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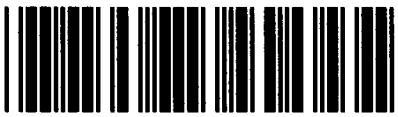

Item Number: 2

Addendum StartPage: 0

APPLICATION OF

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR A PROPOSED 138 KV TRANSMISSION LINE WITHIN HARRIS COUNTY

DOCKET NO. 38307

Submit seven (7) copies of the attached and all attachments to:

Public Utility Commission of Texas
Attn: Filing Clerk
1701 N. Congress Ave.
Austin, Texas 78711-3326

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DOCKET NO. 38307
APPLICATION OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR A PROPOSED 138 KV TRANSMISSION LINE WITHIN HARRIS COUNTY

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Attachments:

1. Environmental Assessment and Alternative Route Analysis Prepared by POWER Engineers, Inc.
2. Estimated Construction Comparison Costs for the Preferred and Alternate Routes
3. 2012 Northwest Houston Reliability Project
4. ERCOT Independent Review of the Project

Attachments:

5. Franchise Agreement Signed by CenterPoint Energy Houston Electric, LLC with the City of Houston
6. Schematic of CenterPoint Energy Houston Electric, LLC's Existing Transmission System
7. Written Direct Notice to Landowners
8. List of Names and Addresses of Landowners Receiving Written Direct Notice
9. Written Direct Notice to County and Municipal Officials and List of Officials Notified
10. Newspaper Notice
11. Affidavit

APPLICATION OF
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY
FOR A PROPOSED 138 KV TRANSMISSION LINE
WITHIN HARRIS COUNTY

1. **Applicant (Utility Name):** CenterPoint Energy Houston Electric, LLC ("CenterPoint Energy" or "CNP")

   Certificate Number: 30086

   Street Address: 1111 Louisiana Street, Houston, TX 77002

   Mailing Address: P. O. Box 1700, Houston, TX 77251-1700

2. **Person to Contact:** Andrew P. Machtemes

   Title/Position: Administrator, Regulatory Activities & Compliance

   Phone number: (713) 207-5372

   Mailing Address: P. O. Box 1700, Houston, TX 77251-1700

   Email Address: andrew.machtemes@centerpointenergy.com

Alternate Contact: David C. McAden

Title/Position: Regulatory Consultant

Phone Number: (713) 207-6680

Mailing Address: P. O. Box 1700, Houston, TX 77251-1700

Email Address: david.mcaden@centerpointenergy.com

Legal Counsel: DeAnn T. Walker

Phone Number: (512) 397-3032

Mailing Address: 1005 Congress, Suite 650, Austin, TX 78701

Email Address: deann.walker@centerpointenergy.com

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3. **Project Description:**

Name or Designation of Project: 138 kV Zenith Project

Design Voltage Rating (kV): 138 kV

Operating Voltage Rating (kV): 138 kV

Normal Peak Operating Current Rating (A): 3510 amps

4. **Conductor and Structures:**

Conductor Size and Type: 2-959.6 kcmil ACSS-TW (Aluminum Conductor, Steel Supported Trapezoidal Wire)

Type of Structures: The typical structures that will be used along the Preferred Route (Route 1, Segments A-D-E-I) are lattice towers. Along Alternate Route 1 (Route 2, Segments A-D-E-J), lattice towers will be used in Segments A, D, and E, while concrete poles, with lattice towers at the angles, will be used in Segment J. For Alternate Route 2 (Route 6, Segments K-L-N-O-P-Q), lattice towers will be used in Segment K and concrete or steel poles will be used in Segments L, N, O, P, and Q. Along Alternate Route 3 (Route 7, Segments K-R-S'-U'), lattice towers will be used in Segments K and R and concrete or steel poles in Segments S' and U'.

Height of Typical Structures: The typical structure height of a lattice tower will be 90 to 110 feet. The typical height of a concrete pole will be 85 to 100 feet. The typical height of a steel pole, which will be used to cross planned highway overpasses, will be 120 to 130 feet.

Explain why these structures were selected; include such factors as landowner preference, engineering considerations, and cost comparisons to alternate structures that were considered.

