(9,505 miles at 12 kV and 2,580 miles at 35 kV) and over 10,347 miles of underground URD laterals (3,172 miles at 12 kV and 7,175 miles at 35 kV).

To provide service to a distribution customer, the distribution voltage must be lowered to the customer's desired service voltage by utilizing service transformers. Typical service level voltages range from 120/240 volt to 480-volt service. Power is delivered to the customer's point of service by lines called "secondaries" or "service drops."

At the customer's point of service, all usage is measured by meters that are owned, maintained, and operated by CenterPoint Houston. These meters range from advanced smart meters for residential and small commercial customers, as well as mid-size commercial customers, to meters recording 15-minute intervals of kwh usage and demand for large commercial and industrial customers. CenterPoint Houston completed the installation of advanced meters on all of the Company's 2.2 million then-existing customer meters on July 1, 2012. In addition to the enhanced electric market operation, the advanced meters are capable of reporting power outages at customer premises instantaneously. CenterPoint Houston uses data analytics as a tool to process and filter meter data into operational metrics. The meter is the end of the utility's distribution system.

Q. DOES CENTERPOINT HOUSTON UTILIZE UNDERGROUND DISTRIBUTION FACILITIES?

A. Yes, the Company utilizes underground main feeder lines to serve designated areas. Underground feeder lines serve downtown Houston, Texas Medical Center, Houston Intercontinental Airport, UT Medical Branch in Galveston, and the Galleria and Greenway Plaza areas. The underground system also includes

underground crossings of some freeways, underground connections called "getaways" between the substation and overhead circuits, and underground laterals. The total underground system consists of 790.9 miles of circuit at 12 kV and 558.9 miles of circuit at 35 kV.

Q. PLEASE DESCRIBE THE TYPES OF PROGRAMS AND INITIATIVES THAT CENTERPOINT HOUSTON RELIES UPON TO OPERATE THE DISTRIBUTION DELIVERY SYSTEM.

A. Since January 1, 2010, CenterPoint Houston has implemented a number of program and initiatives designed to enhance the safety and reliability of the Distribution Delivery System including a Pole Maintenance Program, URD Cable Life Extension Program, Meter Maintenance Program, Meter Inspection Program, Tree Trimming Program, Feeder Inspection Program, Pole Top Switch Inspection Program and Service Restoration Process. I discuss each of these eight programs below. The Company also has a Power Factor Program that is discussed in the testimony of Ms. Bodden, along with a discussion of the Company's reliability standards. The Company's Infra-Red Program, Root Cause Analysis Program, Hot Fuse Program and Distribution Automation Program are discussed by Ms. Sugarek. All of these programs may result in capital improvements, O&M expenses, or a combination of both. For instance, the Pole Maintenance Program routinely requires O&M expense for inspections and ground-line treatment of existing poles and capital investment when an entire pole is replaced. As noted above, whether work is classified as O&M or capital investment is determined by the Company's Capitalization Policy.

A. Pole Maintenance Program

Q. WHAT IS THE POLE MAINTENANCE PROGRAM?

A. The Pole Maintenance program ensures that a portion of the Company's distribution system poles are assessed annually by contract ground-line crews. Pole assessments include a visual and/or manual assessment. Visual pole assessments are comprised of a field observation for evidence of exterior decay or damage above the ground line. Poles that are seven years old or older are manually excavated and assessed for decay below the ground line, as well as sounded and bored to locate internal voids. Poles of sufficient strength to remain in service until the next scheduled assessment are treated and tagged. Poles that are identified for reinforcement during these assessments are either treated (with a fumigant or preservative, as necessary) and braced, or replaced.

The Pole Maintenance Program also includes visual assessment of guy wires, including checking for guy wires that are damaged, broken, frayed or slack, and assessment of guy strains and anchors.

As part of the Company's grid hardening initiative, pole assessment and treatment have been accelerated, so approximately 10% of the Company's poles are assessed annually, on average, on a rolling 10-year cycle. As such, pole bracings and replacements should increase accordingly. Additional foreign poles (for example AT&T poles) containing Company facilities that may merit replacement by third parties are also identified.

Q. HOW IS THE POLE MAINTENANCE PROGRAM ADMINISTERED?

A. The CenterPoint Houston administrator of the program is responsible for the management of the systematic inspection of all CenterPoint Houston distribution

wood poles, the treatment of poles, and the bracing or replacement of poles with significant wood decay. The administrator ensures that work orders are issued and construction completed in a timely manner for poles requiring bracing or replacement. The administrator manages the contracts with the contractors that perform the pole inspections, pole replacements and pole bracings. The administrator also coordinates any electrical construction on AT&T poles.

B. URD Cable Life Extension Program

Q. WHAT IS THE URD CABLE LIFE EXTENSION PROGRAM?

A. The program takes an innovative, proactive approach to identify potential failures in aged underground cable and other URD components that do not meet specification before they can occur. By identifying the risk of potential failures, CenterPoint Houston can make wise and prudent investments in its URD infrastructure and ultimately better serve our customers by preventing future outages where they are most likely.

Q. WHY IS THIS IMPORTANT?

A. The Company has more than 18,000 URD loops comprising more than 13,000 miles of cable and associated distribution equipment. This equipment includes: pad-mounted transformers, secondary pedestals, primary pull holes, terminal poles, terminators and elbows. Currently, 27% of these loops have cables that are at least 35 years old, and these loops cause 44% of system outages. Past loop failures have indicated that URD loops over 35 years old have the highest probability of failure within CenterPoint Houston's distribution system.

Q. WHAT HAS BEEN THE COMPANY'S PRACTICE IN THE PAST?

A. Historically, the Company replaced an average of 35 URD loops annually. The replacement criterion was based on: 1) the loop's age, 2) the loop's reliability performance, and 3) whether the loop was served by large step-down transformers. At this rate, it would take more than 100 years to replace these loops, while the rest of the URD system continues to grow and age.

Q. WHAT IS THE COMPANY'S CURRENT STRATEGY?

A. To address this issue before it could become a major threat to reliability, CenterPoint Houston began an innovative cable life extension program in 2013. This proactive approach, using IMCORP's Factory Grade® cable assessment technology, brought positive results as CenterPoint Houston was able to assess and extend the life of more than 10 times as many loops as it had been replacing annually, while significantly reducing costs and improving system reliability through innovative and affordable means. IMCORP provides a 15-year guarantee on all assessed loops.

Once spans have been assessed and the appropriate corrective actions have been completed, all spans within the entire loop are guaranteed to perform to the original manufacturer's standards. These corrective actions are expected to extend the useful life of the cable system by eradicating or replacing spans that are near or at imminent risk of failure. As a result of the Cable Life Extension Program, the Company is systematically reducing the backlog of aging 35-year-old cable and related systems. See Figure 7 for a picture of a URD loop under assessment.

Figure 7. URD Loop Under Assessment

C. Meter Maintenance and Inspection Programs

Q. WHAT IS THE METER MAINTENANCE PROGRAM?

A. The Company's Meter Maintenance program maintains the installed meters on CenterPoint Houston's system. The program includes testing the accuracy of in-service equipment, identifying and replacing damaged or failed equipment, addressing customer complaints related to the meter, and identifying, investigating, documenting, and correcting the theft of electricity by diversion. Personnel from several different areas are involved in this effort, including Distribution Operations, Metering and Field Operations.

Q. WHAT ARE THE RESULTS OF THE METER MAINTENANCE PROGRAM?

A. CenterPoint Houston tested or inspected approximately 162,700 meters in 2018 as part of the meter maintenance program.

Q. WHAT IS THE METER INSPECTION PROGRAM?

A. The Company's Meter Inspection program is administered by Field Operations. The purpose of the program is to sweep the system utilizing meter reading routes on a 10-year cycle to mitigate revenue losses by doing a visual audit of the systems

integrity with regard to theft, meter by-pass, old electromechanical meters, and AMS meters that are not synced with the Customer Information System and thus not being billed.

Q. HAS THE METER INSPECTION PROGRAM BEEN SUCCESSFUL?

A. Yes. The Meter Inspection Program inspected 217,873 premises and found 7,542 meters that were tampered with or malfunctioning during 2018.

D. Vegetation Management Program

Q. HOW DOES CENTERPOINT HOUSTON PLAN FOR VEGETATION MANAGEMENT?

A. CenterPoint Houston's proactive vegetation management program for the distribution system prioritizes circuits for trimming based on each circuit's trim cycle and the reliability of each circuit. All circuits that initially meet the trim cycle criteria are then ranked and prioritized using an analytics model based on several reliability criteria.

Additionally, the Company's distribution system has been divided into eight regions to better distribute the work among the vegetation contractors and to provide an opportunity for the contractors to bid for a larger portion of proactive work, allowing the best opportunity for the most efficient use of resources. The contractor that is awarded a specific region is responsible for the reactive tree trim maintenance, the proactive tree trim maintenance, the proactive hazard tree work, and tree maintenance associated with capital improvements in that region, providing for more overall efficiencies.

Q. HOW MUCH OF THE VEGETATION MANAGEMENT WORK IS DONE ON A FIXED PRICE (BID) BASIS?

A. Approximately 90% of the Company's proactive vegetation management work is on a fixed price (bid) basis with the remainder of the costs on a time and equipment basis. Fixed price work is primarily allocated to circuits with extensive feeder and lateral networks that are in outlying areas of the system or that are otherwise conducive to fixed price bids. Time and equipment work is allocated strategically for smaller circuits, which include those circuits close to vendor parking locations, those with problems that require quicker action than a bid process will allow, and for other situations not conducive to fixed price bids.

Q. HOW ARE BIDS OBTAINED FOR VEGETATION MANAGEMENT?

A. Vegetation management personnel at CenterPoint Houston prepare work maps of circuits identified for fixed price work. Once completed, these maps as well as trimming specifications are released to vendors for field review. The vendors submit bids to complete tree trimming on the circuits for each region. The vegetation management personnel review the bids and award the work for each region to the best valued provider based on pricing, available resource capacity, and performance as determined from previous performance audits of the vendors' completed work.

Q. IS COMPLETED WORK INSPECTED?

A. Yes. When the work is completed, a CenterPoint Houston forester inspects the job to ensure that it was completed satisfactorily and reviews the invoices to ensure accuracy. CenterPoint Houston foresters and vendors also interface with the customers as needed to resolve issues and facilitate completion of the work.

Q. HOW DOES CENTERPOINT HOUSTON MANAGE THE WORK?

A. Distribution vegetation management work is administered and coordinated by a staff of one manager, one supervisor, eight professional utility foresters, one mapping technician, and one support analyst. Currently, four professional Line Clearance vendors perform utility tree trimming services for CenterPoint Houston.

Q. HOW DOES CENTERPOINT HOUSTON SCHEDULE ITS TREE TRIMMING WORK?

A. The Company identifies circuits eligible for proactive work each calendar year based on the trim cycle criteria. Circuits identified as eligible for proactive work are then prioritized by reliability performance. Once the list of planned circuits is generated for each region, actual scheduling for specific circuits during the year may vary based on developing reliability issues, optimizing for crew and equipment efficiencies, maintaining sensitivity to the community, and other issues historically unique to specific circuits.

Q. WHAT ARE SOME OF THE RELIABILITY ISSUES THAT CENTERPOINT HOUSTON TAKES INTO ACCOUNT?

A. Reliability issues that are taken into account when determining proactive circuit priority are the number of tree clearance events documented as a reliability cause code per circuit and the number of customer minutes of outage due to vegetation and wind per circuit.

Q. HAS CENTERPOINT HOUSTON CHANGED ITS TREE TRIMMING APPROACH FOR 10% CIRCUITS IN RESPONSE TO RELIABILITY STANDARD CHANGES?

A. No, the Company believes it is still important to provide focus on these circuits from a tree trimming perspective. Furthermore, the Company strives to complete the tree trimming for 300% circuits that are due for proactive trimming by March 31 of each year.

Q. DOES CENTERPOINT HOUSTON ADDRESS VEGETATION ISSUES THAT ARISE OUTSIDE OF THE CIRCUITS IDENTIFIED FOR PROACTIVE TREE TRIMMING?

A. Yes. Unscheduled or reactive tree trim maintenance is performed by CenterPoint Houston to address vegetation issues that require immediate attention. This work is done in response to specific requests from customers or CenterPoint Houston personnel located at the Service Centers. Customer requests are received by CenterPoint Houston personnel and routed to assigned vendors for inspection to ensure validity. If valid, the trees are trimmed or removed to clearance specifications. Vendors also receive work orders directly from the Service Centers and conduct work per standard line clearance specifications or specific instructions on the work request. Most reactive work is performed on a unit-priced basis.

Q. DOES CENTERPOINT HOUSTON IDENTIFY AND REMOVE HAZARD TREES THAT ARE LOCATED OUTSIDE OF THE EASEMENT?

A. Yes. In addition to those hazard trees identified and removed as part of scheduled and unscheduled circuit maintenance, CenterPoint Houston utilizes a proactive hazard tree removal program that involves Level 1 tree risk assessments as defined

in Part 9 of ANSI Standard A300. In high-risk areas, hazard trees outside of the easement are proactively located and removed with the consent of the landowner. The intent of this initiative is to reduce the risk of falling trees impacting electrical facilities and to minimize impacts in an extreme storm event. The Company performs a patrol of the feeder-mains for those circuits known for higher tree mortality or otherwise identified as high-risk areas. Frequency of inspections may vary based on conditions observed.

Q. HAVE CENTERPOINT HOUSTON'S EXPENDITURES FOR TREE TRIMMING INCREASED SINCE ITS LAST RATE CASE?

A. Yes. In Project No. 37475, *Rulemaking for Utility Infrastructure Storm Hardening,* the Commission adopted 16 Texas Administrative Code § 25.95 that required utilities to file a storm hardening plan ("Plan") by May 1, 2011, including the utility's current and future storm hardening plans over a five-year period beginning January 1, 2011. In response to this rule, the Company adopted hardening plans to increase proactive tree trimming and implement proactive hazard tree removal. As a result, over the eight-year period from 2011 to 2018, CenterPoint Houston has spent a total of $222.50 million on proactive tree trimming, hazard tree removal and reactive tree trimming. In 2018, during the test year a total of $35.02 million was spent on these three programs.

Q. WHAT FACTORS HAVE CAUSED CENTERPOINT HOUSTON'S TREE TRIMMING COSTS TO INCREASE?

A. The Company experienced a 50% increase in contractor bid prices on a per mile basis from 2014 to 2017. Additionally, as Ms. Bodden's testimony notes, over the past four years, overhead pole miles (feeder-main and laterals) have increased an

average of 171 miles per year. With more miles of distribution line to maintain, the Company's costs associated with tree trimming have increased.

Q. HAS THE COMPANY TAKEN STEPS TO TRY TO CONTROL THE COST OF TREE TRIMMING IN LIGHT OF ITS INCREASED CONTRACTOR COSTS?

A. Yes. In 2017, the Company divided its system into seven regions to better distribute the work and to provide an opportunity for the contractors to bid on a larger scope of tree trimming work in order to make the required work more attractive to bidding contractors. Previously, bids were awarded on a circuit by circuit basis. Under the new approach, all work for a region was packaged together in an effort to reduce pricing based on the scale of the work to be performed.

Based on the bid prices for the circuits in each region, the seven regions were awarded to four contractors. While the Company's cost per mile did not decrease, the strategy was effective in halting the annual increase in costs. In addition, by bidding and awarding a full year of work earlier in the year, the Company afforded contractors the opportunity to better plan their staffing resources. This approach has also allowed foresters to work directly with a single entity in their region rather than having to deal with several contractors based on circuit assignments. This, in turn, allowed the Company and the contractors to communicate monthly budgeting expenditure expectations early in the year, define spend opportunities later in the year and increase contractor accountability. In a further effort to make this work even more attractive to contractors, CenterPoint Houston, in 2018, awarded contracts to four contractors who serve eight system regions.

Q. ARE THESE COST INCREASES IN TREE TRIMMING BALANCED BY THE SYSTEM BENEFITS THIS ACTIVITY PROVIDES?

A. Yes. Falling trees and branches, as well as falling trees outside of the easement, are the primary cause of damage and outages in an extreme storm. An increase in proactive tree trimming and hazard tree removal should reduce the impact of extreme storms, as well as improve day-to-day reliability.

Q. CAN YOU SUMMARIZE CENTERPOINT HOUSTON'S EXPERIENCE REGARDING TREE TRIMMING OVER THE LAST EIGHT YEARS?

A. Yes. CenterPoint Houston has worked to optimally focus its expenditures for tree trimming where they will do the most good, all the while maintaining its commitment to support grid hardening. From 2011 to 2013, hazard tree expenditures increased due to drought conditions and the impact of pine bark beetles. Proactive tree trimming expenditures increased from 2014 to 2017 due to rising contractor labor rates. As a result, the Company implemented new strategies to create the best opportunity for better bid prices. Reactive tree trimming expenditures increased annually to resolve spot tree trimming issues. In summary, the Company continues to refine its approach to meet changing conditions and to invest in tree trimming to support reliability and grid hardening.

E. Feeder Inspection Program

Q. WHAT IS THE FEEDER INSPECTION PROGRAM?

A. The Company's feeder inspection program is a proactive program to inspect distribution feeders and laterals, on a periodic basis to identify and correct issues found with the condition of the feeder that could impact the reliable operation of the feeder. This periodic inspection and maintenance is intended to improve the

performance of the feeders under adverse weather conditions. Damaged or broken facilities are identified, reports are made, and work orders to repair are issued accordingly. See Figure 8 for some examples of the damage identified by the inspectors.

Figure 8. Damage Identified by Inspectors

Q. HOW MANY DAMAGED OR BROKEN FACILITIES HAVE BEEN REPAIRED OR REPLACED UNDER THE FEEDER INSPECTION PROGRAM?

A. From 2011 to 2018, the Company has completed repairs associated with approximately 4,070 work orders.

F. Pole Top Switch Inspection Program

Q. WHAT IS THE POLE TOP SWITCH INSPECTION PROGRAM?

A. The Pole Top Switch Inspection Program performs a conditions-based assessment of distribution overhead pole top switches to improve system reliability. The program began as a pilot in the second quarter of 2018. The pilot is being used to develop an ongoing Pole Top Switch Inspection/Maintenance Program.

Q. WHY IS THE POLE TOP SWITCH PROGRAM IMPORTANT TO CENTERPOINT HOUSTON?

A. Pole top switches are an integral part of the Company's overhead distribution system. The pole top switch is used to sectionalize the distribution circuit at strategic locations for loading purposes under normal conditions and to switch circuit sections under contingency conditions when there is an outage on part of the circuit.

Q. WHAT FACTORS DOES THE PROGRAM USE TO SELECT CIRCUITS TO INSPECT?

A. The program identifies and prioritizes circuits for inspection based on circuit type (residential, commercial, industrial or EOP circuit), circuit reliability (10% or 300% circuit, feeder outages and contamination), previous pole top switch issues and circuit tie/contingency switching capability.

Q. WHAT IS THE SCOPE OF THE INSPECTION EFFORT?

A. The pilot was initially rolled out at two service centers in the second quarter of 2018, and expanded to all service centers in September 2018. The pilot intends to inspect and maintain approximately 96 to 144 distribution circuits annually, which encompasses approximately 960 to 1,440 switches.

Q. WHAT IS THE PROCESS FOR INSPECTION?

A. The process is to perform a visual inspection of the condition of the pole top switch and associated distribution facilities on the pole. Also, a manual operation of the pole top switch is performed. Items needing repair and/or replacement up to and including the entire pole top switch are repaired or replaced. See Figure 9 for a picture of a pole top switch and a switch undergoing maintenance.

Figure 9. Pole Top Switch and Switch Undergoing Maintenance

VIII. SERVICE RESTORATION PROCESS

Q. WHAT IS THE PURPOSE OF THE SERVICE RESTORATION PROCESS?

A. The purpose of the process is to improve service response time by reducing the time it takes to restore service after outages, and as a result, minimize the duration of outages as measured by the Customer Average Interruption Duration Index ("CAIDI"). The reliability of the "system" as measured by the System Average Interruption Duration Index ("SAIDI") is made up of two components, System Average Interruption Frequency Index ("SAIFI"), which is a measure of the frequency of outages, and CAIDI, which is a measure of the duration of outages.

(SAIDI = SAIFI x CAIDI; 122.97 = 1.26 x 97.60). Reducing service response time will improve overall reliability.

