational or Market Failure	No
SI# 5: Workforce Leaders	No	CR# 7: Regulatory / Proceedings and Matters	No
SI# 6: High Performing Safety	No	CR# 8: Regulatory / Legislative - Operations	No
SI# 7: Customer Experience	No	CR# 9: Disruptive Technologies	No
SI# 8: Improve Productivity	No	CR#10: External Environment - Physical	No
SI# 9: Electric Market Changes	No	CR#11: Smart Grid Business Transformation	No
CR# 1: Intentional Physical and Cyber Security Acts	No	CR#12: Credit	No
CR# 2: Critical Technology System Failure	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
2,338,696 / $56,900,000 = 0.04	0 / $56,900,000 = 0.00	= 0.04

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) - CNP-12220

General Questions

What type of load is at risk?
Answer: Distribution

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: No

What is the base load at risk in MW per component or unit?
Answer: 0.4500

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.3200

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 5610.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Base Load = 32306 URD fuses (1/2 loops). Average of 75 custs per loop, 6 KW per cust, equals 450 KW per half loop*
*Components = Number of URD fuses (1/2 loops) addressed per year * 5 year basis = (511 loops * 2 * 5 = 5110)+ (50 loops * 2 * 5) = 5610*
Outage Events = Total number of URD fuse outages caused by cable failure, bushing failure, terminators etc. in 2014 / Number of URD fuses = Probability. The focus is on older loops with a history of failure, so need to double the probability
5180/32306 = 0.16034 x 2 = 0.32068

Select the applicable Distribution Design Criteria, if any, that this project or program addresses. Use the space provided to suppor your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*
Answer: Provides improved service quality to clients / customers
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*

Select the Distr reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This program is focused on loops that experience the largest number of outages as well as those that are older. Currently we are only focused on the older loops that are 35+ years of age.*

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) - CNP-12220

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, operate, and maintain our system to achieve reliability, efficiency, and growth objectives (2017)?
Answer: Yes
Justification:

Deliver cost effective technological solutions and services to achieve operational and business benefit (2017)?
Answer: No

Deliver long-term financial growth objectives through alignment of operational, financial, and regulatory planning (2017)?
Answer: No

Execute physical and cyber security strategy to provide operational resiliency (2017)?
Answer: No

Develop outstanding leaders to drive successful talent management and achieve high employee engagement (2017)?
Answer: No

Achieve a high performance safety culture to strengthen the safety of our employees, the public, and our system (2017)?
Answer: No

Deliver products and services that satisfy customers and enhance the Customer Experience (2017)?
Answer: No

Improve productivity and efficiency through a culture of initiative, process improvement, and collaboration (2017)?
Answer: No

Develop and advocate electric market changes in response to emerging technologies (2017)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Life Extension Program (CLEP) - CNP-12220

Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Smart Grid Business Transformation
Answer: No

Credit
Answer. No

Indirect Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Smart Grid Business Transformation
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer. No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP) - CNP-11322

AIS Tracking Status: Submitted - Asset Management
Division: Distribution Power Delivery
Function: Distribution
Portfolio Name: CEHE 2016 Portfolio
Template Name: CEHE 2016 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Ernie Kaster
AIS Project: CNP-11322

Start Year: 2016
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
This project is designed to proactively locate partial discharge in URD cable and it"s components (terminations & splices) to identify potential areas of faults resulting in a reduction of URD failures and targeted equipment replacement.

Cash Flows	2016	2017	2018	2019	2020	Total
Capital Cost	$21,321,000	$21,960,630	$22,619,449	$23,298,032	$23,996,973	$113,196,084
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	1,938,816	3. Design Criteria	0
2. Reliability Benefit	302,940	4. Supplemental Benefits	96,941

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 2: Critical Technology System Failure	No
SI# 2: Integrate Technology	No	CR# 3: Sustainable Earnings Growth Strategy	No
SI# 3: Support Dereg Market	No	CR# 4: Technology - Systems	No
SI# 4: Enhance Security	No	CR# 5: Human Resources - Optimization	No
SI# 5: Workforce	No	CR# 6: ERCOT Operational or Market Failure	No
SI# 6: High Performing Safety	No	CR# 7: Regulatory / Proceedings and Matters	No
SI# 7: Long-Term Planning	No	CR# 8: Regulatory / Legislative - Operations	No
SI# 8: Customer Engagement	No	CR# 9: Disruptive Technologies	No
SI# 9: Benefits of Electric	No	CR#10: External Environment - Physical	No
SI#10: Recovery of Costs	No	CR#11: Smart Grid Business Transformation	No
SI#11: Manage O&M	No	CR#12: Credit	No
CR# 1: Intentional Physical and Cyber Security Acts	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
2,338,696 / $113,196,084 = 0.02	0 / $113,196,084 = 0.00	= 0.02

Report Run Date: 1/18/2016

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP) - CNP-11322

General Questions

What type of load is at risk?
Answer: Distribution

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: No

What is the base load at risk in MW per component or unit?
Answer: 0.4500

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.3200

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 5610 0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Base Load = 32306 URD fuses (1/2 loops) Average of 75 custs per loop, 6 KW per cust, equals 450 KW per half loop*
*Components = Number of URD fuses (1/2 loops) addressed per year * 5 year basis = (511 loops * 2 * 5 = 5110)+ (50 loops * 2 * 5) = 5610*
Outage Events = Total number of URD fuse outages caused by cable failure, bushing failure, terminators etc. in 2014 / Number of URD fuses = Probability. The focus is on older loops with a history of failure, so need to double the probability
5180/32306 = 0.16034 x 2 = 0.32068

Select the applicable Distribution Design Criteria, if any, that this project or program addresses. Use the space provided to suppor your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*
Answer: Provides improved service quality to clients / customers
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*

Select the Distr reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This program is focused on loops that experience the largest number of outages as well as those that are older. Currently we are only focused on the older loops that are 35+ years of age.*

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP) - CNP-11322

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, operate, maintain, and optimize our system to achieve reliability objectives and meet load growth requirements (2016)</p
Answer. Yes
Justification: Cable Assessment design to reduce URD outages through Cable testing, onsite remediations and planned span replacement.