Response: Both lattice tower and concrete or steel pole construction were evaluated for the preferred and alternate routes. Where new ground easement right-of-way ("ROW") is required, lattice towers require an 80-foot wide ROW, while concrete or steel poles require a 60-foot wide ROW. Where concrete or steel pole structures can be located within an existing road ROW, a 25-foot wide aerial easement is required. Steel poles are proposed only where a route segment utilizing concrete poles crosses a highway overpass, requiring a crossing

structure taller than is available in concrete poles. At the public meeting held on December 10, 2009, comments received from attendees indicated there was no clear preference regarding the type of transmission structures to be used for the proposed double-circuit line. When POWER Engineers, Inc. ("POWER"), the routing consultant for the 138 kV Zenith Project, analyzed the results from the questionnaires returned after the public meeting with regard to which structure type the public preferred, they found that 29.8% stated they had no preference, 17.0% preferred that the line be built underground, 12.8% preferred concrete single poles, 10.6% preferred single poles (type of material not stated), 10.6% preferred "other", 10.6% did not respond to the question, 4.3% preferred lattice towers, 2.1% preferred steel single poles, and 2.1% stated the question was "not applicable" (see POWER's discussion of this topic on page 3-31 in Attachment 1, the Environmental Assessment and Alternative Route Analysis ("the Study") for the proposed project). Because there was no clear consensus on which type of transmission structure to use for the proposed line, CNP performed a cost comparison study, comparing the cost of construction (including materials, labor, overheads, etc.) plus the cost of acquiring ROW, where it will be necessary, comparing lattice towers and single concrete or steel poles. These costs were tabulated for each segment of the preferred route and the three alternate routes, then the structure type having the lowest cost within each segment was selected, and finally the least cost segment totals were combined to arrive at a total least cost option for each of the preferred and alternate routes. The results of these tabulations are shown in Attachment 2. Where a route segment is planned to be located within public road ROW, the only choice is to use single concrete or steel poles due to space limitations, so the lattice tower option received a not applicable ("NA") designation for that segment.

The Preferred Route (Route 1, Segments A-D-E-I) will utilize lattice towers instead of concrete poles for several reasons. Attachment 2 shows that the cost to construct lattice towers is estimated to be the lowest cost transmission construction type for each segment of the Preferred Route. Also, the Preferred Route parallels an existing 345 kV transmission line that utilizes lattice tower construction. Building the new 138 kV transmission line with lattice towers will match the existing construction type in the corridor. Finally, the average span length for lattice towers is about 800 feet compared to about 400 feet for concrete poles. The longer span length for lattice towers means fewer structures will be needed in the ROW.

Alternate Route 1 (Route 2, Segments A-D-E-J) will utilize lattice towers along Segments A, D, and E for the same reasons stated for the Preferred Route. Segment J, however, will utilize concrete poles with lattice towers at the angles. Concrete poles were chosen in this segment because they were estimated to be the lowest cost construction type for this segment, as shown in Attachment 2. This difference in cost is due primarily to the cost of purchasing a narrower 60-foot ROW width, required for concrete pole construction, versus the cost of an 80-foot ROW width required for lattice towers. Segment J will require approximately 1.7 miles of new ROW.

Alternate Route 2 (Route 6, Segments K-L-N-O-P-Q) will utilize a combination of lattice towers and concrete or steel poles. Lattice towers were chosen in Segment K because, as shown in Attachment 2, they were the lowest cost construction type for this segment. Segment K also parallels an existing 345 kV transmission line that is built on lattice towers, so building the new 138 kV transmission line on lattice towers will match the existing construction along the ROW. Segments P, Q, and portions of Segment L are within existing Longenbaugh Road ROW. These segments will utilize concrete pole construction because there is not enough space to construct lattice towers within the road ROW. Where a planned highway overpass will be crossed, steel poles were substituted for the typical concrete poles in order to achieve the necessary clearances. The increased cost of steel pole construction on each side of the planned highway overpass is reflected in the cost estimates for Segment L in Attachment 2. Concrete or steel poles will be designed to accommodate existing and future distribution underbuild that may be co-located in the road ROW. Segments N, O, and the portions of Segment L that follow the future planned alignment of Longenbaugh Road will utilize concrete pole construction in a new 60-foot wide ROW because it minimizes the cost of acquiring approximately 2.2 miles of new ROW, versus the 80-foot wide ROW required for lattice towers.

Alternate Route 3 (Route 7, Segments K-R-S'-U') will utilize a combination of lattice towers and concrete or steel poles. Lattice towers were chosen in Segment K and R because, as shown in Attachment 2, they were the lowest cost construction type for these segments. Segments K and R also parallel a 345kV transmission line constructed on lattice towers, so building the new 138 kV transmission line on lattice towers will match the existing construction type in the ROW. Segments S' and U' are within existing FM Highway 529

("FM 529") road ROW. These segments will utilize concrete pole construction because there is not enough space to construct lattice towers within the road ROW. Where a planned highway overpass will be crossed, steel poles were substituted for the typical concrete poles in order to achieve the necessary clearances. The increased cost of steel pole construction on each side of the planned highway overpass is reflected in the cost estimates for Segment S' in Attachment 2. Concrete or steel poles will also be able to accommodate any future distribution underbuild that may be co-located in the same ROW.