Q. HOW DOES THE SERVICE RESTORATION PROCESS ACCOMPLISH ITS GOALS?

A. The service restoration process utilizes a number of steps to accomplish its goals. First, weather conditions are monitored in advance of storms. This is especially important for storms that occur on weekends and after hours, so that crews can be mobilized before the weather enters the area. Second, eight trouble levels (blue sky day up to an extreme event) have been established to measure the severity of the storm as determined by the number of circuits and fuses that are out. Third, based on forecasted and actual trouble levels, crews are mobilized to respond accordingly. It is important to have an appropriate match between the "number of crews" available and the "amount of trouble". Communications are sent to all necessary personnel to provide notice of impending storms, trouble levels, mobilization requirements and storm status. Fourth, restoration priorities are followed that optimize restoration by restoring service to the outage events that impact the largest number of customers first. The priority is to restore circuits first, then fuses, then transformers and finally local outages, which are individual customers. This effort to triage events insures that resources are deployed in the most effective manner. Circuit and fuse metrics are reported weekly, along with monthly scorecards that measure call out rates, hold time, travel time, dispatch time and system response rates. The result is a unified system-wide approach to restore electric service.

Q. TO SUPPORT THIS PROCESS, DID CENTERPOINT HOUSTON ESTABLISH ANY SPECIFIC ROLES?

A. Yes. CenterPoint Houston has adopted the Incident Command System ("ICS") which is a component of the National Incident Management System. The system uses a common system of identifying roles and responsibilities which include: Incident Commander, Operations Section Chief, and Planning Section Chief, among others. Additionally, the role of the Monitor was established at Distribution Control Operations to monitor the weather, provide alerts, and issue pages. This role is performed by one of the regional supervisors. The role of Trouble Coordinator was established so that at each service center a crew leader provides a single point of contact for trouble related issues at that center. The role of the Incident Commander, which is performed by a Distribution Operations Director, makes all final decisions regarding the activation and mobilization of resources. The Incident Commander is supported by the Operations Section Chief and the Planning Section Chief. These responsibilities are scheduled annually and are an integral responsibility of all operational leaders. All distribution operational leaders play an important role in this process and are assigned several weeks throughout the year in which they perform their role under the ICS structure.

Q. ARE ANY OTHER PROCESSES USED TO ENHANCE SERVICE RESTORATION IN THE EVENT OF A SEVERE STORM?

A. Yes. Trouble isolation practices are utilized. The purpose of trouble isolation practices is to isolate outages to the fewest number of customers, so that the time is takes to make the actual repair impacts the fewest number of customers. For URD loop outages, the practice includes determining the fault location, isolating the bad

transformer or cable fault, re-establishing service to the remaining transformers, and replacing the bad transformer. As a result, only a few customers are out of service during the repair. This same practice is also used for overhead infrastructure where damaged infrastructure is isolated from sound infrastructure – allowing service to be restored to the customers located within the bounds of the non-impacted area.

IX. HURRICANE HARVEY EXPENSES

Q. IS THE COMPANY REQUESTING RECOVERY FOR DISTRIBUTION OPERATIONS EXPENSES ASSOCIATED WITH HURRICANE HARVEY?

A. Yes. The Company is requesting $64.4 million related to its recovery efforts following Hurricane Harvey. These expenses, which were not reimbursed by insurance, were necessary to restore power to customers following Hurricane Harvey. Ms. Colvin discusses the regulatory asset and related accounting treatment proposed by the Company to recover these expenses.

Q. CAN YOU PROVIDE A DESCRIPTION OF THE MAGNITUDE OF HURRICANE HARVEY AND THE COMPANY'S RESPONSE?

A. After making landfall as a Category 4 storm near Port Aransas, Texas, Hurricane Harvey stalled, impacting south Texas, southeast Texas, and Louisiana for days. Maximum sustained winds were 130 mph winds at landfall. 51.88 inches of rainfall was registered in southeast Texas, breaking the single-storm record of 48 inches set in 1978 and exceeding the 10-year annual average for the area. More than 42,000 lightning strikes occurred across our electric service territory. Hurricane Harvey spawned tornadoes in southeast Texas, Louisiana, Alabama, Mississippi,

Tennessee, and North Carolina. As a result of Hurricane Harvey, 293 total electric circuits locked out, 4,494 total electric fuses went out, eight substations were out of service, and nine substations were inaccessible due to high water. 1.2 million customers were impacted. In response to the event, CenterPoint Houston activated its EOP and more than 2,200 employees plus 1,500 contractors and mutual assistance personnel from seven states worked to restore service. Five staging sites were utilized and 352,000 total hours were worked during the EOP event (160 hours per employee). Approximately 85 crew spokespersons were used, 104,412 meals served, and more than 12,000 hotel rooms were utilized. From a distribution capital investment perspective (inclusive of additions and removals) the net impact of the event was approximately $23 million, net of insurance proceeds.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

STATE OF Texas §
§
COUNTY OF Harris §

AFFIDAVIT OF RANDAL PRYOR

BEFORE ME, the undersigned authority, on this day personally appeared Randal Pryor, who having been placed under oath by me did depose as follows:

1. "My name is Randal Pryor. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based upon my personal knowledge.

2. I have prepared the foregoing Direct Testimony and the information contained in this document is true and correct to the best of my knowledge."

Further affiant sayeth not.

Randal M Pryor
Randal Pryor

SUBSCRIBED AND SWORN TO BEFORE ME on this 6th day of March, 2019.

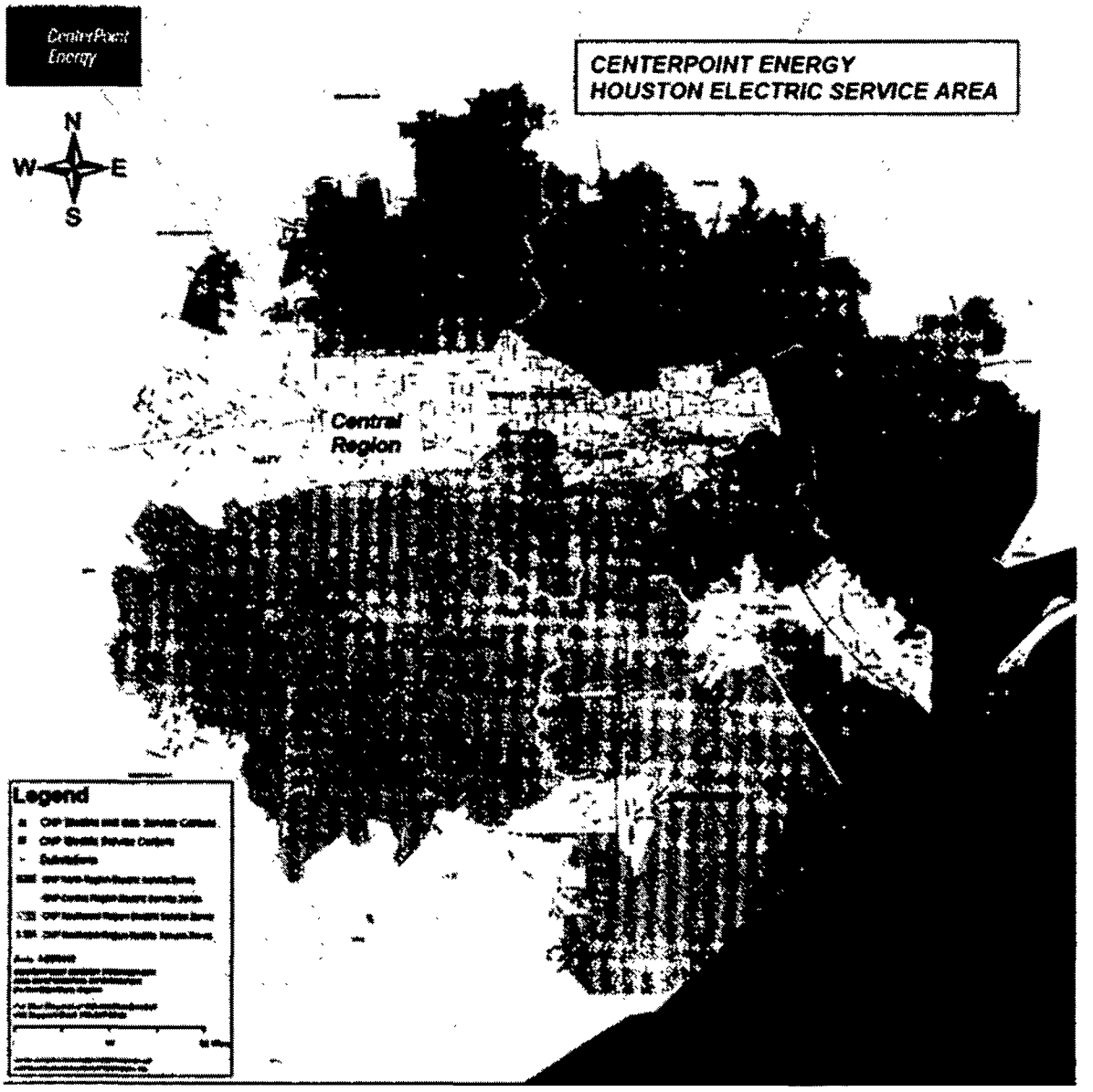
Kristi Keel
Notary Public in and for the State of Texas

KRISTI KEEL
Notary Public, State of Texas
Comm. Expires 03-14-2020
Notary ID 1190550-2

My commission expires: 3/14/20

EXHIBIT RMP-1

CENTERPOINT HOUSTON SERVICE AREA



Distribution Power Delivery
Budget & Financial Training

Service Center Budget Training

What is the role of Distribution Operations?

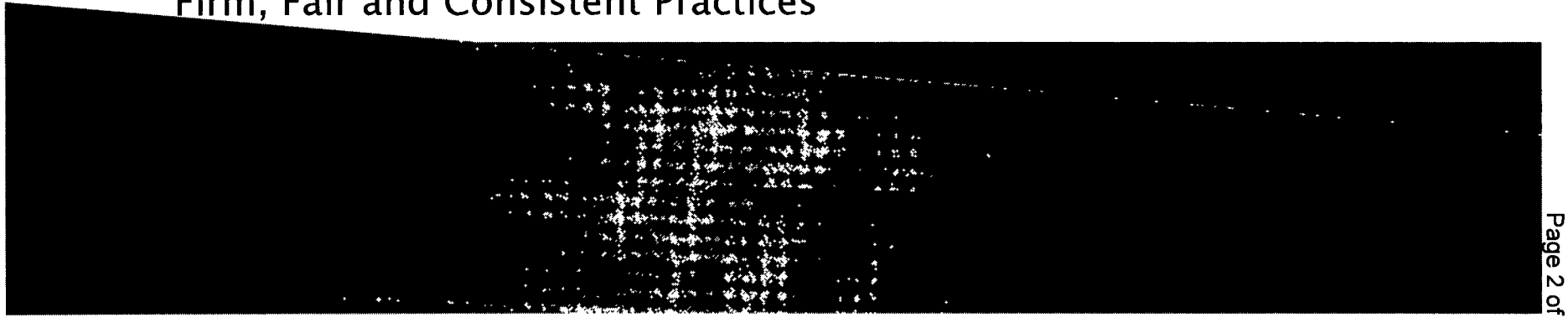
A service center is a business

Stakeholders
- Employees
- Customers
- Shareholders

Business decisions are made everyday and all decisions should consider impact to their stakeholders.

Safety, Reliability, Profitability

Firm, Fair and Consistent Practices

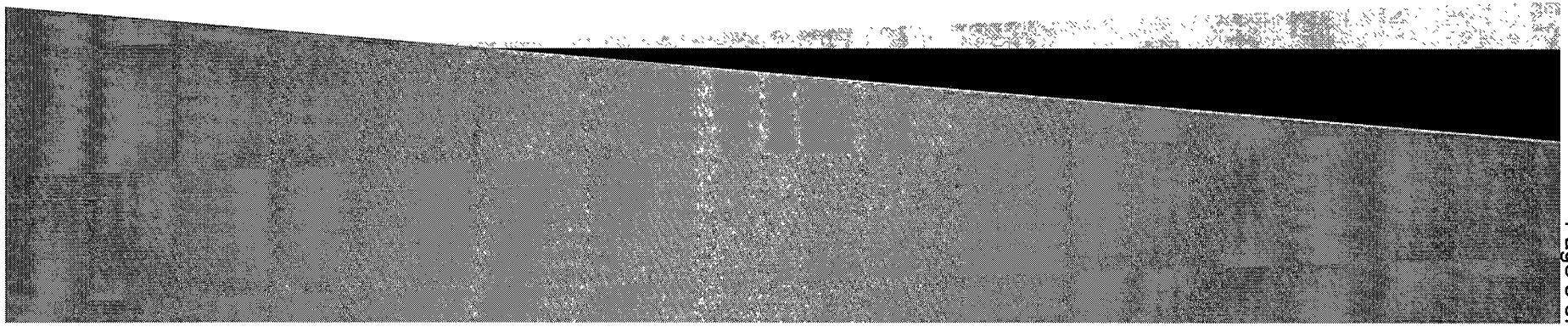


Service Center Budget Training

Who are we?

- Investor Owned
- Regulated Business

As a regulated "wires" utility, we neither generate power nor sell it to end-use customers. We instead own, operate and maintain the poles, wires and substations that make the delivery of electricity from power plants to customers safe and reliable. With over 3,700 miles of transmission lines and 49,000 miles of distribution lines, we deliver electricity on behalf of over 70 retail electric providers.



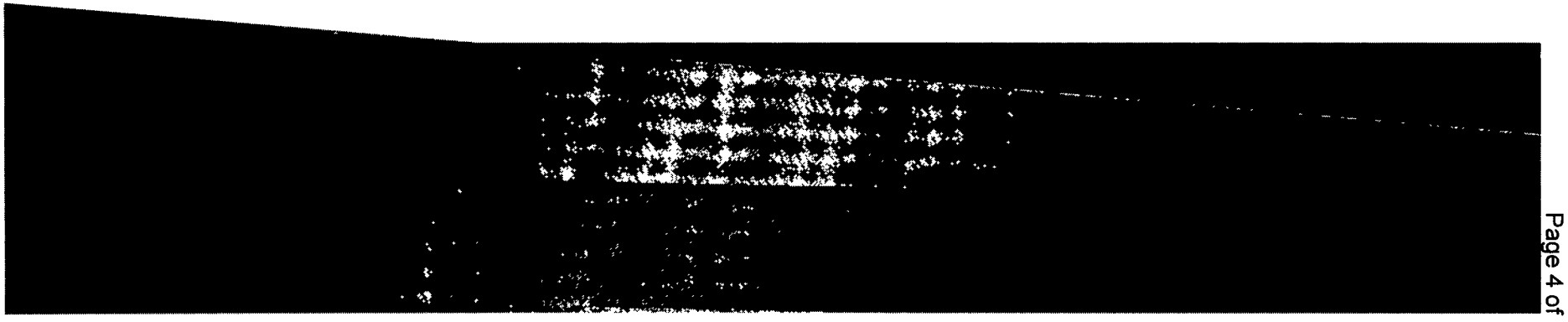
Service Center Budget Training

What are your stakeholders expectations?

- Employees
- Customers
- Shareholders

Who are your customers?

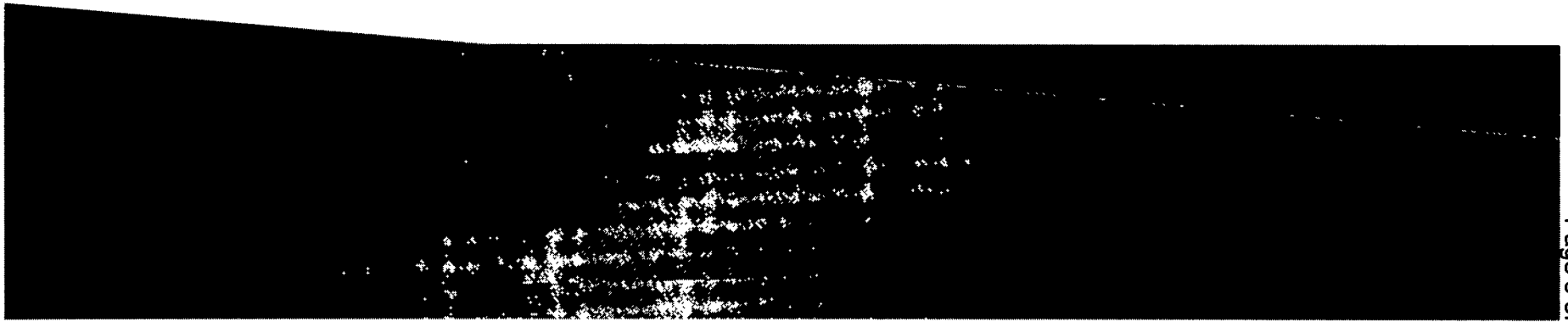
How does CenterPoint Energy Houston Electric make money?



Service Center Budget Training

The Public Utility Commission of Texas(PUCT) regulates the rates and services of transmission and distribution utilities that operate where there is competition, investor-owned electric utilities where competition has not been chosen, and incumbent local exchange companies that have not elected incentive regulation.

- Regulated Business
- Rate Case/DCRF
- Authorized Return On Equity
- Revenue Requirement
- Rate Base
- Capital Expenditures
- Operating Expenses



Service Center Budget Training

Rate Case - The administrative proceeding to establish rates.

Rate of Return - The realized rate of return is the percentage factor obtained by dividing the net operating income from utility operations by the rate base. An adequate rate of return is the percentage factor that, when multiplied by the rate base, produces earnings that will meet the interest and equity requirements of the capital used to support the rate base

Revenue Requirement - The sum total of the revenues required to pay all operating and capital costs of providing service

Rate Base - The investor supplied plant facilities and other assets used in supplying utility service to the consumer. This investment base is the amount to which a rate of return is applied.

Service Center Operations Training

Capital Expenditures - An expenditure to acquire long-term assets

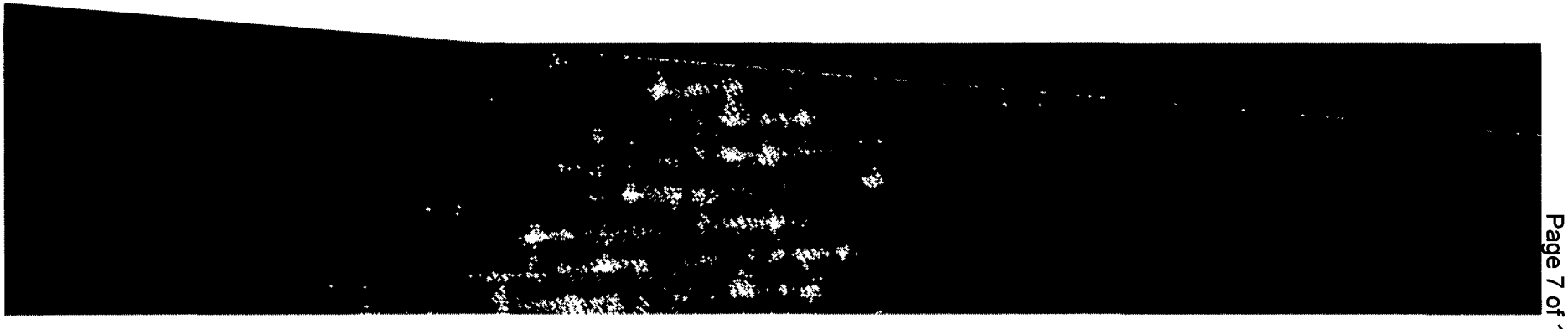
Operating Expenses - An expenditure related to operating and the company's line of business. (O&M, City Franchise Tax, Ad Valorem Tax)

Earnings - Income

Net Income - The excess of all revenues and gains for a period over all expenses and losses of a period.