Enhance operations through integration of new, innovative technologies (2016)?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market (2016)?
Answer: No

Enhance physical and cyber security strategy to strengthen operational resiliency (2016)?
Answer: No

Recruit, retain, and develop employees to ensure a capable, diverse workforce and leadership team (2016)?
Answer: No

Achieve a high performance safety culture to strengthen the safety of our employees and the public (2016)?
Answer: No

Enable long-term planning that provides clear visibility of future capital and O&M requirements to support organic growth in the business (2016)?
Answer: No

Improve customer engagement and satisfaction through enhanced processes, communications and technology (2016)?
Answer: No

Promote the socially responsible benefits of electrification and the grid (2016)?
Answer: No

Achieve complete and timely recovery of costs (2016)?
Answer: No

Improve efficiencies, business processes, and service delivery to effectively manage O&M (2016)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP) - CNP-11322

Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No
Critical Technology System Failure
Answer: No
Sustainable Earnings Growth Strategy
Answer: No
Technology - Systems
Answer: No
Human Resources - Optimization
Answer: No
ERCOT Operational or Market Failure
Answer: No
Regulatory / Proceedings and Matters
Answer: No
Regulatory / Legislative - Operations
Answer: No
Disruptive Technologies
Answer: No
External Environment - Physical
Answer: No
Smart Grid Business Transformation
Answer: No
Credit
Answer: No

Indirect Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No
Critical Technology System Failure
Answer: No
Sustainable Earnings Growth Strategy
Answer: No
Technology - Systems
Answer: No
Human Resources - Optimization
Answer: No
ERCOT Operational or Market Failure
Answer: No
Regulatory / Proceedings and Matters
Answer: No
Regulatory / Legislative - Operations
Answer: No
Disruptive Technologies
Answer: No
External Environment - Physical
Answer: No
Credit
Answer: No
Smart Grid Business Transformation
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

AIS Tracking Status: Submitted - Functional Area
Division: Distribution Power Delivery
Function: Distribution
Portfolio Name: CEHE 2015 Portfolio
Template Name: CEHE 2015 Template
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Prepared by: Dan Greenwood
AIS Project: CNP-10736
Start Year: 2015
Project/Program Project
Non-Discretionary: No

Project Description
This project is designed to proactively locate partial discharge in URD cable and it"s components (terminations & splices) to identify potential areas of faults resulting in a reduction of URD failures and targeted equipment replacement.

Cash Flows	2015	2016	2017	2018	2019	Total
Capital Cost	$20,700,000	$21,321,000	$21,960,630	$22,619,449	$23,298,032	$109,899,111
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	508,032	3. Design Criteria	0
2. Reliability Benefit	79,380	4. Supplemental Benefits	25,402

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI#1: Build, Operate, Maintain & Optimize System	Yes	CR# 4: Intentional Physical and Cyber Security Acts	No
SI#2: Implement & Integrate Innovative Technology	No	CR# 5: External Environment - Physical	No
SI#3: Attract & Retain Satisfied Customers	No	CR# 6: Credit	No
SI#4: Earn Authorized Returns – work with Leg/Reg	No	CR# 7: Critical Technology System Failure	No
SI#5: Attract, Develop, & Retain Skilled Workforce	No	CR# 8: Regulatory / Proceedings and Matters	No
SI#6: Value: Sustainable Infrastructure Growth	No	CR# 9: Regulatory / Legislative - Operations	No
SI#7: Proactively Support Deregulated Power Market	No	CR#10: External Environment - Economic	No
CR#1: Human Resource - Optimization	No	CR#11: Smart Grid Business Transformation	No
CR# 2: ERCOT Operational or Market Failure	No	CR#12: Disruptive Technologies	No
CR# 3: Technology - Systems	No		

Calculated Value to Cost Ratio = 612,813 / $109,899,111 = 0.01

Corporate Risk Alignment Ratio Value = 0.00

= 0.01

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

General Questions

What type of load is at risk?
Answer: Distribution

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 0.2400

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.0300

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 5880.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Base Load = 32306 URD fuses (1/2 loops). Average of 40 custs per loop, 6 KW per cust, equals 240 KW per loop*
*Components = Number of URD fuses (1/2 loops) addressed per year * 5 year basis = (588 loops * 2 * 5 = 5880)*
Outage Events = Total number of URD fuse outages caused by cable failure, bushing failure, terminators etc. in 2013 / Number of URD fuses = Probability. The focus is on older loops with a history of failure, so need to double the probability
442/32306 = 0.013682 x 2 = 0.02736334

Select the applicable Distribution Design Criteria, if any, that this project or program addresses. Use the space provided to suppor your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *By doing this project we are focusing on some of the worst performing loops This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*
Answer: Provides improved service quality to clients / customers
Justification: *By doing this project we are focusing on some of the worst performing loops. This should assist us in hardening the grid as well as increasing grid performance. All this will lead to fewer outages and increased quality of service.*

Select the Distr reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification. *This program is focused on loops that experience the largest number of outages as well as those that are older. Currently we are only focused on the older loops that are 35+ years of age.*

Strategic Alignment

Please identify this project or program's alignment with CEHE's strategic imperatives (select 'Yes' for all that apply)

Build, operate, maintain, and optimize our system to provide safe, reliable and efficient service?
Answer: Yes
Justification:

Implement and integrate innovative technology solutions to improve efficiencies and performance?
Answer: No

Attract and retain satisfied customers through enhanced services, business processes, and technology?
Answer: No

Earn authorized returns and work with legislators and regulators to achieve success?
Answer: No

Attract, develop and retain a diverse, highly skilled and productive workforce?
Answer: No

Increase shareholder value through sustainable infrastructure growth?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

Corporate Risk Alignment

Human Resource - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Technology - Systems
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Critical Technology System Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

External Environment - Economic (Incls Price Volatility)
Answer: No

Smart Grid Business Transformation
Answer: No

Disruptive Technologies
Answer: No

Indirect Corporate Risk Alignment

Human Resource - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Technology - Systems
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Critical Technology System Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

External Environment - Economic (Incls.Price Volatility)
Answer: No

Smart Grid Business Transformation
Answer: No

Disruptive Technologies
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

AIS Tracking Status: Approved - Asset Management
Division: Distribution Power Delivery
Function: Distribution
Portfolio Name: CEHE 2014 Portfolio
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Prepared by: Dan Greenwood
AIS Project: CNP-10661
Start Year: 2014
Project/Program/Baseline: Project
Non-Discretionary: Yes - Capitalization treatment from FERC indicates a fixed tenure timeframe. CAP began in 2013 and is carry forward

Project Description
This project is designed to proactively locate partial discharge in URD cable and it's components (terminations & splices) to identify potential areas of faults resulting in a reduction of URD failures and targeted equipment replacement.