Provide dimensional drawings of the typical structures to be used in the project.

Response: Dimensional drawings of the typical structures to be used are shown on Figures 1-2, 1-3, 1-4, and 1-5 in Attachment 1, the Study for the proposed project prepared by POWER Engineers, Inc.

5. Right-of-way:

Provide a brief description of the area traversed by the proposed transmission line. Include a description of the general land uses in the area and the type of terrain crossed by the proposed line.

Response: The Preferred and Alternate routes are located within a rapidly expanding urban geographic area in the northwestern portion of Harris County, Texas. The land use within the western half of the study area is comprised primarily of previous rice farms that have been converted to pastures for cattle grazing. The eastern half of the study area is rapidly expanding to the north and west with residential subdivisions, public schools, roadway projects, and other required infrastructure to support these developments. The Preferred Route is proposed within CNP's existing T.H. Wharton - Zenith Corner transmission ROW, which extends eastward from the Zenith Substation to the existing 138 kV transmission lines serving Gertie Substation. The existing 345 kV transmission facilities in the T.H. Wharton – Zenith Corner ROW were constructed in 1968, and the 138 kV transmission lines serving Gertie Substation were constructed in 1979. The T.H. Wharton – Zenith Corner ROW is within pastureland for 22,260 feet (86%) of its total route length. The eastern portion of the ROW is within the Towne Lake residential area for 3,490 feet (12%) of the total route length.

Alternate Route 1 is also located primarily within the same CNP T.H. Wharton - Zenith Corner transmission ROW, but turns south and east prior to reaching the Towne Lake residential area referenced above. Alternate Routes 3 and 4 utilize CNP's existing Obrien - Zenith Corner transmission ROW for a portion of their route lengths and also traverse various combinations of pastureland and commercial and residential areas as they turn east, paralleling existing roadways and property lines to tie into the existing 138 kV transmission lines. Alternate Routes 3 and 4 also cross a small section of a pine plantation. The terrain is nearly flat with elevations ranging from 140-150 feet above mean sea level, and it is bisected primarily with channelized streams and improved drainage ditches.

Table 5 below contains the miles of ROW required, miles of ROW needed and percentage of ROW acquired for the Preferred and Alternate Routes.

Table 5
Right-of-way Requirements for the Preferred and Alternate Routes

ROW	**Preferred Route,** Route 1 (A-D-E-I)	**Alternate Route 1,** Route 2 (A-D-E-J)	**Alternate Route 2,** Route 6 (K-L-N-O-P-Q)	**Alternate Route 3,** Route 7 (K-R-S'-U')
Required (miles)	4.88	5.42	6.50	7.30
Needed (miles)	0.05*	1.70	4.80	4.50
Acquired (%)	99	69	26	38

* Will require a 9,200 square foot aerial easement at the 138 kV transmission line tie point.

6. Substations or Switching Stations:

List the name of all existing substations or switching stations that will be associated with the proposed new transmission line.

Response: There is an existing 345 kV Zenith Substation that will be utilized to add a new 138 kV switching station associated with the proposed new transmission line. The proposed

138 kV switching station will be connected to the existing 345 kV switching station located at the Zenith Substation site through one 345/138 kV autotransformer.

List the name of all new substations or switching stations that will be associated with the proposed new transmission line.

Response: The proposed new transmission line will connect to a new 138 kV switching station within the Zenith Substation site as described above.

7. Estimated Schedule:

Preferred Route (Segments A-D-E-I):

Estimated Date of:	Start	Completion
Right-of-way Acquisition	July 6, 2011	January 5, 2012
Construction of Facilities	August 15, 2011	February 14, 2012
Energize Facilities	----------	February 14, 2012

Alternate Route 1 (Segments A-D-E-J):

Estimated Date of:	Start	Completion
Right-of-way Acquisition	July 6, 2011	July 6, 2012
Construction of Facilities	August 15, 2011	September 1, 2012
Energize Facilities	----------	September 1, 2012

Alternate Route 2 (Segments K-L-N-O-P-Q):

Estimated Date of:	Start	Completion
Right-of-way Acquisition	July 6, 2011	July 6, 2012
Construction of Facilities	August 15, 2011	September 30, 2012
Energize Facilities	----------	September 30, 2012

Alternate Route 3 (Segments K-R-S'-U'):

Estimated Date of:	Start	Completion
Right-of-way Acquisition	July 6, 2011	July 6, 2012
Construction of Facilities	August 15, 2011	September 30, 2012
Energize Facilities	----------	September 30, 2012

8. Counties:

List all counties in which the preferred or alternate routes are proposed to be constructed.