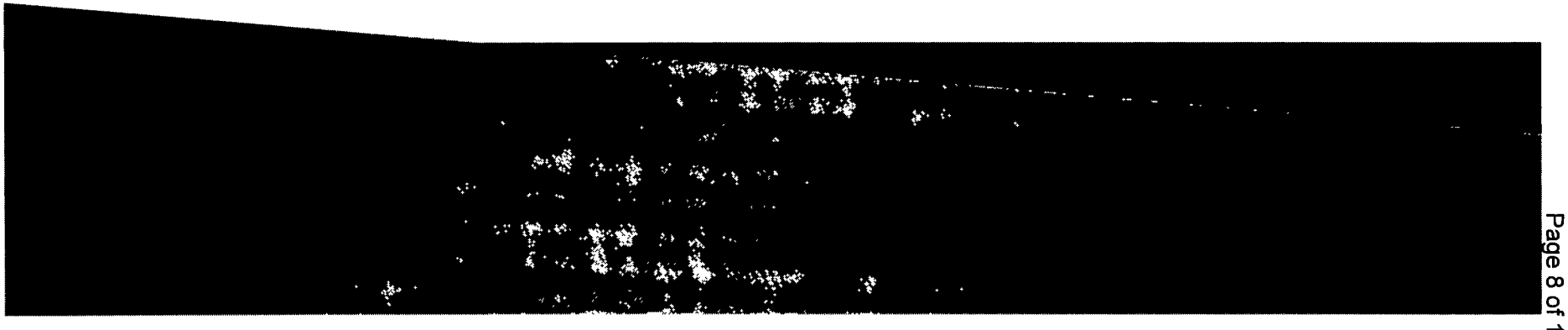
Operating Income - Income before interest and Income Taxes

O&M - Expenses such as labor, contracts and services that maintain and operate the unit.



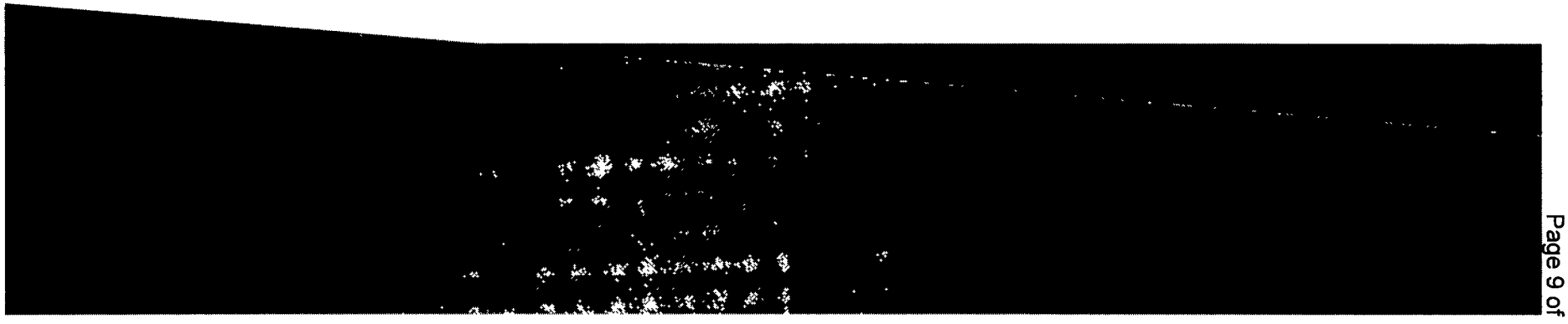
Service Center Operations Training

Depreciation - Depreciation is the process by which a company gradually records the loss in value of a fixed asset. The purpose of recording depreciation as an expense over a period is to spread the initial purchase price of the fixed asset over its useful life. Each time a company prepares its financial statements, it records a depreciation expense to allocate the loss in value of the machines, equipment or cars it has purchased.



Service Center Operations Training

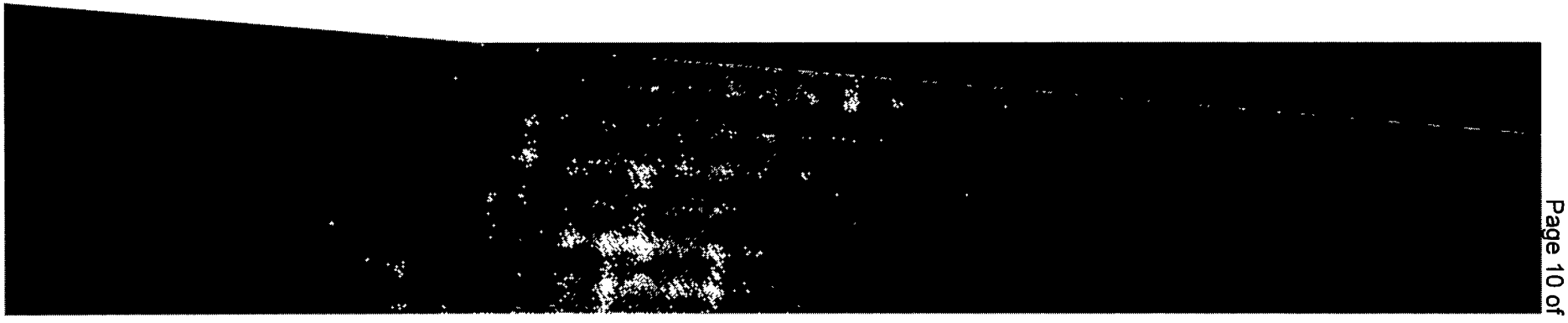
- How do you increase rate base?
- What impact is there from increasing rate base?
- How do you impact operating income?



Service Center Budget Training

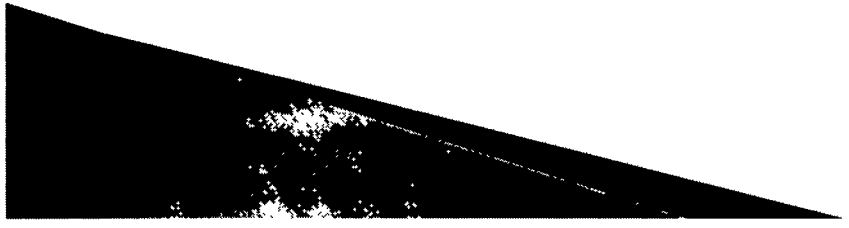
Financial Acumen

- Strategic Plan
- Five Year Financial Plan
- Annual Budget (O&M and Capital)
- Monthly Forecast
- Quarterly Earning Release
- Purpose of WBS and Cost Elements



What would CNP need to consider when budgeting?

- Materials
- Labor
- Transportation
- Etc.



- CAPITAL –

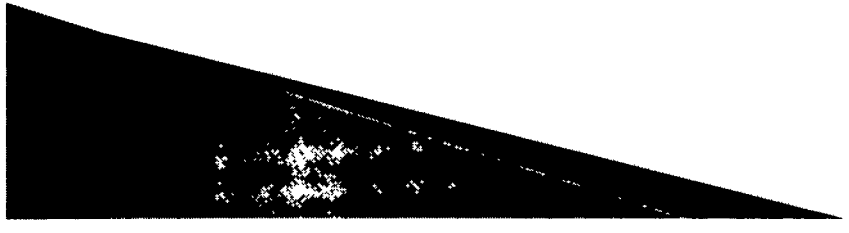
  Money that is used to generate income or make an investment.

- CAPITAL ITEMS –
  - Pole
  - Wire
  - Arrestor
  - Switch
  - Transformer
  - Capacitor Control

- OPERATIONS & MAINTENANCE (O&M) -

  Actions to retain or restore an item in a state that it can perform its required function.

- O&M Items-
  - Cross Arm Replacement
  - Bolts, Nuts, Washers
  - Fuse Link
  - Bracket

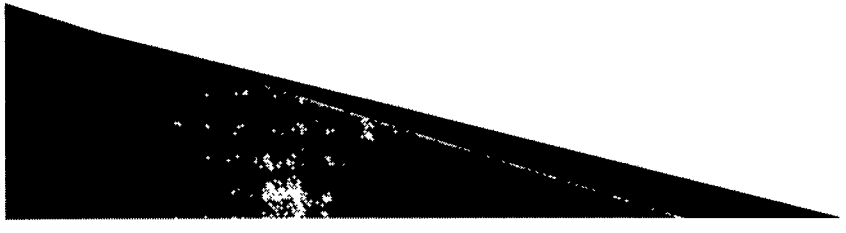


Capital Order Types

- HDC1 -Dist Construction-New (Install Only)
- HDC2 -Dist Construction Rebuild/Improve (Install & Remove)
- HDC3 -Dist Construction Relocations (Usually Remove)

O&M Order Types

- HDM1- Dist Restoration
- HDM2 - Dist Corrective Maintenance
- HDM4 - Dist Plan/Preventative Maintenance



Display CEHE Dist: Construction Rebuild/Improve 76732591 Header Data
Display CEHE Dist: Construction Rebuild/Improve 76732591: Header Data
Status
Order
FUW_OSR_9758_2425030_PTS
Notification
1403775873
System Status
User Status
PMACTtype
01
Distribution - Reliability
Operations
Components
Costs
Partner
Objects
Addl Data
Location
Planning
Control
Enhancement
ALA
FUW_OSR_9758_2425030_PTS
01/10/2016 06:29:23 CSI Jonathan Berkowitz (00214299) Phone 8328867170
NEED TO REPLACE PTS 9758
FILLED AND ENTERED BY RICK VILLALON ON 01/12/2016 IN YARD D
Reviewed labor and material, labor var. due to working thru lunch, sent
to saa for teco. 01/18/2016 JDJ 13834
Order address
Obj. address
Sold-to party
Street/Hse No.
Location
Telephone
Fax
Responsibilities
Planner group
DIS / 1012 Distribution
Main WorkCtr
SAT0206 / 1012 CREW - OPEN
User responsible
00222936
Brian Davenport
Dates
Bas. start date
01/22/2016
Basic fin. date
03/01/2016
Priority
1st chance,lower
Sched. start
01/22/2016 15:00:00
Sched. finish
03/01/2016 19:16:00
Revision
Actual start
01/15/2016 00:00:00
Actual finish
00:00:00
Scheduling type
Backwards
Reference Date
01/22/2016
Version
0
Start in past
0
Rel. view
Predecessor
Adjust dates
1
Ca. Selection
From Work Center (...
Factory Cal. ID

Order
Environment
System
Help
Display CEHE Dist: Construction Rebuild/Improve 76732591: Add'l Data
Status
Order
HDC2 732591
FUW_OSR_9758_2425030_PTS
Notification
14037758873
System Status
CLSD PCNF PRT GMPS MANC PRC SETC
User Status
GIR1 MRCL PCAE COM UNIT
PMActType
81 Distribution - Reliability
Header Data
Operations
Components
Costs
Partner
Objects
Location
Planning
Control
Enhancement
ALA
Organization
Company Code
0003 CNP Houston Electric, LLC
Controlling Area
C0AR CNP Controlling Area
Profit Center
1101170 BTWN/CHALVIEW AREA
Tax Jurisdiction
USTX7752048541
Processing group
0
Project Definition
S/101556/C
Responsible CCtr
CA700984 BAY OH Rel AB1C
Object Class
Overhea..
Functional Area
1070 Constr Work in Prog
WBS Element
S/101556/CE/AB1CI-1 OH RELIABILITY INSTALL-1
SubNetwork Of

Correcting Order Errors

- The creator of the order will receive the error in their SAP Inbox.
- In order to correct the order, the creator must go through the SAP Inbox. Going straight into Change mode will not correct the error.
- All errors must be corrected by month end.
- See "Process ALA Error" Documentation

- When creating a work order, first use the 3 letter main work center (BEL, SPB, HUM, etc.) or DPM when applicable. After releasing the order you may go back into the order and include any following digits (for example: DPM012)
- All orders must have a Functional Location
- Once an order is released and other fields are populated, do not make changes to the automatically populated fields
- Error correction must be completed through your SAP Inbox. Otherwise, the correction will not be processed (See "Process ALA Error" Instructions).
- SAP Reports:
  - IW31 - Create Work Order
  - IW32 - Change Work Order
  - IW33 - Display Work Order
  - Z_REI_TOTMATL - Total Material Report - Displays materials for a specific work order and identifies retirement units.

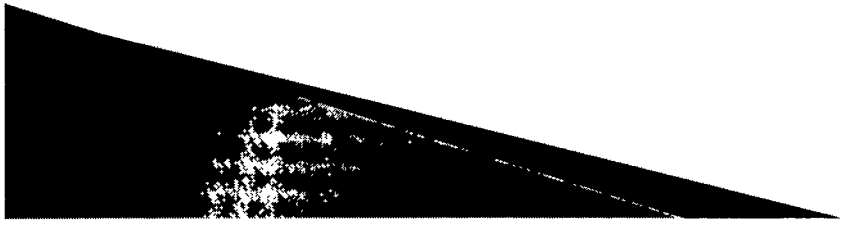


EXHIBIT RMP-3 SERVICE CONSULTANT

SAP TRAINING

TO TESTIMONY

OF

RANDAL M. PRYOR

IS VOLUMINOUS AND

WILL BE PROVIDED IN ELECTRONIC

FORMAT.

SAP 4.6 UPGRADE
AUTOMATED DEFAULT SETTLEMENT RULES FOR WORK ORDERS
Order - Maintenance Activity - WBS Elements

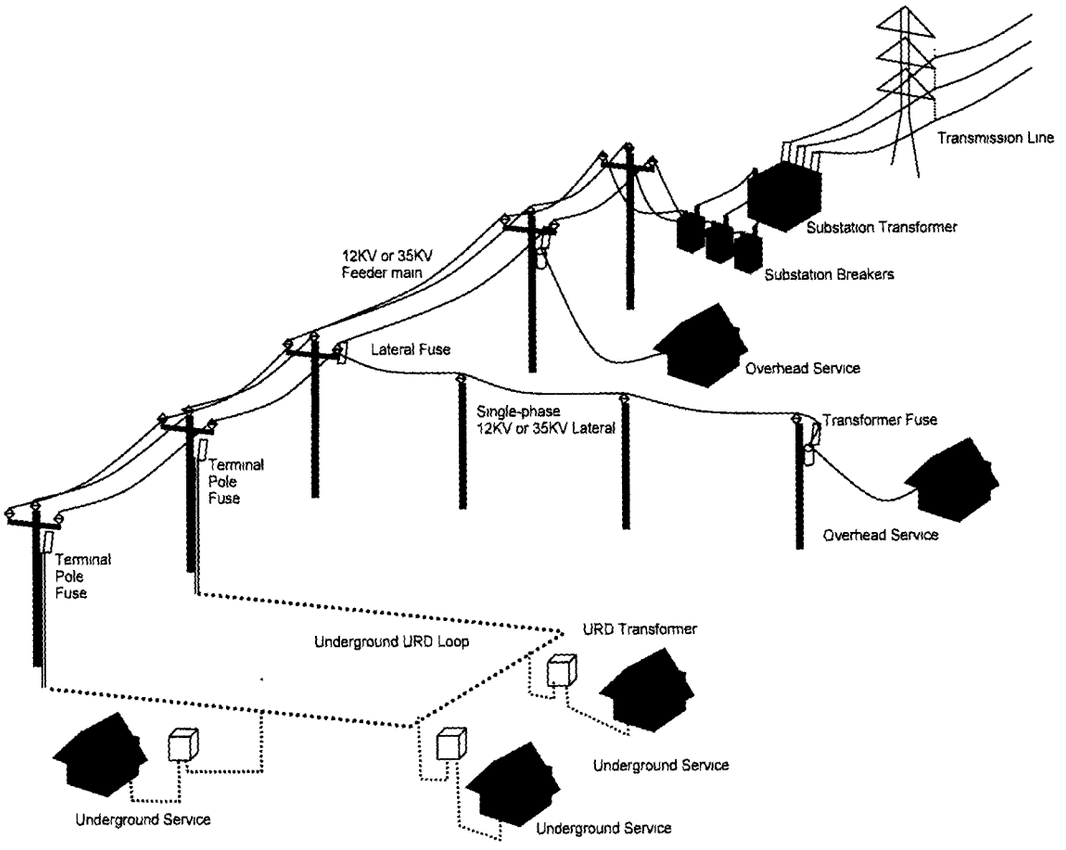
Order Type	MAT Code	MAT Description	Description	Header WBS	Settlement WBS Element - 1	%	Settlement WBS Element - 2	%
HDC1			**New Construction Involving ONLY the Installation of Capital Material**					
HDC1	230	Large meter Installation	Installation of new meter and drops	S/101XXX/CN/AF1ZI	S/101XXX/CN/AF1ZI	100%		
HDC1	63	Dlines - Overhead - Residential	Overhead revenue installation - Residential	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	100%		
HDC1	64	Dlines - Overhead - Commercial	Overhead revenue installation - Commercial	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	100%		
HDC1	65	Dlines - Overhead - Industrial	Overhead revenue installation - Industrial	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	100%		
HDC1	66	Dlines - Underground	Underground revenue installation	S/101XXX/CN/AF1UI	S/101XXX/CN/AF1UI	100%		
HDC1	80	Distribution - Capacity	New feeder development	S/101XXX/CN/AF1AI	S/101XXX/CN/AF1AI	100%		
HDC1	101	Distribution - Lines/Equipment	Field corrective maintenance - new installation only	S/101XXX/CE/AB1ZI	S/101XXX/CE/AB1ZI	100%		
HDC1	81	Distribution - Reliability	Reliability work - installation of capital material to prevent outages	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	100%		
HDC1	82	Distribution - Quality of Service	Reliability work - installation of capital material to address power quality	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	100%		
HDC1	83	Distribution - Voltage	Reliability work - installation of capital material to address voltage problems	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	100%		
HDC1	84	Distribution - Load Bal/Control	Reliability work - installation of capital material to address load balancing	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	100%		
HDC1	901	Capacitors - New	New capacitor installations	S/101XXX/CE/AFNCI	S/101XXX/CE/AFNCI	100%		
HDC2			**Construction Involving the Installation and Removal of Capital Material**					
HDC2	101	Distribution - Lines/Equipment	Field corrective maintenance - installation & removal of capital material	S/101XXX/CE/AB1ZI	S/101XXX/CE/AB1ZI	70%	S/101XXX/CE/AB1ZR	30%
HDC2	247	Distrib - URD Span Replacement	Underground span replacements	S/101XXX/CE/AB1SI	S/101XXX/CE/AB1SI	70%	S/101XXX/CE/AB1SR	30%
HDC2	63	Dlines - Overhead - Residential	Overhead revenue - installation & removal of capital material - residential	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	70%	S/101XXX/CN/AF1HR	30%
HDC2	64	Dlines - Overhead - Commercial	Overhead revenue - installation & removal of capital material - commercial	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	70%	S/101XXX/CN/AF1HR	30%
HDC2	65	Dlines - Overhead - Industrial	Overhead revenue - installation & removal of capital material - industrial	S/101XXX/CN/AF1HI	S/101XXX/CN/AF1HI	70%	S/101XXX/CN/AF1HR	30%
HDC2	66	Dlines - Underground	Underground revenue - installation & removal of capital material	S/101XXX/CN/AF1UI	S/101XXX/CN/AF1UI	70%	S/101XXX/CN/AF1UR	30%
HDC2	78	Guard Lights	Area lighting - installation & removal of area light unit	S/101XXX/CE/AB1YI	S/101XXX/CE/AB1YI	70%	S/101XXX/CE/AB1YR	30%
HDC2	79	Distrib - Reliability URD - Loop	Underground loop replacement - installation & removal of capital material	S/101XXX/CE/AB1VI	S/101XXX/CE/AB1VI	70%	S/101XXX/CE/AB1VR	30%
HDC2	80	Distribution - Capacity	Feeder development - installation & removal of capital material	S/101XXX/CN/AF1AI	S/101XXX/CN/AF1AI	70%	S/101XXX/CN/AF1AR	30%
HDC2	81	Distribution - Reliability	Reliability work - installation & removal of capital material to prevent outages	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	70%	S/101XXX/CE/AB1CR	30%
HDC2	82	Distribution - Quality of Service	Reliability work - installation & removal of capital material to address power quality	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	70%	S/101XXX/CE/AB1CR	30%
HDC2	83	Distribution - Voltage	Reliability work - installation & removal of capital material to address voltage problems	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	70%	S/101XXX/CE/AB1CR	30%
HDC2	84	Distribution - Load Bal/Control	Reliability work - installation & removal of capital material to address load balancing	S/101XXX/CE/AB1CI	S/101XXX/CE/AB1CI	70%	S/101XXX/CE/AB1CR	30%
HDC2	902	Capacitor Work	Capacitor maintenance - installation & removal of capital material	S/101XXX/CE/AB1XI	S/101XXX/CE/AB1XI	70%	S/101XXX/CE/AB1XR	30%
HDC2	903	Program Pole Bracing	Non-HLP pole bracing (DO NOT USE)	S/101550/CE/ABP3I	S/101550/CE/ABP3I	70%	S/101550/CE/ABP3R	30%
HDC2	904	Non Program Rotten Poles	Non program rotten pole - installation & removal of pole	S/101XXX/CE/AB1GI	S/101XXX/CE/AB1GI	70%	S/101XXX/CE/AB1GR	30%
HDC2	905	Program Rotten Poles	Program rotten poles - installation & removal of pole	S/101550/CE/AB2GI	S/101550/CE/AB2GI	70%	S/101550/CE/AB2GR	30%
HDC2	906	Program Pole Bracing	Program pole bracing (Truss brace)	S/101550/CE/AB4BI	S/101550/CE/AB4BI	70%	S/101550/CE/AB4BR	30%
HDC2	907	SBC Pole Replacement	Installation & removal of Capital CPE equipment with SBC Pole replacement	S/101550/CE/ABP1I	S/101550/CE/ABP1I	70%	S/101550/CE/ABP1R	30%
HDC2	245	Distribution - Customer Request	Overhead relocations - installation & removal of capital material	S/101XXX/CE/AD2DI	S/101XXX/CE/AD2DI	70%	S/101XXX/CE/AD2DR	30%
HDC2	246	Distribution - Government	Overhead relocations - installation & removal of capital material (i e , TXDOT, COH)	S/101XXX/CE/AD2DI	S/101XXX/CE/AD2DI	70%	S/101XXX/CE/AD2DR	30%
HDC2	92	Distribution - Statutory	Overhead relocations - installation & removal of capital material (i e , PUC, RRC)	S/101XXX/CE/AD2DI	S/101XXX/CE/AD2DI	70%	S/101XXX/CE/AD2DR	30%
HDC2	93	Distribution - Other	Overhead relocations - installation & removal of capital material (internal requests)	S/101XXX/CE/AD2DI	S/101XXX/CE/AD2DI	70%	S/101XXX/CE/AD2DR	30%
HDC3			**Construction Involving ONLY the Removal of Capital Material**					
HDC3	51	Lines/Equipment - Removal	Removal of overhead distribution	S/101XXX/CE/AB1ZR			S/101XXX/CE/AB1ZR	100%
HDC3	52	Capacitor - Removal	Removal of existing capacitor bank	S/101XXX/CE/AB1XR			S/101XXX/CE/AB1XR	100%
HDC3	58	Guard Light - Removal	Removal of area lighting	S/101XXX/CE/AB1YR			S/101XXX/CE/AB1YR	100%
HDC3	59	URD Removal	Removal of underground distribution	S/101XXX/CE/AB1VR			S/101XXX/CE/AB1VR	100%
HDM2			**Construction That Does Not Involve the Installation or Removal of Capital Material**					
HDM2	78	Guard Lights	Area lighting maintenance work	S/101XXX/EE/AB1Y				
HDM2	79	Distrib - Reliability URD - Loop	Maintenance of URD loops (i e , loop inspections, replacing elbows, leveling PMT)	S/101XXX/EE/AB1V				
HDM2	81	Distribution - Reliability	Maintenance of overhead distribution to improve reliability	S/101XXX/EE/AB1C				
HDM2	101	Distribution - Lines/Equipment	Maintenance of overhead distribution (i e , visibility sleeving, vessel moves, isolations)	S/101XXX/EE/AB1Z				
HDM2	902	Capacitor Work	Maintenance and inspection of capacitor banks	S/101XXX/EE/AB1X				
HDM2	190	Dist Maint Req (DMR)	Distribution maintenance request for Tree Trimming (DMR)	S/101XXX/EE/AB11S				
HDM2	907	SBC Pole Replacement	Replace SBC pole and ONLY Transfer CPE equipment	S/101550/EE/ABP1				