Cash Flows	2014	2015	2016	2017	2018	Total
Capital Cost	$23,000,000	$23,690,000	$24,400,700	$25,132,721	$25,886,703	$122,110,124
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Financial Benefit	0	4. Design Criteria	0
2. Load at Risk	583,942	5. Regulatory Concerns	0
3. Reliability Benefit	91,241	6. Supplemental Benefits	29,197

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI#1 - Reliability / Load Growth	Yes	CR# 4: External Environment - Physical	No
SI#2 - Tech Initiatives	No	CR# 5: Regulatory/Legislative	No
SI#3 - Regulatory / Legislative	No	CR# 6: Smart Grid Business Transformation	No
SI#4 - Workforce	No	CR# 7: Credit	No
SI#5 - Deregulated Power Market	No	CR# 8: Asset Optimization	Yes
SI#6 - Customer Engagement	No	CR# 9: Growth Strategy	No
CR# 1: Technology - Systems	No	CR#10: External Environment - Economic	No
CR# 2: Critical System Failure	No	CR#11: Capital Availablity / Allocation	No
CR# 3: ERCOT Operational or Market Failure	No	CR#12: Human Resources - Optimization	No

Calculated Value to Cost Ratio = 704,379 / $122,110,124 = 0.01

Strategic Imperatives Ratio Adjustment = 0.00
Corporate Risk Ratio Adjustment = 0.00

= 0.01

Report Run Date: 7/1/2014

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

General Questions

What type of load is at risk?
Answer: Distribution

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 0 2400

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.0345

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 5880.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Numbers based on 5 year outlook:*

MW at Risk = 32306 URD fuses (1/2 loops). Average of 40 custs per loop, 6 KW per cust, equals 240 KW per loop = 0.24

*Components = Number of URD fuses (1/2 loops) addressed per year * 5 year basis = 5880*

Probability = Total number of URD fuse outoges coused by cable failure, bushing failure, terminators etc in 2012 / Number of URD fuses = Probability. The focus is on older loops with a history of failure, so need to double the probability
557/32306 = 0.017241 x 2 = 0.03448257

Select the reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *Current program specifically targets aging cable*

Select the applicable Distribution Design Criteria, if any, that this project or program addresses. Use the space provided to suppo your selections.
Answer:

Are there agreements between CEHE and a regulatory body or external entity that require this project or program to be done? Select the entity and attach a copy of the agreement.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Answer: Provides improved service quality to clients / customers

Strategic Alignment

Please identify this project or program's alignment with CEHE's strategic imperatives (select 'Yes' for all that apply)

Build, operate, maintain, and optimize our system to achieve reliability objectives and meet load growth requirements?
Answer: Yes

Effectively implement technology initiatives?
Answer: No

Achieve favorable regulatory and legislative outcomes
Answer: No

Attract, develop, and retain a highly skilled, safety conscious workforce?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market?
Answer: No

Improve customer engagement through enhanced processes and technology?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

Cable Assessment Program (CAP)

Corporate Risk Alignment

Please identify this project or program's alignment with CEHE's corporate risks (select 'Yes' for all that apply):

Technology - Systems?
Answer: No

Critical System Failure?
Answer: No

ERCOT Operational or Market Failure?
Answer: No

External Environment - Physical?
Answer: No

Regulatory/Legislative - Proceedings and Matters?
Answer: No

Smart Grid Business Transformation?
Answer. No

Credit?
Answer: No

Asset Optimization?
Answer: Yes

Growth Strategy?
Answer: No

External Environment - Economic (Including Price Volatility)?
Answer: No

Capital Availability/Allocation?
Answer: No

Human Resources - Optimization?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-12172

AIS Tracking Status: Submitted - Asset Management
Division: High Voltage Delivery
Function: Major Underground
Portfolio Name: CEHE 2017 Portfolio
Template Name: CEHE 2017 Template
Project/Program Non-Discretionary: Program No

Prepared by: Rick Nelson
AIS Project: CNP-12172

Start Year: 2017
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
The services identified need to be rehabbed. Due to the nature of the load converting the services to an auto-transfer scheme is justifiable. In order to harden our system and to provide more reliable service to critical loads, it would be beneficial to upgrade manual rollover services to an automated rollover in dedicated underground areas at the same time provide monitoring for those services.

Cash Flows	2017	2018	2019	2020	2021	Total
Capital Cost	$500,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$5,300,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	801,900	3. Design Criteria	0
2. Reliability Benefit	80,190	4. Supplemental Benefits	20,048

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 3: Sustainable Earnings Growth Strategy	No
SI# 2: Technology Solutions	No	CR# 4: Technology - Systems	No
SI# 3: Long-Term Planning	No	CR# 5: Human Resources - Optimization	No
SI# 4: Execute Security	No	CR# 6: ERCOT Operational or Market Failure	No
SI# 5: Workforce Leaders	No	CR# 7: Regulatory / Proceedings and Matters	No
SI# 6: High Performing Safety	No	CR# 8: Regulatory / Legislative - Operations	No
SI# 7. Customer Experience	No	CR# 9: Disruptive Technologies	No
SI# 8. Improve Productivity	No	CR#10: External Environment - Physical	No
SI# 9: Electric Market Changes	No	CR#11: Smart Grid Business Transformation	No
CR# 1: Intentional Physical and Cyber Security Acts	No	CR#12: Credit	No
CR# 2: Critical Technology System Failure	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
902,137 / $5,300,000 = 0.17	0 / $5,300,000 = 0.00	= 0.17

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-12172

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 0.4500

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 2.2500

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 44.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Load at risk is 19.836 MW for the 44 locations in the 5 year program 19.836/44=0.4508 MW per location. Anticipated outage is based on an average of 3 circuit outages per year either interrupting service or service being put into contingency status at 75% of the locations, since they have dual feeds (3 x 0.75=2.25).*
Delayed response time to restore service to critical loads at Bush Airport. Some of these locations are in secured areas that make it difficult to access, especially when service is interrupted.