Response: The preferred route and the three alternate routes are located in Harris County.

9. Municipalities:

List all municipalities in which the preferred or alternate routes are proposed to be constructed.

Response: The Preferred Route and Alternate Route 1 are not within any municipal boundaries. Portions of Alternate Routes 2 and 3 are within the municipal boundaries of the City of Houston.

Attach a copy of the franchise, permit or other evidence or the city's consent held by the utility. If franchise, permit, or evidence of the city's consent has been previously been filed, provide only the docket number of the application in which the consent was filed.

Response: A copy of the franchise agreement signed by Houston Lighting & Power Company with the City of Houston in 1957 was originally filed in Docket No. 6719. That version of the franchise agreement has been replaced by a 2005 update of the franchise agreement. A copy of the 2005 version of the franchise agreement between CNP and the City of Houston is provided in Attachment 5 of this Application.

10. Affected Utilities:

Identify any other electric utility served by or connected to facilities proposed in this application. Include any utilities sharing proposed facilities (double-circuit structures, substation equipment) or right-of-way.

Response: The facilities proposed in this Application will not connect with facilities owned by another utility.

Describe how any other electric utility will be affected and the extent of the other utilities' involvement in the construction of this project.

Response: No other utilities will be affected by or involved in the construction of the proposed project.

11. Financing:

Describe the method of financing this project. If the applicant is to be reimbursed for this project, or a portion of this project, identify the source and the amount of the contribution in aid of construction.

Response: CNP will finance this project from its general corporate funds.

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12. Estimated Costs

	Preferred Route (Route 1) (A-D-E-I)	Alternate Route 1 (Route 2) (A-D-E-J)	Alternate Route 2 (Route 6) (K-L-N-O-P-Q)	Alternate Route 3 (Route 7) (K-R-S'-U')	Substation Facilities[3]
Right-of-way (Easement and Fees)	$123,000	$1,570,000	$7,947,000	$9,032,000	$0
Material and Supplies	$1,925,000	$2,345,000	$2,903,000	$3,172,000	$10,297,000
Labor and Transportation (Utility)	$1,960,000	$2,697,000	$3,889,000	$4,110,000	$346,000
Labor and Transportation (Contract)	$0	$0	$0	$0	$2,572,000
Stores	$258,000	$330,000	$432,000	$464,000	$134,000
Engineering and Administration (Utility)	$1,573,000	$2,040,000	$2,749,000	$2,948,000	$1,488,000
Engineering and Administration (Contract)	$252,000	$252,000	$252,000	$252,000	$179,000
Estimated Total Cost[1][2]	$6,091,000	$9,234,000	$18,172,000	$19,978,000	$15,016,000

[1] In addition to the transmission cost shown, the following electric distribution costs will be incurred due to constructing the proposed transmission line over existing distribution lines: Preferred Route (Route 1) $0; Alternate Route 1 (Route 2) $0; Alternate Route 2 (Route 6) $155,000; Alternate Route 3 (Route 7) $0.

[2] In addition to the transmission cost shown, the following reconductoring costs will be incurred from the tie point north to Gertie Corner due to constructing the proposed transmission line: Preferred Route (Route 1) $0; Alternate Route 1 (Route 2) $526,000; Alternate Route 2 (Route 6) $912,000; Alternate Route 3 (Route 7) $1,360,000.

[3] Substation facilities will cost the same for all routes.

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13. Need for the Proposed Project:

Describe the need for the proposed construction. Describe the existing transmission system and conditions addressed by this application. Provide historical load data and load projections for at least five years to justify projects planned to accommodate load growth. State how the proposed facilities will meet the project demand and provide written description of the steady state load flow analysis that justifies the project. Provide any documentation of the review and recommendation of a PURA §39.151 organization. Provide any documentation showing the proposed facilities are needed to provide service to a new transmission service customer.