SAP 4.6 UPGRADE
AUTOMATED DEFAULT SETTLEMENT RULES FOR WORK ORDERS
Order - Maintenance Activity - WBS Elements

Order Type	MAT Code	MAT Description	Description	Header WBS	Settlement WBS Element - 1	%	Settlement WBS Element - 2	%
HDM4			**Construction That Does Not Involve the Installation or Removal of Capital Material**					
HDM4	145	Proactive Tree Trimming	The programmed trimming of trees and clearing of underbrush	S/101550/EE/AB59S				
HDM4	118	Dist. - Groundline Inspect./Treat.	The programmed inspection and treatment of HL&P distribution wood poles	S/101550/EE/AB47				
HDM4	131	Distribution - Customer Trouble	Installation and removal of By-Pass cords - Customer owned URD drops	S/101XXX/EE/AD89S				
HDCT			**Trouble Work Involving the Installation or Removal of Capital Material**					
HDCT	100	Distribution - Storms	Installation or removal of capital material as a result of adverse weather	S/101XXX/CE/AD86I	S/101XXX/CE/AD86I	70%	S/101XXX/CE/AD86R	30%
HDCT	101	Distribution - Lines/Equipment	Installation or removal of overhead capital material (non weather related)	S/101XXX/CE/AD07I	S/101XXX/CE/AD07I	70%	S/101XXX/CE/AD07R	30%
HDCT	102	Distribution - URD Equipment	Installation or removal of underground capital material (non weather related)	S/101XXX/CE/AD06I	S/101XXX/CE/AD06I	70%	S/101XXX/CE/AD06R	30%
HDMT			**Trouble Work That Does Not Involve the Installation or Removal of Capital Material**					
HDMT	100	Distribution - Storms	Minor repairs made to the distribution system as a result of adverse weather	S/101XXX/EE/AD86				
HDMT	101	Distribution - Lines/Equipment	Minor repairs made to the overhead distribution system (non weather related)	S/101XXX/EE/AD07				
HDMT	102	Distribution - URD Equipment	Minor repairs made to the underground distribution system (non weather related)	S/101XXX/EE/AD06				
HDMT	131	Distribution - Customer Trouble	Customer Insdie Trouble - Non CPE, By-Pass cords	S/101XXX/EE/AD89				

EXHIBIT RMP-5

DIAGRAM OF DISTRIBUTION SYSTEM



RANDAL M. PRYOR WORKPAPERS:

WP RMP-1	Tree Trimming
WP RMP-2	2010 Capital Project List Summary
WP RMP-2	2010 Capital Project List Pivot
WP RMP-2	2010 Capital Project List Detail
WP RMP-2	2011 Capital Project List Summary
WP RMP-2	2011 Capital Project List Pivot
WP RMP-2	2011 Capital Project List Detail
WP RMP-2	2012 Capital Project List Summary
WP RMP-2	2012 Capital Project List Pivot
WP RMP-2	2012 Capital Project List Detail
WP RMP-2	2013 Capital Project List Summary
WP RMP-2	2013 Capital Project List Pivot
WP RMP-2	2013 Capital Project List Detail
WP RMP-2	2014 Capital Project List Summary
WP RMP-2	2014 Capital Project List Pivot
WP RMP-2	2014 Capital Project List Detail
WP RMP-2	2015 Capital Project List Summary
WP RMP-2	2015 Capital Project List Pivot
WP RMP-2	2015 Capital Project List Detail
WP RMP-2	2016 Capital Project List Summary
WP RMP-2	2016 Capital Project List Pivot
WP RMP-2	2016 Capital Project List Detail
WP RMP-2	2017 Capital Project List Summary
WP RMP-2	2017 Capital Project List Pivot
WP RMP-2	2017 Capital Project List Detail
WP RMP-2	2018 Capital Project List Summary
WP RMP-2	2018 Capital Project List Pivot
WP RMP-2	2018 Capital Project List Detail

Workpaper – RMP-1

Tree Trimming Expenditures Since Docket 38339

In Project No. 37475, *Rulemaking for Utility Infrastructure Storm Hardening,* the Public Utility Commission adopted P.U.C. Subst. R. 25.95 that required utilities to file a storm hardening plan ("Plan") by May 1, 2011, including the utility's current and future storm hardening plans over a five-year period beginning January 1, 2011. In response to this rule, the Company adopted hardening plans to increase proactive tree trimming and implement proactive hazard tree removal.

Accordingly, CenterPoint Houston requested increases in expenditure for these two programs in the last rate case, Docket 38339. The Company increased the 2009 baseline expenditures of $16.1 million by $5.2 million to a total of $21.3 million for proactive tree trimming, and the Company implemented a proactive hazard tree removal program for $0.75 million per year.

CenterPoint Houston has been very successful in implementing these programs. When you consider both proactive tree trimming and proactive hazard tree removal, the Company has spent an amount that exceeded the total targeted amount ($22.05 million) in every year except 2014. In 2014, labor vacated the system to meet mutual assistance requests by other utilities and competing industries. Labor was also directed internally to complete priority capital project deadlines. Over the 8 year period from 2011 to 2018, CenterPoint Houston has spent a total of $191.93 million versus a target of $171.95 million for these two programs. See chart below.

Dollars in millions

Program Description	Target	2011*** Target	2011 Actual	2012 Actual	2013 Actual	2014 Actual
Proactive Tree Trimming*	**21.30**	**17.40**	**20.39**	**20.31**	**19.89**	**18.98**
Hazard Tree Removal **	**0.75**	**0.20**	**3.26**	**6.02**	**2.93**	**1.20**
Unplanned Hazard Tree Removal			1.07	4.03	1.55	0.58
Proactive Hazard Tree Removal			2.19	1.99	1.38	0.62
Subtotal for Proactive Trimming & Hazard Trees	**22.05**	**17.60**	**23.65**	**26.33**	**22.82**	**20.18**
Reactive Tree Trimming			**2.51**	**2.15**	**2.70**	**2.76**
Total Proactive Trimming, Hazard Trees & Reactive			**26.16**	**28.48**	**25.52**	**22.94**

Program Description	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2011-2018 Target	2011-2018 Actual
Proactive Tree Trimming*	**22.15**	**24.18**	**21.73**	**28.02**	**166.50**	**175.65**
Hazard Tree Removal **	**0.93**	**0.76**	**0.61**	**0.62**	**5.45**	**16.33**
Unplanned Hazard Tree Removal	0.42	0.42	0.30	0.32		
Proactive Hazard Tree Removal	0.51	0.34	0.31	0.30		
Subtotal for Proactive Trimming & Hazard Trees	**23.08**	**24.94**	**22.34**	**28.64**	**171.95**	**191.98**
Reactive Tree Trimming	**3.95**	**4.51**	**5.56**	**6.38**		**30.52**
Total Proactive Trimming, Hazard Trees & Reactive	**27.03**	**29.45**	**27.90**	**35.02**		**222.50**

* Proactive Tree Trimming includes circuit trim, beneficial removals in easement and hazard tree removals that are found in the course of the proactive circuit trim.

** Hazard Tree Removal includes proactive hazard tree removal and unplanned hazard tree removals not associated with circuit trim.

*** 2011 required amounts for target, based on additional annual expenditures, are prorated beginning Oct 2011 and added to baseline expenditures.

The Company saw a 50% increase in contractor bid prices on a per mile basis from 2014 to 2017. Additionally, over the past four years, overhead pole miles (feeder-main and laterals) have increased an average of 171 miles per year. With more miles of distribution line to maintain, the Company's costs associated with proactive tree trimming have increased. Expenditures for reactive tree trimming have also increased over the last eight years. The test year amount for proactive tree trimming was $28,023,054. The test year amount for hazard trees was $616,462. The test year amount for reactive trimming was $6,382,524.

CenterPoint Energy Houston Electric
Capital Project List
Calendar 2010

Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						15,367,564
	EQUIP	Purchase of powered equipment	1,640,002	939,878	2,579,880	
	FLEET	Purchase of Vehicles and Power Operated Equipment.	3,153,809	(266,413)	2,887,396	
	HXSF	Field Metering - Purchase of in-service meter equipment.	1,278,484	-	1,278,484	
	MISC	Telecom Delivery Misc Projects - video walls, furniture,equipment, printers, and computers in support of the Technology Systems Control Center at Addicks Operations Center and Energy Control & Data Center.	2,388,949	-	2,388,949	
	OPENSKY	Voice and Mobile Data - Major upgrades, hardening and system enhancements/improvements to Voice and Mobile Data Radio System (VMDRS), which is a critical part of the CNP's Telecommunications infrastructure that must remain a reliable, up-to-date system.	1,633,039	-	1,633,039	
	TFSY	Synchronous Fiber installation and rehab	3,249,779	-	3,249,779	
	XA11	REDE System Advanced Applications Renov	1,350,037	-	1,350,037	
Load Growth						119,086,311
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	14,450,519	2,238,774	16,689,293	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	16,787,419	155,811	16,943,230	
	AF1U	Underground residential distribution services to new customers.	11,987,064	57,781	12,044,846	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	4,485,189	-	4,485,189	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	2,705,323	219,450	2,924,773	
	AF2H	Overhead line extensions to new underground residential distribution subdivisions.	1,021,833	26,376	1,048,208	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	3,110,338	298,375	3,408,713	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	5,617,055	40,104	5,657,159	
	DF1U	Streetlight New Installations	5,978,353	(14,970)	5,963,383	
	HLP/00/0055/0064	Provide service to new Betka substation	1,387,970	30,724	1,418,694	
	HLP/00/0093/TR	Upgrades to transmission circuits to support load growth	4,747,385	718,042	5,465,427	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0678	Build new 345KV Meadow substation	7,452,113	327,179	7,779,292	
	HLP/00/0718/SB	Upgrade Limestone substation to 63kA fault duty ratng	4,020,382	-	4,020,382	
	HLP/00/0763	Build new Rothwood 345/138KV Substation	20,650,252	14,785	20,665,036	
	HLP/00/0787	Westfield Substation; Add 3 35KV Feeders & 100MVA Transformer	4,213,488	934	4,214,422	
	HLP/00/0834	Rebuild of the 138/12kv West Galveston substation.	2,368,438	233	2,368,671	
	HLP/00/0839	Upgrade transmission ckt 66 and 81 Tomball – Rothwood – Rayford – Louetta tap	3,989,573	20	3,989,593	
Public Improvements						15,232,636
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	1,548,915	253,829	1,802,745	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	8,582,166	1,847,452	10,429,618	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	2,907,043	93,230	3,000,273	
Restoration						29,824,285
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	6,710,249	1,176,619	7,886,868	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	10,467,430	2,172,257	12,639,687	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	4,887,845	1,011,761	5,899,606	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	2,707,762	690,362	3,398,124	
System Improvements						74,440,879

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	6,584,953	1,065,053	7,650,006	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	1,900,658	559,092	2,459,750	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble	3,866,159	1,191,127	5,057,286	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	4,337,253	954,913	5,292,166	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	4,376,966	345,142	4,722,108	
	AB1Y	Replacement of existing CNP owned area lighting fixtures as a result of failure or damage. (Does not include streetlights).	607,341	714,747	1,322,088	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	5,867,880	473,855	6,341,735	
	AB2G	Replacement of CEHE-owned poles based on inspections for ground rotting-- the Groundline Inspection Program.	3,427,702	1,115,858	4,543,560	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	1,039,659	-	1,039,659	
	AFNC	New Capacitor Installations	1,974,502	902	1,975,403	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	2,267,115	262,640	2,529,754	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,502,503	248,575	1,751,077	
	DB2H	Replacement of streetlight standards due to cable cuts.	4,329,631	1,714,160	6,043,791	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	1,171,197	20,248	1,191,445	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	5,311,345	712,575	6,023,920	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	12,526,581	44,075	12,570,655	
	HLP/00/0243	Replace or add new fault recorders at selected locations based upon parts availability and evaluated need.	1,085,636	24,158	1,109,794	
	HLP/00/0583/SB	Upgrade relaying in various substations from 3 zone to 4 zone protection	2,688,762	127,920	2,816,682	
		Total of Projects Greater than $1,000,000	232,344,042	21,607,632	253,951,675	253,951,675
		Total of Projects Less than $1,000,000	28,197,498	(1,438,702)	26,758,796	26,758,796
		Total of All Projects	260,541,540	20,168,930	280,710,470	280,710,470

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						13,175,440
	Fleet	Purchase of Vehicles and Power Operated Equipment.	9,759,562	(471,263)	9,288,300	
	HLP/00/0636/OT	Replacement of the REDE critical infrastructure support systems. These systems include the Mapboard, Video Graphic Recorders and REDE consoles used by RTO System Controllers for power system observibility.	3,887,141	-	3,887,141	
Load Growth						109,703,808
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	8,490,430	1,240,622	9,731,052	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	18,500,609	246,608	18,747,218	
	AF1U	Underground residential distribution services to new customers.	17,254,733	99,926	17,354,658	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	4,819,461	-	4,819,461	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	2,944,020	155,684	3,099,704	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	1,988,130	18,881	2,007,011	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	4,722,938	(26)	4,722,912	
	DF1U	Streetlight New Installations	7,263,753	9,855	7,273,607	
	HLP/00/0055/0075	Provide 138kv service to Duncan substation	1,002,380	-	1,002,380	
	HLP/00/0130/SB/0017	Bellaire 138kV Substation: Upgrade Fault Duty to 80kA	2,996,575	68,953	3,065,528	
	HLP/00/0683/SB	Convert Ckt 58 Hockley-Racoon Bend-Peters to 138Kv	1,386,694	49,339	1,436,033	
	HLP/00/0683/TR	Convert Ckt 58 Hockley-Racoon Bend-Peters to 138Kv	5,444,779	641,687	6,086,467	
	HLP/00/0718/SB	Upgrade Limestone substation to 63kA fault duty ratng	1,396,091	735,275	2,131,366	
	HLP/00/0734	Upgrade Ckt 09E1 Addicks-Britmoore	1,062,029	172,690	1,234,719	
	HLP/00/0782	Build new Zenith 345kv substation	22,260,531	652,197	22,912,728	
	HLP/00/0834	Rebuild of the 138/12kv West Galveston substation.	1,929,899	244,385	2,174,285	
	HLP/00/0881	Upgrade transmission ckt 99 Oasis – Meadow	1,888,088	16,591	1,904,680	
Public Improvements						10,281,184
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	1,498,955	126,993	1,625,947	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	5,309,655	989,126	6,298,781	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	2,562,434	(205,979)	2,356,455	
Restoration						36,877,089
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement Includes cable replacement, transformers, and other retirement units and their related components.	8,649,451	1,478,386	10,127,837	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	12,376,510	2,465,026	14,841,536	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions	3,477,847	762,049	4,239,896	
	CAPITAL STORM RESTORATION	Capitalized equipment replacements damaged due to a major storm event.	919,599	146,225	1,065,824	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	3,354,900	646,591	4,001,491	
	HLP/00/0863	Midtown Ckt 90 Restore Damaged Facilities	1,142,035	-	1,142,035	
	XD11	Emergency restoration involving transmission facilities	1,448,141	10,328	1,458,469	
System Improvements						93,721,540
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	7,191,935	1,336,274	8,528,209	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	2,375,670	646,667	3,022,337	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble	3,775,604	1,088,116	4,863,721	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	6,359,621	1,069,928	7,429,548	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	2,351,569	187,896	2,539,465	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	5,659,116	682,480	6,341,595	
	AB2G	Replacement of CEHE-owned poles based on inspections for ground rotting– the Groundline Inspection Program.	5,609,098	1,674,803	7,283,900	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	2,764,557	-	2,764,557	
	AFNC	New Capacitor Installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	2,261,175	-	2,261,175	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	3,215,655	(436,260)	2,779,396	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,263,993	208,281	1,472,274	
	DB2H	Replacement of streetlight standards due to cable cuts.	3,650,088	1,362,207	5,012,296	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	1,166,623	131,671	1,298,293	
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's).	1,076,630	115,972	1,192,602	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	6,016,124	652,295	6,668,419	
	HLP/00/0054/TR/0009	Partial rebuild of 138kV ckt 03J/88B from Alexander Island	1,573,281	62,522	1,635,802	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	11,979,045	493,070	12,472,115	
	HLP/00/0234	Replacement of indoor switchgear facilities with low profile facilities due to reliability issues.	2,457,500	75,979	2,533,479	
	HLP/00/0582/SB	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	1,659,111	96,667	1,755,778	
	HLP/00/0583/SB	Upgrade relaying in various substations from 3 zone to 4 zone protection	1,577,478	56,250	1,633,728	
	HLP/00/0671/SB	Install relaying and control equipment at various 69kV substations to provide breaker failure functionality, address other single-contingency equipment failures , and provide protection and monitoring to meet present design criteria	2,557,711	277,124	2,834,834	
	HLP/00/0672/SB	This program provides for various protection improvements on the substation system. Work covered with these amounts was associated with the installation of a 35kv breaker at Satsuma Substation.	1,472,947	108,374	1,581,321	
	HLP/00/0850/SB	Various reliability improvments at Galveston 26th substation	1,842,122	121,722	1,963,844	
	HLP/00/0852/SB	Various reliability improvements at Freeport area substations	1,682,261	-	1,682,261	
	HLP/00/0887	Reconfigure San Felipe substation	2,135,173	35,417	2,170,590	
Intelligent Grid						5,467,599