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided to support your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Provides improved service quality to clients / customers
Justification: *Provides improved service quality to customers by automatically transferring load between primary circuits without sending a crew to switch. Delayed response time to restore service to critical loads. Most of these locations are in secured areas that make it difficult to access, especially when service is interrupted.*

Select the MUG reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Support Grid Hardening
Justification: *In order to harden our system and to provide more reliable service to critical loads, it would be beneficial to upgrade manual rollover services to an automated rollover in dedicated underground areas at the same time provide monitoring (SCADA)for those services.*

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-12172

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, operate, and maintain our system to achieve reliability, efficiency, and growth objectives (2017)?
Answer: Yes
Justification:

Deliver cost effective technological solutions and services to achieve operational and business benefit (2017)?
Answer: No

Deliver long-term financial growth objectives through alignment of operational, financial, and regulatory planning (2017)?
Answer: No

Execute physical and cyber security strategy to provide operational resiliency (2017)?
Answer: No

Develop outstanding leaders to drive successful talent management and achieve high employee engagement (2017)?
Answer: No

Achieve a high performance safety culture to strengthen the safety of our employees, the public, and our system (2017)?
Answer: No

Deliver products and services that satisfy customers and enhance the Customer Experience (2017)?
Answer: No

Improve productivity and efficiency through a culture of initiative, process improvement, and collaboration (2017)?
Answer: No

Develop and advocate electric market changes in response to emerging technologies (2017)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-12172

Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Smart Grid Business Transformation
Answer: No

Credit
Answer: No

Indirect Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Smart Grid Business Transformation
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

AIS Tracking Status: Submitted - Asset Management
Division: High Voltage Delivery
Function: Major Underground
Portfolio Name: CEHE 2016 Portfolio
Template Name: CEHE 2016 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Rick Nelson
AIS Project: CNP-11362

Start Year: 2016
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
The services identified need to be rehabbed. Due to the nature of the load converting the services to an auto-transfer scheme is justifiable. In order to harden our system and to provide more reliable service to critical loads, it would be beneficial to upgrade manual rollover services to an automated rollover in dedicated underground areas at the same time provide monitoring for those services.

Cash Flows	2016	2017	2018	2019	2020	Total
Capital Cost	$1,000,000	$1,000,000	$1,200,000	$1,200,000	$1,200,000	$5,600,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	-$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	803,326	3. Design Criteria	0
2. Reliability Benefit	80,333	4. Supplemental Benefits	20,083

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 2: Critical Technology System Failure	No
SI# 2: Integrate Technology	No	CR# 3: Sustainable Earnings Growth Strategy	No
SI# 3: Support Dereg Market	No	CR# 4: Technology - Systems	No
SI# 4: Enhance Security	No	CR# 5: Human Resources - Optimization	No
SI# 5: Workforce	No	CR# 6: ERCOT Operational or Market Failure	No
SI# 6: High Performing Safety	No	CR# 7: Regulatory / Proceedings and Matters	No
SI# 7: Long-Term Planning	No	CR# 8: Regulatory / Legislative - Operations	No
SI# 8: Customer Engagement	No	CR# 9: Disruptive Technologies	No
SI# 9: Benefits of Electric	No	CR#10: External Environment - Physical	No
SI#10: Recovery of Costs	No	CR#11: Smart Grid Business Transformation	No
SI#11: Manage O&M	No	CR#12: Credit	No
CR# 1: Intentional Physical and Cyber Security Acts	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
903,741 / $5,600,000 = 0.16	0 / $5,600,000 = 0.00	= 0.16

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 0.4508

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 2.2500

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 44.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 1.0000
Justification: *Load at risk is 19.836 MW for the 44 locations in the 5 year program 19.836/44=0.4508 MW per location. Anticipated outage is based on an average of 3 circuit outages per year either interrupting service or service being put into contingency status at 75% of the locations, since the have dual feeds (3 x 0 75=2.25).*
Delayed response time to restore service to critical loads at Bush Airport. Some of these locations are in secured areas that make it difficult to access, especially when service is interrupted.

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided t support your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Provides improved service quality to clients / customers
Justification: *Provides improved service quality to customers by automatically transferring load between primary circuits without sending a crew to switch. Delayed response time to restore service to critical loads. Most of these locations are in secured areas that make it difficult to access, especially when service is interrupted.*

Select the MUG reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Support Grid Hardening
Justification: *In order to harden our system and to provide more reliable service to critical loads, it would be beneficial to upgrade manual rollover services to an automated rollover in dedicated underground areas at the same time provide monitoring (SCADA)for those services.*

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, operate, maintain, and optimize our system to achieve reliability objectives and meet load growth requirements (2016)</p

Answer: Yes
Justification: Automatic transfer between primary circuits alleviates the need for operations to travel to these locations to manually switch. Saves O&M cost of that activity and provides much faster service restoration to the customer.
Answer: No
Answer: Yes
Justification: Automatic transfer between primary circuits alleviates the need for operations to travel to these locations to manually switch. Saves O&M cost of that activity and provides much faster service restoration to the customer.
Answer: Yes
Justification:
Answer: No
Answer: Yes
Justification:
Answer: Yes
Justification:
Answer: No
Answer: Yes
Justification:

Enhance operations through integration of new, innovative technologies (2016)?

Answer: Yes
Justification: Automatic transfer between primary circuits alleviates the need for operations to travel to these locations to manually switch. Saves O&M cost of that activity and provides much faster service restoration to the customer.
Answer: No
Answer: No
Answer: Yes
Justification:
Answer: No
Answer: No
Answer: Yes
Justification:
Answer: No
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market (2016)?

Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

Enhance physical and cyber security strategy to strengthen operational resiliency (2016)?

Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

Recruit, retain, and develop employees to ensure a capable, diverse workforce and leadership team (2016)?
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

Achieve a high performance safety culture to strengthen the safety of our employees and the public (2016)?
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer. No
Answer: No
Answer: No
Answer: No

Enable long-term planning that provides clear visibility of future capital and O&M requirements to support organic growth in the business (2016)?
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

Improve customer engagement and satisfaction through enhanced processes, communications and technology (2016)?
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

Promote the socially responsible benefits of electrification and the grid (2016)?
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

Achieve complete and timely recovery of costs (2016)?

Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No
Answer: No

Improve efficiencies, business processes, and service delivery to effectively manage O&M (2016)?