Response: The proposed project is part of an interrelated set of improvements that are needed to maintain the reliability of CNP's service in the northwest Houston area, as described more fully in Attachments 3 and 4 of this Application. The proposed project is a portion of an overall set of plans to improve reliability of the transmission system in CNP's service territory. A system schematic illustrating CNP's transmission network in northwest Houston as of 2011, prior to the completion of the comprehensive set of improvements, and a written description of CNP's analysis, which justifies those improvements, is provided as Attachment 3, "CenterPoint Energy 2012 Northwest Houston Reliability Project". Only one part of the comprehensive set of improvements, a new 138 kV double-circuit transmission line between Zenith Substation and the circuits serving Gertie Substation, is included in this application. The other improvements do not require the filing of a CCN application. The analysis was based on the Electric Reliability Council of Texas ("ERCOT") Steady-State Working Group ("SSWG") planning base cases published in December 2007. As noted in the analysis, several single contingency events cause transmission element overloads in the northwest Houston area beginning in 2011 and rapidly increasing by 2013. In addition, single contingency events result in voltage violations that are below CNP's Transmission System Design Criteria for loss of a single bulk electric system element (NERC Category B) of 0.95 per unit. Common mode contingency events result in numerous transmission elements loading above their emergency ratings and voltages below CNP's Transmission System Design Criteria for the loss of two or more system elements (NERC Category C) of 0.92 per unit. The proposed project, as part of the comprehensive set of improvements, eliminates

these loading and voltage problems. In addition to the facilities proposed in this Application, the CenterPoint Energy 2012 Northwest Houston Reliability Project includes circuit upgrades on the Cyfair to Kluge segment, the Gertie to Satsuma segment, and addition of a new 345/138 kV autotransformer at Zenith Substation, none of which require a Certificate of Convenience and Necessity ("CCN").

The Northwest Houston Reliability Project, including the facilities proposed in this Application, addresses additional reliability issues in the northwest Houston area. For example, 138 kV circuit 76 from Addicks to Kluge and 138 kV circuit 21 from Kluge to CAMRON share common towers for approximately 14 miles. Loss of one of these common towers, including both circuits, results in the loss of both CNP distribution substations Gertie and Cyfair. The total load at these substations reached 413 MW in the summer of 2009. However, this project, along with the related set of improvements recommended in the CNP Northwest Houston Reliability Project, eliminates this common mode loss of both Gertie and CyFair Substations. In addition, as described in the sensitivity portion of the Northwest Houston Reliability Project report, the proposed set of improvements, including the facilities proposed in this Application, provides a performance advantage beyond the five-year planning horizon.

ERCOT performed an independent review analysis of the Northwest Houston Reliability Project, including the facilities proposed in this Application, and recommended the set of improvements. The ERCOT recommendation is provided in Attachment 4, "ERCOT Independent Review of CenterPoint Energy 2012 Northwest Houston Reliability Project". ERCOT's analysis utilized the SSWG planning base cases, which were updated in June 2009, and include significantly lower load forecast projections than the December 2007 planning base cases utilized in CNP's analysis. ERCOT's report includes the following summary of load in the area of the Northwest Houston Reliability Project:

Model / Case	**2012 Updated June 2009**	**2013 Updated June 2009**	**2014 Updated June 2009**
Load (MW)	2105.85	2162.96	2220.50

The table above includes the loads at the Gertie, Cyfair, Kluge, Klein, CAMRON, Willow, Freeman, Flewellen, Katy, Obrien, Addicks, Fairbanks, North Belt, and Satsuma Substations.[4] Historical peak loads for each of these substations for the years 2007, 2008 and 2009 as well as peak load projections from the June 2009 SSWG base cases for these substations for 2010 through 2014 are provided in the table below:

Historical and Projected Loads in the Area of the Northwest Houston Reliability Project:

	Historical Load (MW)			Load Projections (MW)				
Substation	2007	2008	2009	2010	2011	2012	2013	2014
Addicks	133.1	140.0	151.4	156.0	157.5	159.1	160.7	162.3
CAMRON	11.5	11.7	12.2	11.8	11.8	11.8	11.8	11.8
Cyfair	193.9	178.3	190.6	198.4	211.7	225.4	238.3	251.7
Fairbanks	187.2	168.9	169.7	174.9	178.6	182.2	185.9	189.6
Flewellen	119.0	122.6	149.0	133.0	140.4	146.1	151.1	157.3
Freeman	8.8	8.7	7.3	8.1	24.1	24.2	24.4	24.5
Gertie	211.7	212.1	222.5	213.1	205.8	210.0	214.4	217.9
Katy	133.1	119.5	113.7	108.5	111.1	113.3	116.9	119.2
Klein	176.4	194.6	200.8	188.2	193.9	199.7	205.7	211.8
Kluge	232.6	236.7	241.4	234.5	241.9	249.1	256.6	264.3
North Belt	130.2	128.7	121.8	113.5	115.8	118.1	120.5	122.9
Obrien	99.3	124.8	140.7	127.7	132.0	135.3	138.7	142.2
Satsuma	280.8	278.1	292.2	281.5	286.9	292.5	298.2	303.9
Willow	45.4	43.5	38.0	37.0	38.0	39.0	40.0	41.0
Total Load	1963.1	1968.2	2051.3	1986.0	2049.5	2105.8	2163.0	2220.5

[4] ERCOT's load summary also includes portions of the T.H. Wharton and Tomball substations that do not have load.