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	4,565,329	902,270	5,467,599	
Projects greater than $1,000,000			247,976,786	21,249,874	269,226,660	269,226,660
Projects less than $1,000,000			18,168,231	619,066	18,787,297	18,787,297
Total of All Projects			266,145,018	21,868,939	288,013,957	288,013,957

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						50,363,946
	13069486	Telecom Network Infrastructure -Capital replacement of telecom network equipment. The Telecom Network includes over 380 Backhaul/TOP sites and 340 miles of fiber that includes generators, fiber equipment, and microwave radios.	1,089,983	-	1,089,983	
	AA80	Facilities modifications including fencing, shelving, furniture, etc.	1,949,358	-	1,949,358	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	1,135,714	-	1,135,714	
	EQUIP	Purchase of powered equipment.	2,687,623	(297,942)	2,389,681	
	Fleet	Purchase of Vehicles and Power Operated Equipment.	20,402,032	(810,498)	19,591,535	
	HXSF	Field Metering - Purchase of in-service meter equipment.	4,985,723	-	4,985,723	
	MISC	Telecom Delivery Misc Projects - video walls, furniture,equipment, printers, and computers in support of the Technology Systems Control Center at Addicks Operations Center and Energy Control & Data Center.	1,914,709	-	1,914,709	
	OPENSKY	Voice and Mobile Data - Major upgrades, hardening and system enhancements/improvements to Voice and Mobile Data Radio System (VMDRS), which is a critical part of the CNP's Telecommunications infrastructure that must remain a reliable, up-to-date system.	5,275,325	-	5,275,325	
	TFSY	Synchronous Fiber installation and rehab	7,859,510	-	7,859,510	
	TMSY	Microwave Projects - Design, install and deploy microwave/radio systems in support of corporate communications. This project is to support growth and eliminate points of failure that could impact critical systems and applications. Replace old shelters facilities.Also provides for replacement of Microwave radios and related MW equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	4,172,410	-	4,172,410	
Load Growth						173,046,291

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	9,171,898	1,357,744	10,529,642	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	19,327,685	377,258	19,704,944	
	AF1U	Underground residential distribution services to new customers.	19,181,225	143,646	19,324,871	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	4,188,007	-	4,188,007	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	3,517,117	328,433	3,845,550	
	AF2H	Overhead line extensions to new underground residential distribution subdivisions.	1,395,440	56,324	1,451,764	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	2,355,823	5,802	2,361,625	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	8,540,134	(118,837)	8,421,297	
	DF1U	Streetlight New Installations	6,733,516	5,620	6,739,136	
	HLP/00/0032/TR/0087	Springwoods- Raise transmission ckts 74 & 75	1,394,543	153,149	1,547,692	
	HLP/00/0055/0077	Provide 138kv service to Scarsdale substation	2,915,145	57,124	2,972,269	
	HLP/00/0130/SB/0016	Addicks 138kV Substation: Upgrade Fault Duty to 80kA	2,684,469	64,082	2,748,551	
	HLP/00/0395	Mt Belview and Crosby area reconfiguration	6,815,309	284,100	7,099,408	
	HLP/00/0603/SB	Lyondel Substation - Upgrade transformers and add feeders	3,888,567	-	3,888,567	
	HLP/00/0618	Conversion to 138kv at Industrial and Oates substations	2,991,113	-	2,991,113	
	HLP/00/0683/SB	Convert Ckt 58 Hockley-Racoon Bend-Peters to 138Kv	1,386,789	107,332	1,494,121	
	HLP/00/0711	Upgrade Ckt 04 Texas Gulf-West Columbia	23,276,189	2,317,907	25,594,096	
	HLP/00/0738	Parallel Bundle Ckt 90 Garrott-Midtown-Polk	30,738,668	62,307	30,800,975	
	HLP/00/0778	Build new Zenith 138kV Substation	15,386,181	198,192	15,584,373	
	HLP/00/0837/DM	Fannin Substation: Add 8th 35KV Feeder	1,758,290	-	1,758,290	
Public Improvements						18,179,757

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	1,529,412	256,897	1,786,309	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	5,764,822	1,061,959	6,826,781	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	9,701,757	(135,090)	9,566,667	
Restoration						38,536,902
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	7,201,766	1,305,944	8,507,710	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	11,719,790	2,514,416	14,234,206	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	4,974,954	1,110,726	6,085,679	
	CAPITAL STORM RESTORA	Capitalized repairs requiring equipment replacement to the overhead distribution system resulting from a major storm event.	3,092,077	692,526	3,784,602	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	4,743,035	1,181,668	5,924,704	
System Improvements						147,489,669
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	8,494,476	1,458,427	9,952,903	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	3,371,401	928,195	4,299,596	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble	4,477,127	1,462,439	5,939,565	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	8,075,643	1,935,185	10,010,828	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	2,758,224	309,404	3,067,628	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	6,502,198	1,402,755	7,904,953	
	AB2G	Replacement of CEHE-owned poles based on inspections for ground rotting-- the Groundline Inspection Program.	5,389,313	1,524,940	6,914,253	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	2,401,956	-	2,401,956	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	13,172,351	912,162	14,084,513	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,649,179	269,215	1,918,394	
	DB2H	Replacement of streetlight standards due to cable cuts.	4,927,345	2,100,033	7,027,378	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	5,787,427	966,688	6,754,115	
	HLP/00/0012	Scheduled Substation Corrective Projects-small, scheduled corrective projects. These projects involve replacement of equipment and or structures.	2,780,937	160,027	2,940,965	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrial substations	1,146,656	-	1,146,656	
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's).	3,817,479	218,212	4,035,691	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	10,553,978	1,173,079	11,727,057	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	12,864,592	440,106	13,304,697	
	HLP/00/0187	Replace obsolete and unreliable circuit switchers.	1,467,110	44,641	1,511,751	
	HLP/00/0234	Replacement of indoor switchgear facilities with low profile facilities due to reliability issues.	1,459,726	14,028	1,473,754	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	1,106,379	-	1,106,379	
	HLP/00/0582/SB	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	1,735,813	81,780	1,817,593	
	HLP/00/0583/SB	Upgrade relaying in various substations from 3 zone to 4 zone protection	1,723,326	80,011	1,803,337	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	2,760,978	61,190	2,822,168	
	HLP/00/0671/SB	Install relaying and control equipment at various 69kV substations to provide breaker failure functionality, address other single-contingency equipment failures , and provide protection and monitoring to meet present design criteria	2,682,713	131,987	2,814,700	
	HLP/00/0798	Add dual pilot 138kv line relaying for improved protection and reliability.	1,702,933	61,408	1,764,341	
	HLP/00/0852/SB	Various reliability improvements at Freeport area substations	6,884,828	259,333	7,144,162	
	HLP/00/0883	Relocate/Elevate oil pumping facilites at Galveston 26th substation	2,180,973	368,566	2,549,539	
	HLP/00/0884	Replace 12/35KV SQD Type FBS Breakers - This project includes replacement of 115 Square D, type FBS, SF6 breakers with history of high level of failure rates.	2,024,866	76,498	2,101,364	
	HLP/00/0886	Reconfigure Kirby Substation	1,170,371	75,974	1,246,345	
	HLP/00/0901/SB	Install 3-Single Phase autotransformers at PH Robinson substation	2,193,558	-	2,193,558	
	HLP/00/0902/SB	Various modifications and improvements at Willow substation	2,209,423	22,976	2,232,399	
	OTHER	CenterPoint Energy's share of capital improvments/rehab at jointly owned STP switchyard	1,477,129	-	1,477,129	
Intelligent Grid						3,555,651
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	3,111,141	444,510	3,555,651	
		Total of Projects Greater than $1,000,000	401,907,657	29,264,559	431,172,216	431,172,216
		Total of Projects Less than $1,000,000	10,271,646	516,840	10,788,486	10,788,486
		Total of All Projects	412,179,303	29,781,398	441,960,702	441,960,702

CenterPoint Energy Houston Electric
Capital Project List
Calendar 2013

Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						84,813,284
	13073881	CenterPoint Energy Electric IT Projects: Update to Mobile Data system as well as enhancements, migrations, and/or updates to various IT systems: LD Pro (Distribution Design Software), EAI (Enterprise Application Interface-system integration), OASIS (outage), BES and SWIS (billing systems), and SLAMS (streetlight maintenance system). Additional enhancements or changes to various technology systems in support of mandatory Regulatory, Rate or Operational requirments (TX-SET and TMH).	6,324,746	-	6,324,746	
	13086286	ALA-ARO Fixed Asset Enhancement - Asset Lifecycle Accounting system developed by SAP to integrate with core SAP fixed asset functionality.	3,846,706	-	3,846,706	
	AA20	General Equipment - Purchase of distribution computer hardware, premise equipment, tools, test equipment, etc.	1,041,731	-	1,041,731	
	AA80	Facilities modifications including fencing, shelving, furniture, etc.	1,506,793	-	1,506,793	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's real time operation of the power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	22,217,572	18,520	22,236,093	
	FIBER	Purchase of fiber optic cable and the labor to install the cable. CNP's expanding network infrastructure requires an increase in the CNP fiber network to geographically support the expanding backhaul infrastructure and establish a fiber footprint in locations where microwave communications may limit capacity. Also includes replacement of aged/degraded fiber on CNP's Core Fiber Backbone and planned rehabilitation/replacement of existing fiber system	3,429,540	-	3,429,540	
	Fleet	Purchase of Vehicles and Power Operated Equipment.	7,154,970	(954,668)	6,200,302	
	HLP/00/0636/OT	This project covers the replacement of the REDE critical infrastructure support systems. These systems include the ECDC UPS and PDU equipment used to furnish and monitor REDE electrical service and the Mapboard, Video Graphic Recorders and REDE consoles used by RTO System Controllers for power system observability.	1,032,949	-	1,032,949	
	HXSF	Field Metering - Purchase of in-service meter equipment.	7,767,966	-	7,767,966	

CenterPoint Energy Houston Electric
Capital Project List
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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	MISC	Telecom Delivery Misc Projects - video walls, furniture,equipment, printers, and computers in support of the Technology Systems Control Center at Addicks Operations Center and Energy Control & Data Center.	1,349,243	-	1,349,243	
	MPLS	MPLS Network - replace routers and related network equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	1,864,628	-	1,864,628	
	OPENSKY	Voice and Mobile Data - Major upgrades, hardening and system enhancements/improvements to Voice and Mobile Data Radio System (VMDRS), which is a critical part of the CNP's Telecommunications infrastructure that must remain a reliable, up-to-date system.	22,468,548	-	22,468,548	
	TFSY	Synchronous Fiber installation and rehab	1,958,685	-	1,958,685	
	TMSY	Microwave Projects - Design, install and deploy microwave/radio systems in support of corporate communications. This project is to support growth and eliminate points of failure that could impact critical systems and applications. Replace old shelters facilities Also provides for replacement of Microwave radios and related MW equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	3,785,354	-	3,785,354	
Load Growth						187,219,975
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	18,429,921	2,971,505	21,401,427	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	20,962,142	538,980	21,501,122	
	AF1U	Underground residential distribution services to new customers.	26,353,698	147,893	26,501,591	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	5,496,860	-	5,496,860	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	6,175,034	439,854	6,614,887	
	AF2H	Overhead line extensions to new underground residential distribution subdivisions.	1,843,568	69,991	1,913,559	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	2,678,065	88,026	2,766,091	

CenterPoint Energy Houston Electric
Capital Project List
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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	8,357,636	(93,426)	8,264,210	
	DF1U	Streetlight New Installations	8,444,455	(27,012)	8,417,443	
	HLP/00/0055/0071	DOW Substation: Add 3rd autotransformer	1,722,949	167,266	1,890,215	
	HLP/00/0055/0087	Provide 138kv service to Miller substation	1,211,833	104,995	1,316,828	
	HLP/00/0055/TR/0082	Provide 138kv service to Norton substation	2,757,997	-	2,757,997	
	HLP/00/0093	Northside to Crockett- Adjust distribution facilities to increase clearances	9,661,610	598,772	10,260,382	
	HLP/00/0395	Mt Belview and Crosby area reconfiguration	3,691,735	216,356	3,908,091	
	HLP/00/0618	Conversion to 138kv at Industrial and Oates substations	2,056,649	152,278	2,208,927	
	HLP/00/0711	Upgrade Ckt 04 Texas Gulf-West Columbia	1,112,475	194,372	1,306,848	
	HLP/00/0730/TR	Reconductor Ckt09G2: Fort Bend-Brazos Valley	1,371,967	195,929	1,567,896	
	HLP/00/0747	Flewellen Substation: Substation work to add 7th and 8th feeders and a 3rd transformer at Flewellen substation to support load growth.	4,392,720	14,302	4,407,022	
	HLP/00/0794	Trinity Bay Substation: Substation work to add a feeder at Trinity Bay substation to support load growth.	1,212,145	7,783	1,219,928	
	HLP/00/0819/TR	Upgrade 345kv Ckt 97 PH Robinson – Center- Cedar Bayou	1,210,362	-	1,210,362	
	HLP/00/0848/SB	Upgrade autotransformer at O'Brien substation	9,040,609	7,775	9,048,384	
	HLP/00/0880/SB	Replace Greens Bayou autotransformer #2 with 800MVA autotransformer	7,940,524	33,683	7,974,207	
	HLP/00/0911	Split the WAP 345 kV bus resulting in two electrically separate buses.	15,930,678	173,548	16,104,226	
	HLP/00/0913	Various improvements to address growing customer load in the Mount Belview area. Includes building new Jordan substation	10,718,159	74,978	10,793,136	
	HLP/00/0925	New Gulf Substation: Substation work to upgrade transformers and add two feeders at New Gulf substation to support load growth.	3,923,083	56,758	3,979,841	
	HLP/00/0942	Seawall Substation: Substation work to add 3rd 50mva transformer at Seawall substation to support load growth.	4,388,495	-	4,388,495	
Public Improvements						12,682,733
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	1,573,100	148,052	1,721,152	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	5,807,449	1,190,649	6,998,098	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	3,903,222	60,262	3,963,483	
Restoration						42,982,064
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	8,216,993	1,527,516	9,744,509	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	12,955,324	2,747,819	15,703,143	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	5,405,876	1,365,736	6,771,612	
	CAPITAL STORM RESTORA	Capitalized repairs requiring equipment replacement to the overhead distribution system resulting from a major storm event.	904,108	249,012	1,153,121	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	2,662,239	662,364	3,324,603	
	HLP/00/0907/TR	CKT 88/03 Alexander Island-Replace damaged facilites	6,285,077	-	6,285,077	
System Improvements						216,732,927
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	10,277,164	1,903,740	12,180,903	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	2,935,069	724,247	3,659,316	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble	4,483,440	1,107,548	5,590,988	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	8,753,778	2,044,547	10,798,325	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	2,446,492	289,997	2,736,489	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	7,065,292	4,102,225	11,167,517	
	AB2G	Replacement of CEHE-owned poles based on inspections for ground rotting-- the Groundline Inspection Program.	10,926,457	3,398,170	14,324,628	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	ABCA	Cable Life Extension Program - Testing the condition of underground cable and mitigating components of good cable with a high probability of failure.	2,662,605	-	2,662,605	
	AFNC	New Capacitor installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	1,040,035	-	1,040,035	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	2,523,024	594,000	3,117,023	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,516,617	185,518	1,702,135	
	DB2H	Replacement of streetlight standards due to cable cuts.	4,672,553	1,586,472	6,259,026	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	3,862,360	67,120,986	70,983,346	
	HLP/00/0012	Scheduled Substation Corrective Projects-small, scheduled corrective projects. These projects involve replacement of equipment and or structures.	1,041,137	56,275	1,097,412	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrial substations	1,275,498	-	1,275,498	
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's).	2,535,140	140,627	2,675,767	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	11,160,304	1,657,602	12,817,907	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	8,660,535	1,737,162	10,397,697	
	HLP/00/0187	Replace obsolete and unreliable circuit switchers.	3,613,888	166,015	3,779,902	
	HLP/00/0234	Replacement of indoor switchgear facilities with low profile facilities due to reliability issues.	4,206,597	78,208	4,284,805	
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	3,340,363	21,526	3,361,889	
	HLP/00/0491/SB	Elevate control houses and other equipment as necessary to prevent damage from flooding.	4,663,279	-	4,663,279	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0521	Line Arrestor Replacements: This program provides for replacement of unreliable line arresters.	1,401,367	88,803	1,490,170	
	HLP/00/0582/SB	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	986,032	71,190	1,057,223	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	5,939,524	237,717	6,177,241	
	HLP/00/0762/SB	Installation of Traveling Wave System (TWS) fault locators on the transmission grid .	2,781,356	-	2,781,356	
	HLP/00/0869/SB	Upgrade fault duty (bus work and equipment) at various substations within CNP's electrical Substation facilities.	1,030,037	50,557	1,080,595	
	HLP/00/0884	Replace 12/35KV SQD Type FBS Breakers - This project includes replacement of 115 Square D, type FBS, SF6 breakers with history of high level of failure rates.	3,715,383	235,037	3,950,419	
	HLP/00/0899	This project is needed to reduce the level of induced voltage onto the BNSF railroad for the safety of BNSF personnel and the public. The induced voltage either exceeds or has the capability of exceeding 50V at each railroad insulated joint location.	1,684,611	8,992	1,693,603	
	HLP/00/0919	Reconfigure 69KV LaMarque substation	1,867,599	118,989	1,986,589	
	HLP/00/0920	Galena Park Substation reconfiguration – Conversion of Galena Park substation from a single breaker/single bus configuration to a three breaker ring configuration to improve reliability.	1,383,768	148,306	1,532,074	
	HLP/00/0922	Line clearance corrections between transmission and distribution facilities on Ckt 05 Sharpstown-Sharpstown tap	2,776,457	325,262	3,101,719	
	HLP/00/0931	2013 Major underground rehab - Vault	1,277,077	28,370	1,305,446	
Intelligent Grid						18,113,289
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	16,790,971	1,322,318	18,113,289	
		Projects greater than $1,000,000	459,843,998	102,700,274	562,544,272	562,544,272
		Projects less than $1,000,000	26,774,505	(65,660,070)	(38,885,565)	(38,885,565)
		Total of All Projects	486,618,503	37,040,204	523,658,707	523,658,707