Answer: Yes
Justification: Automatic transfer between primary circuits alleviates the need for operations to travel to these locations to manually switch. Saves O&M cost of that activity and provides much faster service restoration to the customer.
Answer: No
Answer: No
Answer: Yes
Justification:
Answer: No
Answer: No
Answer: Yes
Justification:
Answer: No
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1010 MUG Rehab - PMT Auto XFER - CNP-11362

Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer. No

External Environment - Physical
Answer: No

Smart Grid Business Transformation
Answer: No

Credit
Answer: No

Indirect Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Smart Grid Business Transformation
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer. No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab Tier 3 - FDR Replace Fiber Duct - CNP-12921

AIS Tracking Status: Submitted - Asset Management
Division: High Voltage Power Delivery
Function: Major Underground
Portfolio Name: CEHE 2018 Portfolio
Template Name: CEHE 2018 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Rick Nelson
AIS Project: CNP-12921

Start Year: 2018
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.

Cash Flows	2018	2019	2020	2021	2022	Total
Capital Cost	$1,200,000	$1	$1	$1	$1	$1,200,004
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	576,000	3. Design Criteria	0
2. Reliability Benefit	100,800	4. Supplemental Benefits	23,040

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 5: Regulatory/Legislative - Proceedings and Matters	No
SI# 2: Emerging Technology	No	CR# 6: Technology - Systems	No
SI# 3: Long-Term Planning	No	CR# 7: Regulatory/Legislative - Operations	No
SI# 4: Workforce Leaders	No	CR# 8: Human Resources - Optimization	No
SI# 5: Safety	No	CR# 9: External Environment - Physical	No
CR# 1: Capital Availability	No	CR#10: ERCOT Operational Failure	No
CR# 2: Intentional Physical and Cyber Security Acts	No	CR#11: Disruptive Technologies	No
CR# 3: Sustainable Earnings Growth Strategy	No		
CR# 4: Critical Technology System Failure	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
699,840 / $1,200,004 = 0.58	0 / $1,200,004 = 0.00	= 0.58

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab Tier 3 - FDR Replace Fiber Duct - CNP-12921

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: Yes

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 50.0000

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.0400

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 4.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 4.0000
Justification: *Load at risk is an average of 5 12kV circuits per span = 50 MW. We experience approximately 2 failures per yeor in the project population of 50 spans of fiber duct and it will take a minimum of 4 days to repair (2/50=.04). The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages. There are 4 spans in the 2018 Tier 3 program.*

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided t support your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*
Answer Increases infrastructure capacity for future use
Justification: *4" fiber duct was installed when our system wos mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible New standard installation is 9, 12 or 15, 6" PVC conduits.*

Select the MUG reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This project is to replace deteriorating-4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's/Galveston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic imperatives (select Yes for all that apply)

Build, Operate, and Maintain Imperative (2018)?
Answer: Yes
Justification:

Emerging Technologies Imperative (2018)?
Answer: No

Long Term Growth Imperative (2018)?
Answer: No

Employee Engagement and Talent Imperative (2018)?
Answer: No

Safety Imperative (2018)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab Tier 3 - FDR Replace Fiber Duct - CNP-12921

Corporate Risk Alignment

Capital Availability
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Critical Technology System Failure
Answer: No

Regulatory/Legislative - Proceedings and Matters
Answer. No

Technology - Systems
Answer: No

Regulatory/Legislative - Operations
Answer: No

Human Resources - Optimization
Answer: No

External Environment - Physical
Answer: No

ERCOT Operational Failure
Answer: No

Disruptive Technologies
Answer: No

Indirect Corporate Risk Alignment

Capital Availability
Answer: No

Intentional Physical and Cyber Security Acts
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Critical Technology System Failure
Answer: No

Regulatory/Legislative - Proceedings and Matters
Answer: No

Technology - Systems
Answer: No

Regulatory/Legislative - Operations
Answer: No

External Environment - Physical
Answer: No

ERCOT Operational Failure
Answer: No

Human Resource - Optimization
Answer: No

Disruptive Technologies
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct - CNP-11366

AIS Tracking Status: Submitted - Asset Management
Division: High Voltage Delivery
Function: Major Underground
Portfolio Name: CEHE 2016 Portfolio
Template Name: CEHE 2016 Template
Project/Program Program
Non-Discretionary: No

Prepared by: Rick Nelson
AIS Project: CNP-11366

Start Year: 2016
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Project Description
This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.

Cash Flows	2016	2017	2018	2019	2020	Total
Capital Cost	$2,900,000	$2,200,000	$1,200,000	$1,200,000	$1,200,000	$8,700,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	3,600,720	3. Design Criteria	0
2. Reliability Benefit	630,126	4. Supplemental Benefits	144,029

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI# 1: Reliability/Load Growth	Yes	CR# 2: Critical Technology System Failure	No
SI# 2: Integrate Technology	No	CR# 3: Sustainable Earnings Growth Strategy	No
SI# 3: Support Dereg Market	No	CR# 4: Technology - Systems	No
SI# 4: Enhance Security	No	CR# 5: Human Resources - Optimization	No
SI# 5: Workforce	No	CR# 6: ERCOT Operational or Market Failure	No
SI# 6: High Performing Safety	No	CR# 7: Regulatory / Proceedings and Matters	No
SI# 7: Long-Term Planning	No	CR# 8: Regulatory / Legislative - Operations	No
SI# 8: Customer Engagement	No	CR# 9: Disruptive Technologies	No
SI# 9: Benefits of Electric	No	CR#10: External Environment - Physical	No
SI#10: Recovery of Costs	No	CR#11: Smart Grid Business Transformation	No
SI#11: Manage O&M	No	CR#12: Credit	No
CR# 1: Intentional Physical and Cyber Security Acts	No		

Calculated Value to Cost Ratio	Corporate Risk Ratio Adjustment	Total Value to Cost Ratio
4,374,874 / $8,700,000 = 0.50	0 / $8,700,000 = 0.00	= 0.50

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct - CNP-11366

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: No

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 50.0000

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.0167

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 60.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 4.0000
Justification: *Load at risk is an average of 5 12kV circuits per span = 50 MW. We experience approximately 1 failure per year in the project population of 60 spans of fiber duct and it will take a minimum of 4 days to repair. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages*

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided to support your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*
Answer: Increases infrastructure capacity for future use
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*

Select the MUG reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's/Galveston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct - CNP-11366

Strategic Alignment

Please identify this project or programs alignment with CEHEs strategic Imperatives (select Yes for all that apply)

Build, operate, maintain, and optimize our system to achieve reliability objectives and meet load growth requirements (2016)</p
Answer: Yes
Justification: This will mitigate the delay in response time to restore service to critical loads and will reduce the instances of customer loads left in single contingence for extended periods of time.