ERCOT's analysis determined that "with the lower load forecast projections, the upgrades will be needed by summer peak 2014 to ensure that the transmission system for the area will meet NERC and ERCOT planning criteria. If, in the future, the projected load forecast increases in the area, the project may be needed in 2012 or 2013. The timing of the upgrade in the 2012 to 2014 time frame is at the discretion of CenterPoint Energy". By comparison, the total load for this subset of substations reached a total of 2051 MW during the summer of 2009. Therefore, the actual 2009 load was only 55 MW less than the 2012 load projection.

This project is not needed to provide service to a new transmission service customer; therefore, there is no documentation showing the proposed facilities are needed to provide service to a new transmission service customer.

14. Alternatives to the Proposed Project:

Describe alternatives to the construction of this project (not routing options). Include an analysis of distribution alternatives, upgrading voltage or bundling of conductors of existing facilities, adding transformers, and for utilities that have not unbundled, distributed generation as alternatives to the proposed project. Explain how the proposed project overcomes the insufficiencies of other options that were considered.

Response: CNP considered several options to solve the reliability issues in the northwest Houston area. The leading options are detailed in Attachment 3, "CenterPoint Energy 2012 Northwest Houston Reliability Project". The report provides specific details about each option, and is a comprehensive response to Question No. 14. In general, the alternative options included: installing a new 345/138 kV autotransformer at various locations; building a new 345/138 kV substation in the northwest Houston area; replacing substation equipment and installing a capacitor bank at Klein Substation; building new 138 kV circuits in the northwest Houston area; and reconfiguring existing 138 kV transmission lines to create additional 138 kV circuits. Distribution alternatives cannot resolve the reliability issues identified in the CenterPoint Energy 2012 Northwest Houston Reliability Project Report. CNP is an unbundled utility; therefore, it did not consider distributed generation as an alternative to the proposed project.

Of the leading options, CNP identified Option 2 in the 2012 Northwest Houston Reliability Project as providing the best combination of long-term performance, reliability, and cost-effectiveness. This option consists of a comprehensive set of improvements that include the facilities proposed in this Application to address the reliability concerns.

CNP submitted its analysis and proposal to ERCOT and the ERCOT Regional Planning Group ("RPG"). After the RPG comment period ended, ERCOT performed an independent review of the project. The "ERCOT Independent Review of CenterPoint Energy 2012 Northwest Houston Reliability Project" is contained in Attachment 4 and details the performance analysis that was performed by ERCOT. After taking into account input provided by ERCOT Market Participants and conducting its own independent review, ERCOT concluded that two of the options identified by CNP met minimum reliability requirements. However, ERCOT determined that Option 2 of the 2012 Northwest Houston Reliability Project provides additional reliability benefits not offered by the other alternatives, such as providing a new 138 kV injection point. In addition, ERCOT concluded that adding an autotransformer at the Zenith Substation, which is part of Option 2, reduces the risk associated with loss of the T.H. Wharton Substation by diversifying the location of 345/138 kV autotransformers. ERCOT further stated that the 2012 Northwest Houston Reliability Project also alleviates the loss of approximately 400 MW of load with the outage of a common tower line. ERCOT recommended the 2012 Northwest Houston Reliability Project improvements, including the facilities proposed in this Application.

15. Schematic or Diagram:

Provide a schematic or diagram of the applicant's transmission system in the proximate area of the proposed project. Show the location and voltage of existing transmission lines and substations, and the location of the proposed construction. Locate any taps, ties, meter points, or other facilities involving other utilities on the system schematic.

Response: A schematic of CNP's existing transmission system and the proposed construction in Harris County is included as Attachment 6.

16. Routing Study:

Provide a brief summary of the routing study that includes a description of the process of selecting the study area, identifying routing constraints, selecting potential line segments, and the selection of the preferred and alternate routes. Provide a copy of the complete routing study conducted by the utility or consultant.

Response: The methodologies and assumptions that were used to conduct the environmental assessment and routing study for the 138 kV Zenith Project are consistent with Section 37.056(c)(4)(A)-(D) of the Public Utility Regulatory Act ("PURA"), Subst. R. 25.101(b)(3)(B), Proc. R. 22.52(a)(4), and the Commission's policy of Prudent Avoidance. The methodology used to complete the routing study is summarized below.