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						189,379,171
	13005120	HLPD - Meter & Communications Cap: This project captures labor costs incurred to install meters.	4,359,207	-	4,359,207	
	13064942	CenterPoint Energy Electric IT Projects: This work order is utilized for a scheduled computer refreshment, Oasis (outage) system enhancements, and SLAMS (streetlight mainenance system) to Mobile Data.	1,513,460	-	1,513,460	
	13069482	CenterPoint Energy Electric IT Projects· Project list includes: SAP time keeping duet, Oasis (outage) system enhancement, Drawing Management System, LD Pro (distribution design software) update, and computer equipment.	4,061,904	-	4,061,904	
	13073682	Telecom Network Infrastructure - Capital repair and replacement of telecom network equipment - The Telecom Network includes over 380 Backhaul/TOP sites and 340 miles of fiber. Includes generators, fiber equipment, and microwave radios.	1,950,230	-	1,950,230	
	13077632	CenterPoint Electric IT Projects, includes Texas SET V4.0 upgrade to meet PUCT rule changes.	6,690,244	-	6,690,244	
	AA20	General Equipment - Purchase of distribution computer hardware, premise equipment, tools, test equipment, etc.	2,580,501	-	2,580,501	
	AA80	Facilities modifications including fencing, shelving, furniture, etc.	2,738,091	-	2,738,091	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	62,514,609	-	62,514,609	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	31,696,809	34,128	31,730,937	
	ENTD086	Corporate Website Redesign	7,086,684	-	7,086,684	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	EQUIP	Purchase of powered equipment.	2,692,096	(90,982)	2,601,115	
	Fleet	Purchase of Vehicles and Power Operated Equipment.	22,864,814	(942,756)	21,922,058	
	HED081	Ecurtailment	1,087,266	-	1,087,266	
	HXSF	Field Metering - Purchase of in-service meter equipment.	1,466,999	-	1,466,999	
	S/101318/CG/TOOLS	Purchase of Substation tools that meet capital criteria per CenterPoint energy Capitalization Policy	2,127,089	-	2,127,089	
	S/101392/CE/OPSKY	New V&D Radio System: Non production Test System for the OpenSky Voice and Mobile Data Radio System (VMDRS). This allows version upgrades and code changes to be tested before putting into production.	1,269,282	-	1,269,282	
	S/101745/CN/ENTD041	UCC-VOIP Implementation(Sysco Unified Contact Center) - Technology Replacement of the existing phone system for Customer Service Call Centers in Houston and Minnesota with corporate standard voice over IP technology.	2,946,999	-	2,946,999	
	S/101745/CN/ENTD058	Customer Relationship Management Project-Multi-channel (i.e. agent, automated phone system, email, text messaging, and web) integration software tool to enhance customer experience, integrate outage notification tool, and provide customer service efficiencies.	18,698,978	-	18,698,978	
	S/101784/CE/TOWER	Replace generators at communication towers	1,727,625	2,097	1,729,722	
	S/101785/CN/FIBER	Purchase of fiber optic cable and the labor to install the cable. CNP's expanding network infrastructure requireS an increase in the CNP fiber network to geographically support the expanding backhaul infrastructure and establish a fiber footprint in locations where microwave communications may limit capacity.	2,893,989	-	2,893,989	
	S/101785/CN/MPLS	Replacement of Routers, Battery Plants, Switches, Network Clocks, Terminal Servers, etc. as they approach End of Life/Support.	1,149,908	-	1,149,908	
	S/101785/CN/OPENSKY	Voice and Mobile Data - Major upgrades, hardening and system enhancements/improvements to Voice and Mobile Data Radio System (VMDRS), which is a critical part of the CNP's Telecommunications infrastructure that must remain a reliable, up-to-date system.	4,934,723	-	4,934,723	
	S/101785/CN/TMSY	This WBS/Cost Object is used to purchase and install new Microwave radio and related equipment/systems for the Transport Network.	1,325,175	-	1,325,175	
Load Growth						251,142,971

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans	20,920,992	2,852,355	23,773,347	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	28,774,522	489,057	29,263,579	
	AF1U	Underground residential distribution services to new customers.	44,708,009	296,042	45,004,051	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	10,437,595	426,653	10,864,248	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	16,650,605	1,016,365	17,666,970	
	AF2H	Overhead line extensions to new underground residential distribution subdivisions.	2,715,359	119,838	2,835,196	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	2,980,018	-	2,980,018	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	15,917,292	(131,993)	15,785,299	
	DF1U	Streetlight New Installations	13,610,624	(9,573)	13,601,051	
	HLP/00/0608	King Substation: Substation work to add three feeders and replace the power transformer at King substation to support load growth.	1,680,540	-	1,680,540	
	HLP/00/0612	Fry Substation: Build 35KV Sub W/3 35KV Feeders.	1,228,311	-	1,228,311	
	HLP/00/0637	Project is required to solve reliability concerns, storm harden the Freeport area, and prepare for increased industrial load in the area.	26,427,606	1,764,164	28,191,770	
	HLP/00/0794	Trinity Bay Substation: Substation work to add a feeder at Trinity Bay substation to support load growth.	1,260,310	-	1,260,310	
	HLP/00/0832	Atascocita Substation: Substation work to add a 2nd transformer at Atascocita substation to support load growth.	1,198,621	5,565	1,204,185	
	HLP/00/0860	Katy area upgrades to resolve reliability issues identified as part of the normal transmission design planning process.Upgrade include: New Zenith - Franz line; Install 2nd Zenith 800 MVA auto;Convert Katy to loop station on ckt 09; Convert Franz to loop station on ckt 09.;Upgrade Franz loop	2,119,166	275,103	2,394,269	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0875	Springwoods Substation: Underground distribution work to support new Springwoods substation.	10,150,926	-	10,150,926	
	HLP/00/0913	Various improvements to address growing customer load in the Mount Belview area. Includes building new Jordan substation	30,450,336	436,162	30,886,498	
	HLP/00/0914/0002	South Houston - Convert to 138kv	3,819,783	124,624	3,944,407	
	HLP/00/0914/0003	Busch Substation- Convert to 138kv	5,073,620	97,992	5,171,612	
	HLP/00/0937	Upgrades/69kv to 138kv conversions of various CenterPoint facilities in the Fort Bend area	1,469,416	36,016	1,505,432	
	HLP/00/0953	South Channel Substation: Substation work to add new distribution substation with 2 50mva transformers and 6 feeders at South Channel substation to support load growth.	1,750,952	-	1,750,952	
Public Improvements						27,352,750
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	2,262,294	176,871	2,439,165	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements	6,592,769	1,239,524	7,832,293	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	14,621,391	(529,912)	14,091,479	
	Grand PKWY	Relocation of CNP infrastructure to accommodate Texas Department of Transportation construction of the Grand Parkway Tollway.	4,028,222	(1,038,409)	2,989,813	
Restoration						37,255,363
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	7,687,589	1,611,878	9,299,467	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	11,479,324	2,705,102	14,184,426	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	6,547,233	1,761,313	8,308,546	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	5,040,999	421,925	5,462,924	
System Improvements						212,718,246
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	18,063,510	2,709,081	20,772,591	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	4,434,967	1,092,469	5,527,436	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble	8,404,429	2,104,437	10,508,867	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	5,186,787	1,075,297	6,262,084	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	2,632,648	289,572	2,922,220	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	8,881,207	2,397,429	11,278,636	
	AB2G	Replacement of CEHE-owned poles based on inspections for ground rotting-- the Groundline Inspection Program.	18,008,395	5,197,181	23,205,576	
	AB2S	Underground residential distribution proactive span replacement.	2,853,180	451,363	3,304,544	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	2,275,310	-	2,275,310	
	ABCA	Cable Life Extension Program - Testing the condition of underground cable and mitigating components of good cable with a high probability of failure.	13,821,869	-	13,821,869	
	AFNC	New Capacitor Installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	1,915,895	-	1,915,895	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	2,581,103	(343,081)	2,238,022	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	2,000,400	278,134	2,278,533	
	DB2H	Replacement of streetlight standards due to cable cuts.	6,689,514	2,291,246	8,980,761	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0011	Unscheduled Substation Corrective Projects- small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	2,986,708	206,678	3,193,386	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrila substations	2,030,231	-	2,030,231	
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's)	1,779,547	86,707	1,866,255	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service	21,071,052	2,144,906	23,215,958	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	16,425,472	286,499	16,711,971	
	HLP/00/0187	Replace obsolete and unreliable circuit switchers.	3,502,021	138,371	3,640,392	
	HLP/00/0234/SB/0002	South Houston Substation: Replace obsolete switchgear at South Houston substation	2,242,622	15,572	2,258,193	
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	2,814,649	173,019	2,987,668	
	HLP/00/0521	Line Arrestor Replacements: This program provides for replacement of unreliable line arresters.	1,179,357	84,750	1,264,107	
	HLP/00/0667	This project is to provide funding for replacement of older 345kV Westinghouse, LWE live-tank breakers with newer SF6 gas puffer design single-break units.	3,120,062	123,664	3,243,727	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	2,385,411	96,669	2,482,079	
	HLP/00/0669	Gable Street Substation: Reliability Improvements at Gable Street substation	11,006,122	140,186	11,146,308	
	HLP/00/0820	Add autotransformer at PH Robinson substation	5,698,624	-	5,698,624	
	HLP/00/0884	Replace 12/35KV SQD Type FBS Breakers - This project includes replacement of 115 Square D, type FBS, SF6 breakers with history of high level of failure rates.	2,318,356	88,951	2,407,306	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0899	This project is needed to reduce the level of induced voltage onto the BNSF railroad for the safety of BNSF personnel and the public. The induced voltage either exceeds or has the capability of exceeding 50V at each railroad insulated joint location.	2,343,411	-	2,343,411	
	HLP/00/0909	Replace 35KV//12KV Breakers-This project includes replacement of older troublesome distribution breakers (mostly oil filled) at various substations with newer technology vacuum breakers.	2,295,478	85,233	2,380,711	
	HLP/00/0922	Line clearance corrections between transmission and distribution facilities on Ckt 05 Sharpstown-Sharpstown tap	1,269,878	208,302	1,478,179	
	HLP/00/0931	2013 Major underground rehab - Vault	1,176,006	6,926	1,182,932	
	HLP/00/0936	Substation improvements include conversion at Fannin substation and new feeder panel at Needville substation.	2,464,773	91,351	2,556,125	
	HLP/00/0981	Replace three transmission towers on Ckts 21 and 09	2,373,524	401,080	2,774,604	
	HLP/00/1055	Line clearance corrections between transmission and distribution facilities to meet National Electrical Safety Code (NESC) requirements.	2,289,735	273,998	2,563,733	
Intelligent Grid						9,971,200
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	8,952,499	1,018,701	9,971,200	
		Projects greater than $1,000,000	691,455,860	36,363,841	727,819,701	727,819,701
		Projects less than $1,000,000	22,452,876	(17,365,293)	5,087,583	5,087,583
		Total of All Projects	713,908,736	18,998,548	732,907,284	732,907,284

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						237,925,848
	13090056	HLPD - Meter & Communications Cap - This project captures labor costs incurred to install meters.	3,672,460	-	3,672,460	
	AA80	Facilities modifications including fencing, shelving, etc.	3,290,970	278,859	3,569,829	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	57,298,454	(21,834)	57,276,620	
	AOC Phase I (IT)	IT infrastructure to support Addicks Operating Center (Backup Control Center)	3,678,112	-	3,678,112	
	AOC PHASE II	ITD089-AOC Phase II-IT Backup Data Ctr - Construction of new secondary data center to host IT infrastructure to provide redundancy for the IT infrastructure housed in CNP's primary data center. Together, the primary and secondary data centers support CNP's approximately 80 critical systems and encompass all aspects of Information Technology (IT) operations for Business Continuity (BC), Disaster Recovery (DR) and high availability (HA).	86,790,287	-	86,790,287	
	DISP	Material and labor to install a Zetron MAX Call-Taking phone system for Distribution dispatching. This is a 50+ position phone system with servers, PC's, monitors and VOIP phones along with the labor and training related to implementing the system.	1,162,338	-	1,162,338	
	FIBER	Purchase of fiber optic cable and the labor to install the cable. CNP's expanding network infrastructure requires an increase in the CNP fiber network to geographically support the expanding backhaul infrastructure and establish a fiber footprint in locations where microwave communications may limit capacity. Also includes replacement of aged/degraded fiber on CNP's Core Fiber Backbone and planned rehabilitation/replacement of existing fiber system	4,628,084	12,107	4,640,191	
	FLEET	Purchase of Vehicles and Power Operated Equipment.	15,202,486	(560,979)	14,641,508	
	HED011-S	Regulatory required major projects - EMO. Regulatory required system changes tied to market support.	4,612,453	-	4,612,453	
	HED084	BES Conversion to IEE SAP CCS Billing. BES Upgrade to current Oracle Lodestar release.	18,497,905	-	18,497,905	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HED090	BM - CEHE EAI Technology Change. Technical upgrade of transaction management platform - migrate from Sun JCAPS to Oracle Fusion Middleware.	2,126,347	-	2,126,347	
	HED136	Critical Integration Management Office - The Critical Information Management Office facilitates end-to-end integration between critical programs and projects to ensure the effectiveness, quality, performance, and integrity of the end-to-end solutions. CIMO supports capital projects in alleviating barriers to effective collaboration between interdependent programs and proactively identify misalignment of dependencies that could derail the successful implementation of the programs.. CIMO ongoing activities.	1,780,609	-	1,780,609	
	HED161	Fleet Management System	1,263,347	-	1,263,347	
	HLP/00/0636	This project covers the replacement of the REDE critical infrastructure support systems. These systems include the ECDC UPS and PDU equipment used to furnish and monitor REDE electrical service and the Mapboard, Video Graphic Recorders and REDE consoles used by RTO System Controllers for power system observability.	2,991,026	-	2,991,026	
	HXSF	Field Metering - Purchase of in-service meter equipment.	16,091,237	-	16,091,237	
	MISC	Telecom Delivery Misc Projects - video walls, furniture,equipment, printers, and computers in support of the Technology Systems Control Center at Addicks Operations Center and Energy Control & Data Center.	1,845,303	-	1,845,303	
	MPLS	MPLS Network - replace routers and related network equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	4,635,397	432	4,635,829	
	OPENSKY	Voice and Mobile Data - Major upgrades, hardening and system enhancements/improvements to Voice and Mobile Data Radio System (VMDRS), which is a critical part of the CNP's Telecommunications infrastructure that must remain a reliable, up-to-date system.	2,292,229	-	2,292,229	
	TMSY	Microwave Projects - Design, install and deploy microwave/radio systems in support of corporate communications. This project is to support growth and eliminate points of failure that could impact critical systems and applications. Replace old shelters facilities.Also provides for replacement of Microwave radios and related MW equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	1,492,163	2,745	1,494,908	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	WELSH	CenterPoint share of capital upgrades/improvements for shared Welsh DC Tieline	4,863,312	-	4,863,312	
Load Growth						348,524,905
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	22,810,526	2,965,920	25,776,447	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	30,687,228	854,185	31,541,413	
	AF1U	Underground Residential Distribution services to new customers.	44,552,476	374,707	44,927,183	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	4,151,660	-	4,151,660	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	14,849,196	1,746,524	16,595,720	
	AF2H	Overhead line extensions to new Underground Residential Distribution subdivisions.	2,600,653	106,120	2,706,773	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	7,395,766	-	7,395,766	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	18,001,158	(89,765)	17,911,393	
	DF1U	Streetlight New Installations - Installation of new streetlight standards, and/or luminaires, associated wiring and equipment driven by customer requests for new streetlights.	12,943,643	20,268	12,963,911	
	HLP/00/0055/TR/0102	Transmission service to Marine substation	2,689,062	-	2,689,062	
	HLP/00/0095/SB/0094	Install capacitor banks or other sources of reactive compensation as needed throughout the CenterPoint Energy service area.These dollars were to install a reactor at Tomball Substation	3,884,704	47,157	3,931,862	
	HLP/00/0533	Echo Substation: Add 4th 12kV Trf & 15th Fdr.Substation work to add a transformer and feeder at Echo substation to support load growth.	3,053,075	-	3,053,075	
	HLP/00/0612	Fry Substation: Build 35KV Sub W/3 35KV Feeders.	10,316,441	-	10,316,441	
	HLP/00/0637	Project is required to solve reliability concerns, storm harden the Freeport area, and prepare for increased industrial load in the area.	24,253,984	1,340,589	25,594,573	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0652	Telephone: Add 9th & 10th Feeders & 3rd Transformer:Substation work to add transformer and two feeders to Telephone substation to support load growth.	3,220,985	-	3,220,985	
	HLP/00/0660	Katy Substation: Substation work to add a 3rd 100mva transformer at Katy substation to support load growth.	3,175,050	10,936	3,185,986	
	HLP/00/0732	Reconductor and upgrade substation equipment to increase the thermal limit of circuit 66 Humble -Treaschwig – Westfield.	2,729,047	-	2,729,047	
	HLP/00/0745	Heights Substation Add 4th Transformer and13th,14th,15th Feeders: Substation work to add transformer and feeders to Heights substation to support load growth.	3,152,457	-	3,152,457	
	HLP/00/0795	Hockley Substation-Replace 2-47MVA transformers W/2-100 MVA Transformers: Substation work to add transformer capacity to Hockley substation to support load growth.	4,477,117	-	4,477,117	
	HLP/00/0820	PH Robinson substation:Installation of new autotransformer	1,657,478	85,824	1,743,302	
	HLP/00/0823	Upgrade 69 kV ckt 34 from Heights – White Oak	1,276,490	-	1,276,490	
	HLP/00/0875	Springwoods Substation: Substation and Underground distribution work for new Springwoods substation.	13,560,662	-	13,560,662	
	HLP/00/0899	This project is needed to reduce the level of induced voltage onto the BNSF railroad for the safety of BNSF personnel and the public. The induced voltage either exceeds or has the capability of exceeding 50V at each railroad insulated joint location.	9,820,317	-	9,820,317	
	HLP/00/0914	69-138 kV Conversions at Clinton and Busch substations.	2,443,495	94,252	2,537,747	
	HLP/00/0937	Upgrades/69kv to 138kv conversions of various CenterPoint facilities in the Fort Bend area	12,016,076	1,256,620	13,272,696	
	HLP/00/0941	Alexander Island-Upgrade Transformers to 50MVA: Substation work to replace transformers at Alexander Island substation for capacity increase to support load growth.	1,278,431	-	1,278,431	
	HLP/00/0948	Gears Substation: Substation work to add 3rd transformer and two feeders at Gears substation to support load growth.	3,920,852	59,557	3,980,409	
	HLP/00/0953	South Channel Substation: Substation work to add new distribution substation with 2 50mva transformers and 6 feeders at South Channel substation to support load growth.	6,721,006	-	6,721,006	
	HLP/00/0956	Willow Substation-Add 2-100MVA Transformers/4-35KV Feeders: Substation work to add transformers and feeders to Willow substation to support load growth.	8,218,378	-	8,218,378	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0957	Lockwood Substation-Add 3rd 100MVA Transformer/2-35KV Feeders: Substation work to add transformer and feeders to Lockwood substation to support load growth	3,695,427	-	3,695,427	
	HLP/00/0961	Industrial Substation-Add 5th & 6th Feeders: Add two feeders to Industrial substation to support load growth.	1,814,224	-	1,814,224	
	HLP/00/0963	Springwoods-Add 3rd 100MVA Transformer/4-35KV Feeders- Substation work to add transformer and feeders to Springwoods substation to support load growth.	3,483,629	-	3,483,629	
	HLP/00/0974	Tomball Substation: Substation work to add 3rd transformer and two feeders at Tomball substation to support load growth.	4,515,441	105,998	4,621,439	
	HLP/00/0977	Jordan Substation: Build new 35kv distribution substation at Jordan substation to support load growth.	6,906,746	-	6,906,746	
	HLP/00/0978	Trinity Bay-Install 35KV Facilities: Substation work to construct new substation at Trinity Bay to support load growth.	5,604,806	24,469	5,629,275	
	HLP/00/0989	Various upgrades necessary at Rothwood Substation and involving Rothwood Substation circuits. Upgrades include:Loop 345 kV circuit 75 into Rothwood Substation; Install 800 MVA 345 / 138 kV autotransformer at Rothwood Substation;Expand Rothwood 138 kV Substation and reconfigure in Rothwood area.	7,171,173	87,568	7,258,741	
	HLP/00/0990	Bellaire Substation: Replace 600 MVA autotransformer with new 800MVA autotransformer	6,701,162	-	6,701,162	
	HLP/00/1053	Replace H-Frame portions of 138kV ckt 06C Fairmont – NASA and ckt 06D NASA – Webster to mitigate ground clearance issues.	1,085,833	-	1,085,833	
	HLP/00/1054	Raise 345KV ckts 97 & 99 THWharton-Cedar Bayou to mitigate ground clearance issues.	4,504,250	798,718	5,302,968	
	HLP/00/1068	Rebuild wood pole portions of Hardy-Bertwd-Glenwd 138kV ckt 95C to mitigate ground or distribution clearance issues.	1,625,778	-	1,625,778	
	HLP/00/1070	Brazosport Substation-Add 3rd Transformer / 2-12KV Feeders: Substation work to add transformer and feeders at Brazosport substation to support load growth.	3,029,779	-	3,029,779	
	HLP/00/1072	Interconnection to provide service to new PHRobinson Peaker generation facilitiy as required by ERCOT guides and PUC regulations	2,654,725	35,751	2,690,476	
	HLP/00/1076	Ellington Substation-Add 3rd Transformer and 2 Feeders: Substation work to add transformer and feeders at Ellington substation to support load growth.	3,292,147	-	3,292,147	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/1081	Addicks Substation: Add 8th & 9th 35KV Feeders: Substation work to add feeders at Addicks substation to support load growth.	2,656,974	-	2,656,974	
Public Improvements						21,511,173
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	2,275,043	89,510	2,364,552	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	4,846,818	784,207	5,631,025	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	6,944,601	(418,952)	6,525,649	
	GRAND PARKWAY	Relocation of CNP infrastructure to accommodate Texas Department of Transportation construction of the Grand Parkway Tollway.	3,925,568	75,157	4,000,726	
	HLP/00/0032/TR/0108	Galveston 53rd Street - Relocate Transmission Facilities	2,569,676	419,546	2,989,221	
Restoration						48,000,259
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	9,021,405	1,900,095	10,921,501	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	15,329,017	3,885,561	19,214,578	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	10,174,568	2,797,094	12,971,662	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	4,168,131	724,387	4,892,519	
System Improvements						249,306,541
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	16,722,560	4,045,323	20,767,883	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	2,787,012	872,760	3,659,772	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble.	6,214,657	1,942,632	8,157,289	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	5,587,194	1,085,873	6,673,067	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	2,492,580	314,217	2,806,797	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	7,955,337	2,680,435	10,635,772	
	AB2G	Replacement of CEHE owned poles based on results of the Groundline Inspection Program.	6,449,482	2,431,602	8,881,083	
	AB2S	Underground residential distribution proactive span replacement.	13,619,525	3,697,809	17,317,334	
	ABCA	Cable Life Extension Program - Testing the condition of underground cable and mitigating components of good cable with a high probability of failure.	12,184,931	-	12,184,931	
	AFNC	New Capacitor Installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	2,357,143	-	2,357,143	
	CE1B	Proactive capital replacement of major underground equipment, cable or structures.	9,920,227	1,141,948	11,062,175	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,867,057	310,479	2,177,536	
	DB18	Streetlight LED Replacement- Program replacement of high pressure sodium, metal halide, and mercury vapor streetlight luminaires with LED streetlight luminaires.	15,762,729	-	15,762,729	
	DB2H	Replacement of streetlight standards due to cable cuts.	7,946,872	3,074,338	11,021,210	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	3,406,737	141,169	3,547,907	
	HLP/00/0012	Scheduled Substation Corrective Projects-small, scheduled corrective projects. These projects involve replacement of equipment and or structures.	3,091,367	180,088	3,271,455	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrila substations	2,132,831	-	2,132,831	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's).	4,318,330	198,690	4,517,021	
	HLP/00/0054/TR/0001	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	8,836,168	1,748,213	10,584,381	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	26,576,052	338,405	26,914,457	
	HLP/00/0187	Replace obsolete and unreliable circuit switchers.	4,045,300	64,926	4,110,226	
	HLP/00/0234	Replacement of indoor switchgear facilities with low profile facilities due to reliability issues.	3,121,142	212,356	3,333,498	
	HLP/00/0243	Replace or add new fault recorders at selected locations based upon parts availability and evaluated need.	1,772,190	50,072	1,822,262	
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	6,023,983	122,692	6,146,676	
	HLP/00/0491	Elevate control houses and other equipment as necessary to prevent damage from flooding.	1,320,532	40,235	1,360,767	
	HLP/00/0582	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	3,478,687	4,209	3,482,896	
	HLP/00/0667	This project is to provide funding for replacement of older 345kV Westinghouse, LWE live-tank breakers with newer SF6 gas puffer design single-break units.	2,455,502	42,160	2,497,662	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	13,514,438	320,482	13,834,921	
	HLP/00/0672	This program provides for various protection improvements on the substation system. Work covered with these amounts was associated with the installation of a 35kv breaker at Satsuma Substation.	1,827,414	102,057	1,929,471	
	HLP/00/0762	Installation of Traveling Wave System (TWS) fault locators on the transmission grid .	1,442,392	-	1,442,392	
	HLP/00/0801	Foundation Replacements due to Alkali-Silica Reaction (ASR) in the foundation causing large cracks in the piers/foundations. The reaction cannot be stabilized and is not reversible.	1,190,140	-	1,190,140	
	HLP/00/0869	Upgrade fault duty (bus work and equipment) at various substations within CNP's electrical Substation facilities.	1,707,738	72,881	1,780,619	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0884	Replace 12/35KV SQD Type FBS Breakers - This project includes replacement of 115 Square D, type FBS, SF6 breakers with history of high level of failure rates.	1,251,720	63,168	1,314,888	
	HLP/00/0909	Replace 35KV//12KV Breakers-This project includes replacement of older troublesome distribution breakers (mostly oil filled) at various substations with newer technology vacuum breakers.	2,134,463	25,322	2,159,785	
	HLP/00/0933	Bleeder Pot Distribution Breaker Replacements-replacement of 1st generation 35KV vacuum breakers and the associated "bleeder" transformers installed along with them for reliability improvements. Units are over thirty years old.	1,381,674	40,135	1,421,809	
	HLP/00/0936	Substation improvements including new relay panels at Fannin, HOC and Grant substations; Conversion of Arcola substation to a loop station; Reconfiguration of transformer at Heights substation; replace relays at Berry substation.	2,854,802	85,279	2,940,082	
	HLP/00/0976	Replacement of wood structures at the H-Frame portions of 138kV ckt 09F Ft Bend – Reading – Crabb River tap to mitigate ground clearance issues.	5,920,377	640,555	6,560,931	
	HLP/00/1055	Distribution line clearance corrections between transmission and distribution facilities to meet National Electrical Safety Code (NESC) requirements.	5,285,167	777,538	6,062,704	
	HLP/00/1099	Substation Physical Security Enhancement: Replacement of substation facility fencing with more protective fencing to ensure our critical assets receive a greater level of protection.	1,482,039	-	1,482,039	
Intelligent Grid						78,193,088
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	60,097,897	9,882	60,107,778	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	POST AMS	Project for the deployment of approximately 2.4 million advanced meters and the associated telecommunications and information systems to support the functions of the meters. Also includes additional systems and enhancements to our existing systems to support the AMS meters such as hardware to support storage of AMS information; enhancements to the interface platform that allows AMS systems to communicate with other CenterPoint Electric systems; enhancements to the customer information system to support AMS; enhancements to support analytics utilizing AMS data; and enhancements to SmartMeter Texas to support new market requirements. These costs were not included in the AMS surcharge.	18,165,094	(79,784)	18,085,310	
Projects greater than $1,000,000			936,770,333	46,691,482	983,461,815	983,461,815
Projects less than $1,000,000			52,752,963	(616,202)	52,136,761	52,136,761
Total of All Projects			989,523,296	46,075,279	1,035,598,576	1,035,598,576