Enhance operations through integration of new, innovative technologies (2016)?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market (2016)?
Answer: No

Enhance physical and cyber security strategy to strengthen operational resiliency (2016)?
Answer: No

Recruit, retain, and develop employees to ensure a capable, diverse workforce and leadership team (2016)?
Answer: No

Achieve a high performance safety culture to strengthen the safety of our employees and the public (2016)?
Answer: No

Enable long-term planning that provides clear visibility of future capital and O&M requirements to support organic growth in the business (2016)?
Answer: No

Improve customer engagement and satisfaction through enhanced processes, communications and technology (2016)?
Answer: No

Promote the socially responsible benefits of electrification and the grid (2016)?
Answer: No

Achieve complete and timely recovery of costs (2016)?
Answer: No

Improve efficiencies, business processes, and service delivery to effectively manage O&M (2016)?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct - CNP-11366

Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Smart Grid Business Transformation
Answer: No

Credit
Answer: No

Indirect Corporate Risk Alignment

Intentional Physical and Cyber Security Acts
Answer: No

Critical Technology System Failure
Answer: No

Sustainable Earnings Growth Strategy
Answer: No

Technology - Systems
Answer: No

Human Resources - Optimization
Answer: No

ERCOT Operational or Market Failure
Answer: No

Regulatory / Proceedings and Matters
Answer: No

Regulatory / Legislative - Operations
Answer: No

Disruptive Technologies
Answer: No

External Environment - Physical
Answer: No

Credit
Answer: No

Smart Grid Business Transformation
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

AIS Tracking Status:	Submitted - Asset Management	**Prepared by:**	Rick Nelson
Division:	High Voltage Delivery	**AIS Project:**	CNP-10920
Function:	Major Underground	**Start Year:**	2015
Portfolio Name:	CEHE 2015 Portfolio	**Project/Program**	Program
Template Name:	CEHE 2015 Template	**Non-Discretionary:**	No
CapEx Category:	Sys Impvmts (Repair/repl, rehab, reliability pgms)		

Project Description
This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.

Cash Flows	2015	2016	2017	2018	2019	Total
Capital Cost	$2,150,000	$2,900,000	$2,200,000	$700,000	$700,000	$8,650,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Load at Risk	3,600,720	3. Design Criteria	0
2. Reliability Benefit	630,126	4. Supplemental Benefits	144,029

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI#1: Build, Operate, Maintain & Optimize System	Yes	CR# 4: Intentional Physical and Cyber Security Acts	No
SI#2: Implement & Integrate Innovative Technology	No	CR# 5: External Environment - Physical	No
SI#3: Attract & Retain Satisfied Customers	No	CR# 6: Credit	No
SI#4: Earn Authorized Returns – work with Leg/Reg	No	CR# 7: Critical Technology System Failure	No
SI#5: Attract, Develop, & Retain Skilled Workforce	No	CR# 8: Regulatory / Proceedings and Matters	No
SI#6: Value: Sustainable Infrastructure Growth	No	CR# 9: Regulatory / Legislative - Operations	No
SI#7: Proactively Support Deregulated Power Market	No	CR#10: External Environment - Economic	No
CR# 1: Human Resource - Optimization	No	CR#11: Smart Grid Business Transformation	No
CR# 2: ERCOT Operational or Market Failure	No	CR#12: Disruptive Technologies	No
CR# 3: Technology - Systems	No		

Calculated Value to Cost Ratio =	4,374,874 / $8,650,000 = 0.51
Corporate Risk Alignment Ratio Value =	0.00
	= 0.51

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: No

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 50.0000

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 0.0167

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 60.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 4.0000
Justification: *Load at risk is an average of 5 12kV circuits per span = 50 MW. We experience approximately 1 failure per year in the project population of 60 spans of fiber duct and it will take a minimum of 4 days to repair. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided t support your selections.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*
Answer: Increases infrastructure capacity for future use
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*

Select the MUG reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's/Galveston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

Strategic Alignment

Please identify this project or program's alignment with CEHE's strategic imperatives (select 'Yes' for all that apply)

Build, operate, maintain, and optimize our system to provide safe, reliable and efficient service?
Answer: Yes
Justification:

Implement and integrate innovative technology solutions to improve efficiencies and performance?
Answer. No

Attract and retain satisfied customers through enhanced services, business processes, and technology?
Answer. No

Earn authorized returns and work with legislators and regulators to achieve success?
Answer: No

Attract, develop and retain a diverse, highly skilled and productive workforce?
Answer: No

Increase shareholder value through sustainable infrastructure growth?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

Corporate Risk Alignment

Human Resource - Optimization
Answer: No
ERCOT Operational or Market Failure
Answer: No
Technology - Systems
Answer: No
Intentional Physical and Cyber Security Acts
Answer: No
External Environment - Physical
Answer: No
Credit
Answer: No
Critical Technology System Failure
Answer: No
Regulatory / Proceedings and Matters
Answer: No
Regulatory / Legislative - Operations
Answer: No
External Environment - Economic (Incls Price Volatility)
Answer: No
Smart Grid Business Transformation
Answer: No
Disruptive Technologies
Answer: No

Indirect Corporate Risk Alignment

Human Resource - Optimization
Answer: No
ERCOT Operational or Market Failure
Answer: No
Technology - Systems
Answer: No
Intentional Physical and Cyber Security Acts
Answer: No
External Environment - Physical
Answer: No
Credit
Answer: No
Critical Technology System Failure
Answer: No
Regulatory / Proceedings and Matters
Answer: No
Regulatory / Legislative - Operations
Answer: No
External Environment - Economic (Incls Price Volatility)
Answer: No
Smart Grid Business Transformation
Answer: No
Disruptive Technologies
Answer: No

Corporate Image

Is this project going to have a unique impact to Corporate Image?
Answer: No

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

AIS Tracking Status: Approved - Asset Management
Division: High Voltage Delivery
Function: Major Underground
Portfolio Name: CEHE 2014 Portfolio
CapEx Category: Sys Impvmts (Repair/repl, rehab, reliability pgms)