Considering the project endpoints that were provided by CNP, a base map was developed for the POWER planning team and CNP to delineate the study area boundaries and initiate data collection activities. POWER, with input from CNP, identified the study area with the western and eastern boundaries based on the location of the project end points, the Zenith Substation Site and the existing 138 kV circuits. The Zenith Substation is located adjacent to the 345 kV switching station being constructed at Zenith Corner and the existing 138 kV circuits that serve Gertie Substation extend generally north to south between CyFair and Gertie Substations. The northern boundary is located south of US Highway 290, and the southern boundary is located south of Little York Road to include potential paralleling opportunities with existing linear features in both areas.

Initial reconnaissance surveys were conducted and 52 evaluation criteria were developed. Data were collected pertaining to land use, recreational and park areas, historical and aesthetic values, and environmental integrity. Project scoping letters were sent to federal, state, and local agencies and officials to solicit additional information. Available aerial photography and Geographic Information System ("GIS") coverage with associated metadata was reviewed, and relevant resource data were selected and mapped. The POWER planning team and CNP established sensitivity criteria for a resource sensitivity analysis and development of an environmental and land use composite constraints map.

POWER identified 24 feasible and geographically diverse preliminary routing segments, A through U'. A public meeting was conducted in accordance with P.U.C. Proc. R. 22.52 (a)(4).

Modifications to the preliminary routing segments were completed based on the results of the public meeting, additional agency input, and a reconnaissance survey. Data were then tabulated for the evaluation criteria for each resulting primary alternative route, and a comparative potential impact assessment was completed. The primary alternative routes were divided into three geographic families, and 15 Key Evaluation Criteria were derived from the evaluation criteria to facilitate the comparison and selection of the recommended alternate route within each route family. An additional construction cost and ROW acquisition comparison study between the primary alternative route from each route family was completed by CNP, as described below, and was incorporated into the selection of the preferred and alternate routes through a consensus process.

CNP provided an engineering feasibility and estimated cost analysis for each of the primary alternative routes. POWER incorporated these factors into the analysis and consensus process for the recommendation of the preferred and alternate routes. CNP reviewed POWER's recommendations and concurred that the preferred route and each of the alternate routes were feasible from an engineering, constructability and cost perspective, and concurred with the selection of Route 1 as the Preferred Route.

Route 1 was recommended by POWER as the preferred route based on the following rationale:

- It is the shortest route and represents the most direct pathway possible between the project endpoints.
- It minimizes potential environmental impacts because it is proposed within an existing transmission line ROW for its entire length.
- It minimizes potential impacts to community values and land use because it is proposed within an existing transmission line ROW for its entire length.
- Thirty-seven habitable structures are located within 300 feet of the route centerline but only seven habitable structures are not currently impacted by the existing transmission facilities in the ROW.
- With the exception of the required 9,200 square foot aerial easement at the tie point, no new ROW will be required for construction of this route.
- This route is the most economical of the four alternate routes.

A copy of the Study conducted by POWER is provided in Attachment 1.

17. Public Meeting or Public Open House:

Provide the date and locations for each public meeting or public open house that was held in accordance with Procedural Rule §22.52. Provide a summary of each public meeting or public open house including the approximate number of attendants, and a copy of any survey provided to attendants and a summary of the responses received. Provide a description of the method of notice, a copy of any notices, and the number of notices that were mailed and/or published.

Response: The public meeting was held on December 10, 2009 from 4:30 to 7:30 P.M. east of the study area at the Lone Star College Cypress-Fairbanks Campus in Rooms 152-153 of the College Center Building, located at 9191 Barker Cypress Road, Cypress, Texas 77433. A total of 49 people signed in at the public meeting. CNP personnel registered visitors and handed out a questionnaire and information packet. The questionnaire solicited comments on citizens' concerns as well as an evaluation of the information presented in the public meeting. A copy of the questionnaire is located in Appendix B of the Study, provided in Attachment 1 of this Application. Section 3.6.2 of Attachment 1 includes a detailed description of the public meeting and the responses received to the questionnaire.

Copies of the direct letter notice and the published newspaper notice are located in Appendix B of the Study. Individual notification letters announcing the public meeting were directly mailed by CNP to 982 landowners whose property is located within 400 feet of each of the preliminary routing segments. CNP chose to notify landowners within 400 feet of the centerline of roads, rather than the required 300 feet, in order to ensure that property owners along roadways on preliminary routing segments received notice regardless of which side of the roadways the Commission ultimately approves for the construction of the proposed 138 kV transmission line. For similar reasons, CNP notified landowners within 400 feet of the preliminary routing segments in existing transmission ROW to insure adequacy of notice in case the centerline is moved to a different location within the ROW. In addition, CNP publicized the public meeting through a public notice published in the local newspaper, the Houston Chronicle, on December 1, 2009 and December 8, 2009.