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						87,579,968
	13090056	HLPD - Meter & Communications Cap - This project captures labor costs incurred to install meters.	4,940,297	-	4,940,297	
	13090589	HED011-S-BM-CIS/BES/TMH Mandated Chrg - Support of required regulatory changes tied to market for ECI(Electric/Commercial/Industrial), CIS(Customer Information System), and EAI(Enterprise Application Integration) applications.	1,950,445	-	1,950,445	
	13090592	HED072-IOSS (AMS): IT security application and hardware requirements to support the AMS program	1,175,431	-	1,175,431	
	13090596	HED084-BES/SWIS/SLAMS to SAP-IT: Migration of large commercial customers from legacy BES (Billing Expert System) application to SAP.	1,062,068	-	1,062,068	
	13090601	HED125-ADMS Gap Resolution: This project will support the implementation of the ADMS project with regards to gaps between ADMS and OAS (Outage Analysis System) functionality.	1,451,143	-	1,451,143	
	AA80	Facilities modifications including fencing, shelving, furniture, etc.	7,646,612	3,034	7,649,646	
	AOC	Establish a fully redundant, multi-site Control Center to support CenterPoint Energy Houston Electric's power system. Business continuity considerations, NERC EOP-008 Standard (applicable to NERC registered Transmission Operators - TOP), NERC COM -001 standard (Communication diversity) require that RTO be able to continue to conduct Business As Usual on a 24/7 basis even in the event that the present energy control center and computer systems are destroyed or become unavailable.	7,160,743	-	7,160,743	
	FLEET	Purchase of Vehicles and Power Operated Equipment.	18,233,558	(394,963)	17,838,596	
	HLP/00/0636	Replacement of the REDE critical infrastructure support systems. These systems include the Mapboard, Video Graphic Recorders and REDE consoles used by RTO System Controllers for power system observibility.	1,272,748	-	1,272,748	
	HXSF	Field Metering - Purchase of In-service metering equipment	10,607,654	-	10,607,654	
	S/101320/CG/WELSH	CenterPoint share of capital upgrades/improvements for shared Welsh DC Tieline	17,518,575	-	17,518,575	
	S/101320/CG/XA20WO	Transmission Facility additions including buildings. Also includes premise equipment and tools for transmission activities	2,676,806	26,929	2,703,735	
	S/101784/CE/TOWER	Replace generators at communication towers	1,470,013	0	1,470,013	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	S/101784/CG/MISC	Purchased Licenses and Software needed to manage telecom network for Development/Test and Production environments. Also purchased new equipment cabinets for South Houston.	1,001,139	-	1,001,139	
	S/101785/CE/FIBER	Purchase of fiber optic cable and the labor to install the cable. CNP's expanding network infrastructure requires an increase in the CNP fiber network to geographically support the expanding backhaul infrastructure and establish a fiber footprint in locations where microwave communications may limit capacity. Also includes replacement of aged/degraded fiber on CNP's Core Fiber Backbone and planned rehabilitation/replacement of existing fiber system	3,906,556	-	3,906,556	
	S/101785/CE/MPLS	MPLS Network - replace routers and related network equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	1,250,663	2,773	1,253,436	
	S/101785/CE/TMSY	Microwave - replace Microwave radios and related MW equipment for the Telecom communications system that are End of Life, damaged and/or no longer functioning to the necessary capacity.	1,437,423	632	1,438,055	
	S/101785/CN/OPENSKY	Voice And Mobile Data - Major upgrades, hardening and system enhancements/ improvements to Voice and Mobile Data Radio System (VMDRS) which is a critical part of the CNP's Telecommunications infrastructure and must remain a reliable and up-to-date system.	1,560,454	-	1,560,454	
	S/101785/CN/SCADA	Provide SCADA communications to new electrical substations controlled, managed or monitored by CenterPoint Energy. Services provided by internal telecommunications infrastructure or by leased carrier services, in order to fulfill new operational, business and compliance requirements.	1,619,234	-	1,619,234	
Load Growth						363,705,631
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	27,222,235	6,604,362	33,826,597	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	38,715,987	1,634,206	40,350,193	
	AF1U	Underground Residential Distribution services to new customers.	37,093,401	286,845	37,380,246	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	7,553,039	-	7,553,039	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	16,366,198	1,290,555	17,656,752	
	AF2H	Overhead line extensions to new Underground Residential Distribution subdivisions.	2,835,363	185,325	3,020,688	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	2,272,124	48,705	2,320,830	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	20,601,420	(364,027)	20,237,393	
	DF1U	Streetlight New Installations - Installation of new streetlight standards, and/or luminaires, associated wiring and equipment driven by customer requests for new streetlights.	16,398,064	(63,132)	16,334,932	
	HLP/00/0637	Project is required to solve reliability concerns, storm harden the Freeport area, and prepare for increased industrial load in the area.	9,486,860	566,901	10,053,760	
	HLP/00/0681	O'Brien Substation - Add new 800mva autotransformer	14,703,957	685,621	15,389,578	
	HLP/00/0717	Build a new 345 kV double circuit transmission line from Zenith Substation to Gibbons Creek to Limestone to increase transfer capability to the Houston Region.	26,237,128	-	26,237,128	
	HLP/00/0732	Reconductor and upgrade substation equipment to increase the thermal limit of circuit 66 Humble -Treaschwig – Westfield.	12,585,135	1,774,005	14,359,140	
	HLP/00/0829	Intercontinental- Replace TRF 2 W/50MVA; Work to replace transformer in Intercontinental substation for capacity increase to support load growth.	1,497,524	-	1,497,524	
	HLP/00/0854	Upgrade Gable street - Eastside. Upgrades include:Convert sections of existing 69 kV Garden Villas – Gable Street;Install new 138:69kV 200MVA auto at Gable Street; Install 1.5Ω reactor in series with 69kV Gable Street – Downtown ckt 32; Install a 100 MVAR Cap bank to Rothwood from Eastside	9,006,988	-	9,006,988	
	HLP/00/0859	Galveston Area Upgrades include:Galveston Area Upgrades: LaMarque expand to 5 breaker ring. Reconfigure ckts, loop in two of the three 138 kV lines;Install reactor 10 MVAR shunt reactor at Stewart sub.	6,981,151	169,651	7,150,802	
	HLP/00/0888	Colorado Bend Phase III: Distribution work to provide service to new Bailey substation.	9,470,409	206,992	9,677,401	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0926	Project is required to solve reliability concerns associated with increased industrial loads in the Freeport area such as Freeport LNG. The project is needed to meet ERCOT Planning Criteria and CNP Design Criteria after the inclusion of the Freeport LNG load.	3,965,849	-	3,965,849	
	HLP/00/0937	Upgrades/69kv to 138kv conversions of various CenterPoint facilities in the Fort Bend area	4,940,644	728,772	5,669,416	
	HLP/00/0941	Alexander Island-Upgrade Transformers to 50MVA: Substation work to replace transformers at Alexander Island substation for capacity increase to support load growth.	5,515,966	434,403	5,950,369	
	HLP/00/0956	Willow Substation-Add 2-100MVA Transformers/4-35KV Feeders: Substation work to add transformers and feeders to Willow substation to support load growth.	3,351,363	-	3,351,363	
	HLP/00/0963	Springwoods-Add 3rd 100MVA Transformer/4-35KV Feeders- Substation work to add transformer and feeders to Springwoods substation to support load growth.	6,731,730	-	6,731,730	
	HLP/00/0989	Various upgrades necessary at Rothwood Substation and involving Rothwood Substation circuits. Upgrades include:Loop 345 kV circuit 75 into Rothwood Substation; Install 800 MVA 345 / 138 kV autotransformer at Rothwood Substation;Expand Rothwood 138 kV Substation and reconfigure in Rothwood area.	5,346,750	-	5,346,750	
	HLP/00/0991	Upgrade transmission ckt 06 from SRBertron to Fairmont	3,838,472	378,605	4,217,077	
	HLP/00/1027	Obrien-Add 3RD XFMR and 3 Feeders: Work to add transformer and feeders to O'Brien substation for capacity increase to support load growth.	3,500,133	-	3,500,133	
	HLP/00/1036	Tanner - New 35KV Substation: Work to build new Tanner substation to support load growth.	12,397,363	-	12,397,363	
	HLP/00/1053	Replace H-Frame portions of 138kV ckt 06C Fairmont – NASA and ckt 06D NASA – Webster to mitigate ground clearance issues.	10,091,886	1,501,990	11,593,876	
	HLP/00/1054	Raise 345KV ckts 97 & 99 THWharton-Cedar Bayou to mitigate ground clearance issues.	4,863,897	-	4,863,897	
	HLP/00/1068	Rebuild wood pole portions of Hardy-Bertwd-Glenwd 138kV ckt 95C to mitigate ground or distribution clearance issues.	5,904,814	684,934	6,589,748	
	HLP/00/1077	Rebuild transmission ckt 34B from Heights-HOC to mitigate clearance issues.	6,500,618	650,943	7,151,561	
	HLP/00/1112	Convert HOC substation from 69kv to 138kv	2,824,755	-	2,824,755	
	HLP/00/1131	Reconductor transmission ckts 73 & 81 Brittmore to Sauer	4,069,959	507,120	4,577,079	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/1144	Rebuild CKT04 Wood H-Frame and 1050' span tower sections from Amoco – Mustang – Algoa Corner using new DT-850 towers	2,921,676	-	2,921,676	
Public Improvements						39,095,577
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	3,350,680	398,108	3,748,788	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	12,829,756	2,278,969	15,108,726	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	18,313,161	579,687	18,892,848	
	HLP/00/2000	Relocation of CNP infrastructure to accommodate Texas Department of Transportation construction of the Grand Parkway Tollway.	1,290,236	54,980	1,345,216	
Restoration						62,037,122
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	9,578,467	2,006,565	11,585,032	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	13,896,771	3,500,225	17,396,996	
	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions.	12,446,965	3,602,329	16,049,294	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	6,213,225	620,646	6,833,872	
	HLP/00/0907	Replacement of transmission facilities CKT 88/03 at Alexander Island due to damage from barge.	6,611,769	-	6,611,769	
	S/101320/CE/XD11	Emergency restoration involving transmission facilities	3,191,574	368,586	3,560,160	
System Improvements						187,439,516

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	13,839,839	3,844,622	17,684,461	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	3,207,782	885,912	4,093,694	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis Includes: spans referred from trouble.	4,351,864	1,157,987	5,509,850	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	7,551,596	1,942,017	9,493,612	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	3,576,586	453,643	4,030,229	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	8,625,446	2,788,658	11,414,103	
	AB2G	Replacement of CEHE owned poles based on results of the Groundline Inspection Program.	4,597,559	759,068	5,356,627	
	AB2S	Underground residential distribution proactive span replacement.	5,419,350	1,838,739	7,258,089	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	3,499,665	-	3,499,665	
	ABCA	Cable Life Extension Program - Testing the condition of underground cable and mitigating components of good cable with a high probability of failure.	3,641,713	-	3,641,713	
	AFNC	New Capacitor Installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	1,808,285	-	1,808,285	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	4,071,594	106,514	4,178,108	
	DB16	Streetlight Rehabilitation/Relocations.	914,789	175,250	1,090,039	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	3,349,807	337,518	3,687,324	
	DB18	Streetlight LED Replacement- Program replacement of high pressure sodium, metal halide, and mercury vapor streetlight luminaires with LED streetlight luminaires.	20,961,631	15,492	20,977,123	
	DB2H	Replacement of streetlight standards due to cable cuts.	6,327,172	2,349,377	8,676,549	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	3,450,695	3,312	3,454,006	
	HLP/00/0012	Scheduled Substation Corrective Projects-small, scheduled corrective projects. These projects involve replacement of equipment and or structures.	1,236,785	4,753	1,241,538	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrila substations	2,237,021	(50,375)	2,186,646	
	HLP/00/0054/TR/0001-C	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	12,881,706	2,411,759	15,293,465	
	HLP/00/0054/TR/0009-C	Partial rebuild of 138kV ckt 03J/88B from Alexander Island	6,646,491	162,043	6,808,534	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	9,366,157	55,472	9,421,629	
	HLP/00/0187	Replace obsolete and unreliable circuit switchers.	2,268,215	46,989	2,315,204	
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	3,108,917	-	3,108,917	
	HLP/00/0582	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	1,557,619	-	1,557,619	
	HLP/00/0667	This project is to provide funding for replacement of older 345kV Westinghouse, LWE live-tank breakers with newer SF6 gas puffer design single-break units.	2,799,164	-	2,799,164	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	4,065,532	1,072	4,066,605	
	HLP/00/0801	Foundation Replacements due to Alkali-Silica Reaction (ASR) in the foundation causing large cracks in the piers/foundations. The reaction cannot be stabilized and is not reversible.	2,965,940	-	2,965,940	
	HLP/00/0922	Replace support structures on Sharpstown Tap 138KV Ckt 25A for storm hardening.	2,317,175	262,944	2,580,119	

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
	HLP/00/0936	Substation improvements including Clodine reconfiguration; Heights reconfiguration; Fannin ring bus conversion;Singleton relay panel replacement.	1,891,998	13,215	1,905,213	
	HLP/00/1055	Distribution line clearance corrections between transmission and distribution facilities to meet National Electrical Safety Code (NESC) requirements.	4,727,778	798,208	5,525,986	
	HLP/00/1099	Substation Physical Security Enhancement: Replacement of substation facility fencing with more protective fencing to ensure our critical assets receive a greater level of protection.	8,938,027	871,433	9,809,460	
Intelligent Grid						7,404,371
Intelligent *Grid*	AMS	Project for the deployment of approximately 2.4 million advanced meters and the associated telecommunications and information systems to support the functions of the meters. Also includes additional systems and enhancements to our existing systems to support the AMS meters such as hardware to support storage of AMS information; enhancements to the interface platform that allows AMS systems to communicate with other CenterPoint Electric systems; enhancements to the customer information system to support AMS; enhancements to support analytics utilizing AMS data; and enhancements to SmartMeter Texas to support new market requirements. These costs were not included in the AMS surcharge.	8,585,139	(1,180,768)	7,404,371	
Projects greater than $1,000,000			696,246,058	51,016,127	747,262,185	747,262,185
Projects less than $1,000,000			32,481,578	1,062,516	33,544,093	33,544,093
Total of All Projects			728,727,636	52,078,642	780,806,278	780,806,278