Prepared by: Rick Nelson
AIS Project: CNP-10334
Start Year: 2014
Project/Program/Baseline: Program
Non-Discretionary: No

Project Description
This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.

revised cash flows for budget reduction exercise
ks 20140122

Cash Flows	2014	2015	2016	2017	2018	Total
Capital Cost	$700,000	$3,300,000	$2,900,000	$2,200,000	$700,000	$9,800,000
OM Costs	$0	$0	$0	$0	$0	$0
Avoided Capital	$0	$0	$0	$0	$0	$0
OM Savings	$0	$0	$0	$0	$0	$0

Project Valuation

Criterion	Score	Criterion	Score
1. Financial Benefit	0	4. Design Criteria	0
2. Load at Risk	2,400,000	5. Regulatory Concerns	0
3. Reliability Benefit	375,000	6. Supplemental Benefits	96,000

Strategic/Corporate Risk Alignment

Item	Answer	Item	Answer
SI#1 - Reliability / Load Growth	Yes	CR# 4: External Environment - Physical	No
SI#2 - Tech Initiatives	No	CR# 5: Regulatory/Legislative	No
SI#3 - Regulatory / Legislative	No	CR# 6: Smart Grid Business Transformation	No
SI#4 - Workforce	No	CR# 7: Credit	No
SI#5 - Deregulated Power Market	No	CR# 8: Asset Optimization	No
SI#6 - Customer Engagement	No	CR# 9: Growth Strategy	No
CR# 1: Technology - Systems	No	CR#10: External Environment - Economic	No
CR# 2: Critical System Failure	No	CR#11: Capital Availability / Allocation	No
CR# 3: ERCOT Operational or Market Failure	No	CR#12: Human Resources - Optimization	No

Calculated Value to Cost Ratio = 2,871,000 / $9,800,000 = 0.29

Strategic Imperatives Ratio Adjustment = 0.00
Corporate Risk Ratio Adjustment = 0.00

= 0.29

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

General Questions

What type of load is at risk?
Answer: Major Underground

If this project is not executed, and an outage results, will customers lose electric service?
Answer: No

Will the project be conducted in a Dedicated Underground Area?
Answer: Yes

What is the base load at risk in MW per component or unit?
Answer: 10.0000

How many outage events do you anticipate per time period (identified in the following question)?
Answer: 1.0000

Over what time period do you expect the outage event(s) to occur?
Answer: Per Year

If an outage occurs, how many electrical components or units, are at risk?
Answer: 5.0000

How long will it take (in days) to return the system to normal operating conditions? (Time to Repair)
Answer: 4.0000
Justification: *Load at risk is an average of 5 12kV circuits per span = 10 MW x 5. We experience approximately 1 failure per year and it will take a minimum of 4 days to repair. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

Select the reliability issue(s), if any, that this project is designed to address. Use the space provided to support your selections.
Answer: Address Aging Infrastructure Issues
Justification: *This project is to replace deteriorating 4" fiber duct installed years ago. This duct was installed as a cost cutting measure but it has been determined that it cannot hold up in Houston's/Galveston's environment. The duct collapses and cannot be used and when there is trouble, this duct is found to be broken, blocked and unusable the majority of the time, thus extending outages.*

Select the applicable Major Underground Design Criteria, if any, that this project or program addresses. Use the space provided t support your selections.
Answer:

Are there agreements between CEHE and a regulatory body or external entity that require this project or program to be done? Select the entity and attach a copy of the agreement.
Answer:

What other benefits does this project or program provide? (select all that apply)
Answer: Contributes to overall infrastructure performance / improvement
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*
Answer: Increases infrastructure capacity for future use
Justification: *4" fiber duct was installed when our system was mostly 12kV primary underground distribution. As the fiber duct collapses around 12kV primary cables even if it can be removed installing 35kV feeder cable is typically not possible. New standard installation is 9, 12 or 15, 6" PVC conduits.*

CenterPoint Energy Houston Electric - Project Evaluation Form

HLP/00/1015 MUG Rehab - FDR Fiber Duct

Strategic Alignment

Please identify this project or program's alignment with CEHE's strategic imperatives (select 'Yes' for all that apply)

Build, operate, maintain, and optimize our system to achieve reliability objectives and meet load growth requirements?
Answer: Yes
Justification: This will mitigate the delay in response time to restore service to critical loads and will reduce the instances of customer loads left in single contingence

Effectively implement technology initiatives?
Answer: No

Achieve favorable regulatory and legislative outcomes
Answer: No

Attract, develop, and retain a highly skilled, safety conscious workforce?
Answer: No

Proactively contribute to solutions that support a well-functioning, deregulated power market?
Answer: No

Improve customer engagement through enhanced processes and technology?
Answer: No

Corporate Risk Alignment

Please identify this project or program's alignment with CEHE's corporate risks (select 'Yes' for all that apply):

Technology - Systems?
Answer: No

Critical System Failure?
Answer: No

ERCOT Operational or Market Failure?
Answer: No

External Environment - Physical?
Answer: No

Regulatory/Legislative - Proceedings and Matters?
Answer: No

Smart Grid Business Transformation?
Answer: No

Credit?
Answer: No

Asset Optimization?
Answer: No

Growth Strategy?
Answer: No

External Environment - Economic (Including Price Volatility)?
Answer: No

Capital Availability/Allocation?
Answer: No

Human Resources - Optimization?
Answer: No

ATTACHMENT 2

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
2019 CEHE RATE CASE
DOCKET 49421-SOAH DOCKET NO. 473-19-3864

CITY OF HOUSTON
REQUEST NO.: COH15-02

QUESTION:

Reference CEHE's response to COH01-22, for each capital project identified, identify the specific portions of CEHE's testimony, exhibits and workpapers supporting the prudence of costs incurred for each such project.

ANSWER:

Several Company witnesses support the prudence of and necessity of the capital projects identified in response to COH 1-22. Specifically, Company witness Randal Pryor's testimony describes programs designed to ensure the reasonableness and prudence of distribution investment, as well as cost control and budgeting processes implemented by CenterPoint Houston on an ongoing basis. Company witness Martin Narendorf, likewise, describes programs designed to ensure the reasonableness and prudence of transmission investment, as well as cost control and budgeting processes implemented by CenterPoint Houston. Ms. Dale Bodden describes planning processes that ensure capital investment projects are consistently and thoroughly evaluated prior to and during construction. Ms. Julienne Sugarek testifies to how the Company's Power Delivery Solutions division is responsible for facilitating the interconnection process for customers and generators on both the transmission and distribution system, advising distribution customers on power quality solutions, providing design and project support for installations on the distribution system, and interfacing with customers to address changing electrical service needs and responding to service concerns. And, Ms. Shachella James explains the structure and services provided by Service Company's Technology Operations group and demonstrates the reasonableness and necessity of Technology Operations capital investment deployed by CenterPoint Houston. These witnesses describe how all projects, including the projects identified in response to COH 1-22, are managed on a daily basis to ensure prudence and reasonableness of costs.

See attachment COH15-02 Testimony Pages for Capital Projects.xlsx for a listing of the capital projects identified in CEHE's response to COH 1-22 and specific portions of CEHE's testimony, exhibits and workpapers that are relevant to and supporting of the prudence and necessity for the referenced projects.

SPONSOR (PREPARER):
Randal Pryor/Martin Narendorf/Dale Bodden/Julienne Sugarek/Shachella James (Randal Pryor/Martin Narendorf/Dale Bodden/Julienne Sugarek/Shachella James)

RESPONSIVE DOCUMENTS:
COH15-02 Testimony Pages for Capital Projects.xlsx

COH 15-2 Testimony Pages for Capital Projectsxlsx

Project Number	Short Title	Pryor	Sugarek	Bodden	Narendorf	S James
AB1C	300% and 10% Circuit Reliability Program	Pg 15-22	Pg 9 -15			
AB2G	Pole Maintenance Program (Poles)	Pg 15-22; Pg 34-35	Pg 9 -15			
AB48	Pole Maintenance Program (Bracing)	Pg 15-22, Pg 34-35	Pg 9 -15			
ABCA	Cable Assessment/Life Extension Program (CAP/CLEP)	Pg 15-22, Pg 34-35	Pg 9 -15			
CE1B	Major Underground Rehab				Pg 15	
DB18	City of Houston LED Streetlight Conversion		Pg 24-26			
HLP/00/0014	Replace SCADA Logic Cages/RTUs				Pg 15	
HLP/00/0075	Replace Failed Major Equip and Purchase Spares				Pg 24-25	
HLP/00/0484	Substation Security Upgrades				Pg 24-25	
HLP/00/0612	Fry Substation- Build 35kV Sub w/6 35kV Feeders			Pgs 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0875	Springwoods Substation- Build 35kV Sub w/8 Feeders			Pgs 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0884	Replace 12/35kV Square D Type FBS Breakers				Pg 24-25	
HLP/00/0909	Replace 35/12kV Breakers				Pg 24-25	
HLP/00/0941	Alexander Island Substation. Upgrade Transformers to 50MVA			Pg 15- 22, Exhibit DB-5 p 1-5		
HLP/00/0953	South Channel New Substation 2-50MVA Trfs w/6 Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0954	Sandy Point: New Substation 2-50MVA Trfs w/4-12kV Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0956	Willow Substation Add 2-100MVA Transformers w/4-35kV Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0963	Springwoods Substation Add 3rd 100MVA Trf and 4-35kV Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0974	Tomball Substation Add 3rd Transformer and 2 Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/0977	Jordan New 35kV Substation			Pg 15- 22, Exhibit DB-5 p 1-5		
HLP/00/0978	Trinity Bay: Install 35kV Facilities (2 Trfs and 4-35kV Feeders)			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/1036	Tanner: New Substation w/2-100MVA Trfs and 6-35kV Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/1084	Village Creek New Substation w/2-100MVA Trfs and 4-35kV Feeders			Pg 15- 22; Exhibit DB-5 p 1-5		
HLP/00/1087	Arcola Substation- Install 3rd 100MVA Trf and 3-35kV Feeders			Pg 15- 22, Exhibit DB-5 p 1-5		
S/101785/CE/FIBER	Fiber Rehabilitation, Telecom Core Network					Pg 13-17
S/101785/CN/FIBER	Post Ams WiMax and WiMax "Backhaul" Transport Growth					Pg 13-17
S/101785/CN/MPLS	Telcom Services MPLS Network Optimization					Pg 13-17
S/101785/CN/OPENSKY	Opensky VMDRS- Console Repl; Sys Growth; Post-project enhancements					Pg 13-17
S/101785/CN/TFSY	Fiber Expansion, v.10					Pg 13-17
S/101785/CN/TMSY	Microwave- New licensed sites; OC3 MW repl; Licensed network deployment					Pg 13-17

ATTACHMENT 3

Exhibit SN-13

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
2019 CEHE RATE CASE
DOCKET 49421-SOAH DOCKET NO. 473-19-3864

CITY OF HOUSTON
REQUEST NO.: COH15-06

QUESTION:

Reference CEHE's response to COH01-22, for each capital project identified, provide the corporate costs that were allocated to each project, along with the basis for such allocations, and the portion of such costs included in each CEHE DCRF filing.

ANSWER:

Please see the response to PUC02-20U explaining capital work billed directly or allocated to capital work orders.
Please refer to Ms. Kristie Colvin's direct testimony Exhibit KLC-11 for the capitalization of computer software policy and capitalization policy. Refer to COH15-06 Attachment 1.pdf for the construction overhead policy.
Please see the response to COH15-06 Attachment 2.xlsx for the corporate costs that were included in CenterPoint Houston's DCRF filing. A DCRF application was not filed for calendar year ended 2018.

SPONSOR (PREPARER):
Kristie Colvin / Michelle Townsend (Kristie Colvin / Michelle Townsend)

RESPONSIVE DOCUMENTS:
COH15-06 Attachment 1.pdf
COH15-06 Attachment 2.xlsx

COH/HCC
EXHIBIT 1

SOAH DOCKET No. 473-19-3864
PUC Docket No. 49421
CDH1S-06 Attachment 2.xlsx
Page 1 of 1

CenterPoint Energy Houston Electric
Calculation of Capitalized Overhead for Distribution

	Docket No. 44572	Docket No. 45747	Docket No. 47032	Docket No 48226	Total
Accounts Payable	128,518	119,816	163,906	165,372	577,612
Property Accounting	270,355	274,830	201,733	350,599	1,097,517
Call Center	-	210,013	328,916	388,523	927,451
Total	398,874	604,658	694,555	904,494	2,602,580