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Project Category	Project Number	Description	Additions	Net Salvage	Total	Project Category Total
General Equipment						61,964,545
	13073810	Gable Street Disposal: Removal of facilities at Gable Street.	0	2,733,183	2,733,183	
	13090056	HLPD - Meter & Communications Cap - This project captures labor costs incurred to install meters.	5,718,030	0	5,718,030	
	13090587	HEBM008-Analytics-Real Time Mgmt. Create new reports, dashboards, and data analytics surrounding the information contained in Operational Data Warehouse and SAP BW. Key areas to be improved: Contact log and Streetlight reporting, Intelligent Grid (DACS report), Situational Awareness for CEHE upgrades, Distribution Power Delivery KPI dashboard. Project also impacts Diversion activities (disconnect/no pay with No Reconnect reporting/analysis) with goal of reducing fewer truck rolls for diversion inspections.	2,081,150	0	2,081,150	
	13090588	HEBM009-Analytics-Operations· Create new reports, dashboards, and data analytics surrounding the information contained in Operational Data Warehouse. Work performed will impact Situational Awareness displays and reports for CEHE, DPD Market Orders KPI's, Transformer Load Mgmt./Electric Load Mgmt., BES/Street Light reporting enhancements, and Unbilled reporting. Project also includes hardware costs for DQM (address verification) in SAP.	1,916,627	0	1,916,627	
	13090594	HED074-SD EAI (AMS): EAI development to support AMS program. This project will provide real-time synchronization of Meter Data from CIS to MDM.	1,319,016	0	1,319,016	
	13090640	ENTD044 MOBILE DATA VENTYX R9 - CEHE: Enterprise Mobile data upgrade.	5,930,773	0	5,930,773	
	13090943	ENTD116 - Preference Center - CEHE: Provides a centralized location to manage customer telephone and email consent requirements; Gives customers choices about the information they receive from CNP, thus creating greater satisfaction, trust Enables us to better work with and market to commercial class customers Allows notifications to electric customers before planned outage and curtailment activities	2,795,621	0	2,795,621	
	13091922	ITD089-AOCPhaseII-IT Backup Data Ctr2016: IT Backup Data Center to replace SunGard	4,983,201	0	4,983,201	

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	13091940	HEBM014 Netezza Migration SW: Migrate from Netezza to new HANA Data Warehouse platform Developed Meter Data Models to new HANA Landscape Migrated from Netezza appliance to HANA Created and deployed new Hadoop platform to store 13+ months of MDM data	4,097,852	0	4,097,852	
	13092304	2017 Capital Mobile Data Computer Replacement: Replacement of computer equipment for Distribution related mobile data.	2,128,676	0	2,128,676	
	AA80	Facilities modifications including fencing, shelving, furniture, etc.	2,082,399	0	2,082,399	
	FLEET	Purchase of Vehicles and Power Operated Equipment.	5,236,346	(2,531,581)	2,704,765	
	HLP/00/0636	Replacement of the REDE critical infrastructure support systems. These systems include the Mapboard, Video Graphic Recorders and REDE consoles used by RTO System Controllers for power system observibility.	2,901,644	0	2,901,644	
	HXSF	Field Metering - Purchase of in-service metering equipment	10,073,753	0	10,073,753	
	S/101710/CE/CELLRELAY	Deploy (Post DOE) existing cell relays	2,526,625	(26,792)	2,499,832	
	S/101785/CE/FIBER	Replace aged/degraded fiber on CNP's Core Fiber Backbone	7,711,870	286,152	7,998,022	
Load Growth						534,463,901
	AF1A	Planned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains as called for in Planning Issued Distribution Development Plans.	16,032,021	3,588,173	19,620,194	
	AF1H	Overhead services to new customers or adding facilities to accommodate additional load to an existing customer.	36,968,128	1,949,047	38,917,175	
	AF1U	Underground Residential Distribution services to new customers.	30,939,764	354,324	31,294,088	
	AF1Z	Only for the installation of overhead service drops and meters to a new customer or service drop replacement to an existing customer adding load where no other facilities are involved.	7,272,555	0	7,272,555	
	AF2A	Unplanned additions/improvements to the 12kV and 35kV overhead distribution system feeder mains relating to area load growth, in conjunction with providing service to customers.	13,207,238	1,599,389	14,806,627	
	AF2H	Overhead line extensions to new Underground Residential Distribution subdivisions.	2,865,121	133,339	2,998,461	
	CE1A	Planned additions/improvements to the 12kV and 35kV distribution system that requires underground feeder mains and underground dips as called for in Planning Issued Distribution Development Plans.	6,659,506	(11,864)	6,647,642	
	CF1R	New major underground services to customers that require three-phase underground facilities to serve their electrical load.	16,176,017	(65,910)	16,110,108	

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	DF1U	Streetlight New Installations - Installation of new streetlight standards, and/or luminaires, associated wiring and equipment driven by customer requests for new streetlights.	13,844,281	(1,425)	13,842,856	
	HLP/00/0522	CARDIF-Instll 3rd Trf & 8th 12kV Fdr: Work to install transformer and feeder at Cardiff substation to support load growth.	1,389,685	0	1,389,685	
	HLP/00/0637	Project is required to solve reliability concerns, storm harden the Freeport area, and prepare for increased industrial load in the area.	16,673,891	1,526,797	18,200,687	
	HLP/00/0653	FRANZ_ Instl 4th Trf,(3)35kV Feeders: Work to install transformer and feeders at Franz substation to support load growth.	4,788,380	0	4,788,380	
	HLP/00/0717	Work to provide distribution service for FAA required lighting on structures installed as part of the Brazos Valley Interconnection project.	99,595,081	613,151	100,208,232	
	HLP/00/0822	WOODCREEK-Inst 3rd Trf & (2)35kV Fdr's : Work to install transformer and feeder at Woodcreek substation to support load growth.	1,942,565	0	1,942,565	
	HLP/00/0823	Upgrade 69 kV transmission ckt 34 from Heights – White Oak	5,474,783	879,541	6,354,324	
	HLP/00/0854	Upgrade Gable street - Eastside. Upgrades include:Convert sections of existing 69 kV Garden Villas – Gable Street;Install new 138-69kV 200MVA auto at Gable Street; Install 1.5Ω reactor in series with 69kV Gable Street – Downtown ckt 32; Install a 100 MVAR Cap bank to Rothwood from Eastside	4,826,077	937,111	5,763,188	
	HLP/00/0859	Galveston Area Upgrades include:Galveston Area Upgrades: LaMarque expand to 5 breaker ring. Reconfigure ckts, loop in two of the three 138 kV lines;Install reactor 10 MVAR shunt reactor at Stewart sub.	1,251,056	68,992	1,320,047	
	HLP/00/0860	Katy area upgrades to resolve reliability issues identified as part of the normal transmission design planning process.Upgrade include: New Zenith - Franz line; Install 2nd Zenith 800 MVA auto;Convert Katy to loop station on ckt 09; Convert Franz to loop station on ckt 09.;Upgrade Franz loop	21,365,053	8,847	21,373,899	
	HLP/00/0888	Interconnection to provide service to generation as required by ERCOT procedure and PUC regulations. 'Construction and Interconnection of Bailey substation	6,103,006	69,775	6,172,781	
	HLP/00/0926	Distribution work to support Freeport area projects.	83,820,590	1,298,764	85,119,354	
	HLP/00/0932	'Interconnection to provide service to generation as required by ERCOT procedure and PUC regulations. Construction and Interconnection of Freeport LNG PTS Generator Oyster Creek.	19,739,703	39,078	19,778,781	

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	HLP/00/0954	Sandy Point_-Build New 138/12KV Sub;: Work to build new Sandy Point substation to support load growth.	15,363,534	156,218	15,519,752	
	HLP/00/0956	Willow Substation-Add 2-100MVA Transformers/4-35KV Feeders: Substation work to add transformers and feeders to Willow substation to support load growth.	1,399,358	181,007	1,580,365	
	HLP/00/0969	Intermediate-Upgrade 2 Transformers to 50MVA - Upgrade transformers at Intermediate substation to support load growth.	4,764,029	30,800	4,794,829	
	HLP/00/0986	Deepwater Area Conversions: Project includes: Convert 69kV CHANEL to 138 kV and connect to ckt 70.;Loop ckt 94 L College tap – Witter tap into Deepwater.; Convert 69kV MOCHEM to 138 kV and connect to ckt 70.;Convert 69kV TXPET to 138 kV and connect to ckt 70.	4,895,348	106,269	5,001,617	
	HLP/00/0992	Jordan substation - Add Second 800 MVA Autotransformer	10,767,273	0	10,767,273	
	HLP/00/0993	Dow Install Second 800 MVA Autotransformer	15,895,496	282,384	16,177,880	
	HLP/00/0994	PH Robinson Substation:Replace 600 MVA autotransformer with 800 MVA autotransformer.	6,851,830	253,669	7,105,499	
	HLP/00/1036	Tanner - New 35KV Substation: Work to build new Tanner substation to support load growth.	9,412,585	69,115	9,481,700	
	HLP/00/1084	New VILLAGE CREEK substation: Purchase of property for new Village Creek distribution substation to support load growth.	1,533,763	0	1,533,763	
	HLP/00/1088	QUAIL VALLEY-Add Transformer and Feeders: Work to add transformers and feeders at Quail Valley substation to support load growth.	2,458,371	22,395	2,480,766	
	HLP/00/1089	New 1960 Area Substation: Purchase of property for new 1960 Area distribution substation to support load growth.	2,000,954	0	2,000,954	
	HLP/00/1101	LYONDELL-Add Transformer and Feeders: Work to add transformer and feeders at Lyondell substation to support load growth.	3,228,403	16,736	3,245,139	
	HLP/00/1102	Orchard-Add 1-50 MVA XFMR and 1-35KV FDR: Work to install transformer and feeder at Orchard substation to support load growth.	1,375,747	(53,395)	1,322,352	
	HLP/00/1107	HANEY - UPGRADES XFMRS/ADD 5TH,6T,7TH FD: Work to replace transformers and add feeders at Haney substation to support load growth.	3,367,951	0	3,367,951	
	HLP/00/1109	South Lane : Add 2nd Transformer/Feeder: Work to add transformer and feeder at South Lane substation to support load growth	1,430,825	0	1,430,825	
	HLP/00/1116	Move 600 MVA autotransformer from PHRobinson substation to Meadow substation.	2,218,777	0	2,218,777	

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	HLP/00/1122	Build a new Retrieve 138kV substation and tie to TNP near West Columbia to provide a third source for the Phillips Sweeny plant	1,908,649	0	1,908,649	
	HLP/00/1140	'Interconnection to provide service to generation as required by ERCOT procedure and PUC regulations. Construction and Interconnection for Friendswood Energy	2,565,175	16,235	2,581,410	
	HLP/00/1143	Rebuild CKT05B Intermediate/Southwyck to mitigate ground /distribution clearance issues.	4,539,582	622,123	5,161,704	
	HLP/00/1144	Rebuild CKT04 Wood H-Frame and 1050' span tower sections from Amoco – Mustang – Algoa Corner using new DT-850 towers	6,419,296	691,980	7,111,276	
	HLP/00/1157	Bringhurst-Replace transformer and add feeder: Work to replace transformer and add feeder at Bringhurst substation to support load growth	1,562,727	0	1,562,727	
	HLP/00/1183	FRANZ_-Install 11th 35kV Feeder: Substation work to add feeder at Franz substation to support load growth.	2,233,203	107,086	2,340,289	
	HLP/00/1218	Rebuild transmission Ckts 98D&99D from Zenith to Singleton	1,600,942	245,836	1,846,778	
Public Improvements						26,779,804
	AD2D	The relocation of CEHE overhead distribution facilities that are generally less than five poles, due to customer request, including city, state, and federal government infrastructure improvement projects, such as road widening or roadway improvements.	2,797,064	583,806	3,380,870	
	AD3D	The relocation of CEHE overhead distribution facilities generally five poles or more, due to customer request, including city, state, and/or federal government infrastructure improvement projects such as road widening or roadway improvements.	8,366,426	2,698,667	11,065,092	
	CG1R	Relocation of major underground facilities for road widening, light rail, etc. Includes relocation of overhead to underground at customer's request.	10,219,783	1,074,870	11,294,653	
	HLP/00/0032/TR/0071	CKT91E. Merfish property- Relocate transmission facilities	1,039,188	0	1,039,188	
Restoration						52,226,948
	HLP/00/1222	Replacement of transmission conductor from Stewart to Westbay due to contamination.	2,604,715	456,967	3,061,682	
	AD06	Reactive capitalized replacements that are made to the underground residential distribution system requiring facility replacement. Includes cable replacement, transformers, and other retirement units and their related components.	10,542,348	2,204,744	12,747,092	
	AD07	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement.	13,073,798	3,259,848	16,333,646	

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	AD86	Reactive capitalized replacements made to the overhead distribution system requiring facility replacement resulting from the effects of adverse weather conditions	6,138,172	1,653,806	7,791,978	
	CD1T	Reactive capitalized replacements made to the major underground system requiring replacement of equipment, cable or structures in response to "lights out." Also includes replacement of system neutral associated with copper theft.	5,118,180	764,848	5,883,028	
	XD11	Emergency restoration involving transmission facilities	5,644,370	765,152	6,409,522	
System Improvements						202,028,414
	AB1C	Planned capital replacement or rehabilitation of the overhead distribution system associated with reliability improvement. This includes target top 10% of SAIDI circuits, outage-driven overhead rehab, recurring fuse outages, recurring transformer outages, etc.	11,584,990	2,299,008	13,883,999	
	AB1G	Replacement of CEHE-owned poles found defective that are not part of the Groundline Inspection Program or trouble related.	2,952,177	1,017,056	3,969,233	
	AB1S	Planned underground residential distribution cable replacement on a one-span basis. Includes: spans referred from trouble.	4,801,199	1,462,066	6,263,265	
	AB1V	Planned underground residential distribution cable replacement of 12kV and 35kV partial and total loops. Includes: cable relocations, transformer relocation/replacements, raising transformers, and pedestals.	5,519,450	1,371,951	6,891,401	
	AB1X	Capacitor banks that include the replacement of capital material such as capacitor, vacuum switches, disconnects, controller, etc.	3,476,806	419,178	3,895,984	
	AB1Z	Proactive routine capital replacements to the overhead distribution system.	26,130,007	8,987,016	35,117,023	
	AB2G	Replacement of CEHE owned poles based on results of the Groundline Inspection Program.	12,622,114	3,129,307	15,751,422	
	AB48	Install C-truss or other approved brace on CEHE poles identified by the Groundline Inspection Program.	3,362,083	0	3,362,083	
	ABCA	Cable Life Extension Program - Testing the condition of underground cable and mitigating components of good cable with a high probability of failure.	6,000,571	0	6,000,571	
	AFNC	New Capacitor Installations - as part of the Distribution Development Plan to support load growth and demand on the electrical system	1,306,211	0	1,306,211	
	CE1B	Proactive replacement of major underground equipment, cable or structures.	4,004,241	575,699	4,579,940	
	DB16	Streetlight Rehabilitation/Relocations.	837,742	167,590	1,005,331	
	DB17	Replacement of streetlight standards and/or luminaires as a result of failure or damage. Does not include area lighting.	1,895,013	285,254	2,180,267	

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	DB18	Streetlight LED Replacement- Program replacement of high pressure sodium, metal halide, and mercury vapor streetlight luminaires with LED streetlight luminaires.	17,319,767	380	17,320,147	
	DB2H	Replacement of streetlight standards due to cable cuts.	5,517,799	2,313,015	7,830,814	
	HLP/00/0011	Unscheduled Substation Corrective Projects-small, unscheduled corrective type projects and unforeseen equipment failures. These projects involve replacement of equipment and or structures.	3,564,429	18,192	3,582,621	
	HLP/00/0012	Scheduled Substation Corrective Projects-small, scheduled corrective projects. These projects involve replacement of equipment and or structures.	3,320,220	22,354	3,342,573	
	HLP/00/0013	Replace failed/obsolete metering equipment at industrial substations or install new metering at new industrila substations	3,568,392	0	3,568,392	
	HLP/00/0014	Replace the logic cages in aging and/or unreliable SCADA Remote Terminal Units (RTU's)	1,625,708	4	1,625,712	
	HLP/00/0054/TR/0001-C	Replace deteriorating transmission facilities that if left in place could lead to outages in the near future and less reliable service.	12,606,555	1,835,983	14,442,538	
	HLP/00/0054/TR/0009-C	Partial rebuild of 138kV ckt 03J/88B from Alexander Island	5,456,362	792,599	6,248,961	
	HLP/00/0075	This project provides funding for replacement of failed distribution and transmission transformers as well as replacement of failed transmission circuit breakers. (Transformers may be rewound and the rewind would be capitalized).	9,358,050	63,288	9,421,338	
	HLP/00/0484	Substation Security Upgrades - Installation of security equipment to control physical and cyber access to CNP substations. This includes: Plant separation fencing, security cameras, & cyber security equipment at various substations. These substations are selected based on risk, vulnerability, and impact as determined by CNP security policies and/or future regulatory requirements.	1,362,233	(52,464)	1,309,769	
	HLP/00/0491/SB/0005	Build elevated control house for DOW substation.	1,704,589	0	1,704,589	
	HLP/00/0582	Install Switch onto Fault (SOTF) relay protection on the 138KV grid.	1,149,556	0	1,149,556	
	HLP/00/0668	This project is to provide funding for the replacement of 138 KV and 69KV old oil breakers with newer technology SF6 gas breakers.	2,716,966	78,591	2,795,557	
	HLP/00/0762	Installation of Traveling Wave System (TWS) fault locators on the transmission grid .	1,667,240	0	1,667,240	
	HLP/00/0798	Add dual pilot 138kv line relaying for improved protection and reliability.	1,364,040	0	1,364,040	

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	HLP/00/0801	Foundation Replacements due to Alkali-Silica Reaction (ASR) in the foundation causing large cracks in the piers/foundations. The reaction cannot be stabilized and is not reversible.	4,363,859	359,280	4,723,139	
	HLP/00/0936	Substation improvements include conversion at Fannin substation and new feeder panel at Needville substation.	1,972,944	55,179	2,028,124	
	HLP/00/1055	Distribution line clearance corrections between transmission and distribution facilities to meet National Electrical Safety Code (NESC) requirements.	4,509,756	714,752	5,224,508	
	HLP/00/1099	Substation Physical Security Enhancement: Replacement of substation facility fencing with more protective fencing to ensure our critical assets receive a greater level of protection.	6,667,280	20	6,667,301	
	HLP/00/1195	Modifications to substation control house communications network to conform to NERC Critical Infrastructure Protection standards.	1,804,766	0	1,804,766	
Intelligent Grid						17,429,208
	Post AMS	Project for the deployment of approximately 2.4 million advanced meters and the associated telecommunications and information systems to support the functions of the meters. Also includes additional systems and enhancements to our existing systems to support the AMS meters such as hardware to support storage of AMS information; enhancements to the interface platform that allows AMS systems to communicate with other CenterPoint Electric systems; enhancements to the customer information system to support AMS; enhancements to support analytics utilizing AMS data; and enhancements to SmartMeter Texas to support new market requirements. These costs were not included in the AMS surcharge.	7,779,717	(592,787)	7,186,930	
	IG	Intelligent Grid Project provides enhanced monitoring, interrogation, and control capability of the distribution grid. The project consists of installation and integration of the Advanced Distribution Management System (ADMS) and installation of field infrastructure.	10,183,000	59,278	10,242,278	
		Total of Projects Greater than $1,000,000	839,851,772	55,041,048	894,892,820	894,892,820
		Total of Projects Less than $1,000,000	38,048,994	1,853,673	39,902,667	39,902,667
		Total of All Projects	877,900,767	56,894,720	934,795,487	934,795,487