18. Routing Maps:

Base maps should be a full scale (one inch = one mile) highway map of the counties involved, or a U.S.G.S. 7-minute topographical map, or other map of comparable scale with sufficient cultural and natural features to permit location of the proposed routes in the field. Provide a map (or maps) that shows the study area, routing constraints, and all routes or line segments that were considered prior to the selection of the preferred and alternate routes. Identify the preferred and alternate routes and any existing facilities to be interconnected or coordinated with the project. Locate any taps, ties, meter points, or other facilities involving other utilities on the routing map. Show all existing transmission facilities located in the study area. Include the location of the habitable structures, radio transmitters and other electronic installations, airstrips, irrigated pasture or cropland, parks and recreational areas, historical and archeological sites, and any environmentally sensitive areas.

Response: The following study area, constraints, and routing maps are included in the Study, provided in Attachment 1 of this Application.

Figure 3-1. Composite Constraints Map

Figure 3-2. Preliminary Routing Segments

Figure 3-3. Primary Alternative Routes

Figure 5-1. Habitable Structures and Other Land Use Features in the Vicinity of CNP's Preferred and Alternate Routes (Appendix D)

19. Permits:

List any and all permits or approvals required for the construction of the proposed project. Indicate whether or not permits have been obtained.

Response: Specific information concerning possible permits or approvals is discussed in greater detail in Section 1.3 of Attachment 1.

- The Commission: The proposed project requires approval of a CCN by the Commission. Approval by the Commission has not been obtained at this time.

- United States Fish and Wildlife Service ("USFWS"): The United States Fish and Wildlife Service ("USFWS") is charged with the responsibility for enforcement of federal wildlife laws and providing comments on proposed construction projects with a federal nexus under the National Environmental Protection Act ("NEPA"), and within the framework of several federal laws including the Endangered Species Act ("ESA"), Migratory Bird Treaty Act ("MBTA"), and Bald and Golden Eagle Protection Act ("BGEPA"). POWER reviewed the USFWS listed species for Harris County, Texas and solicited Texas Natural Diversity Database ("TXNDD") records from Texas Parks and Wildlife ("TPWD"). Upon approval of a route, if the Final Order issued by the Commission requires CNP to coordinate with the USFWS, CNP will coordinate with the USFWS – Clear Lake Ecological Services Field Office to determine the need for any required species-specific surveys or additional permitting under Section 7 of the ESA.

- United States Army Corps of Engineers ("USACE"): The proposed project could require USACE's Nationwide Permits ("NWPs") 25 and 12, or a Section 404 permit for work in wetland areas, or some combination of these permits. If the proposed impacts of the project exceed the criteria established under General Condition 13 or other regional conditions listed under the NWPs, then an Individual Permit will be required. No permit or authorization from the USACE has been obtained at this time.

- Federal Aviation Administration ("FAA"): Based on the FAA notification criteria, the proposed project may require a Notice of Proposed Construction or Alteration, FAA Form 7460-1, to be completed and submitted to the FAA Southwest Regional Office in Fort Worth, Texas, because of the location of a heliport at Cy-Fair Fire Station No. 11. This heliport is close enough to both the Preferred Route (A-D-E-I) and Alternate Route 1 (A-D-E-J) to require FAA notification (see the response to Question 22 of this Application, as well as Table 22). No permit or authorization from the FAA has been obtained at this time.

- Texas Commission on Environmental Quality ("TCEQ"): The project may require development of a Stormwater Pollution Prevention Plan ("SWPPP"), which is a TCEQ stormwater discharge-related requirement. A determination of the need for a SWPPP will be made after approval of the route for the transmission line. A Section 401 Water

Quality Certificate from the TCEQ may be also be required if the project requires an USACE Individual Permit for proposed impacts to surface waters or wetlands as previously discussed. No permit or authorization from the TCEQ has been obtained at this time.

- The Texas Historical Commission ("THC"): If necessary, CNP will conduct an on-the-ground cultural resources survey of the approved transmission line route and obtain authorization from the THC prior to starting construction. No permit or authorization from THC has been obtained at this time.

- Texas Department of Transportation ("TxDOT"): If Alternate Route 3 (K-R-S'-U') is approved by the Commission, a permit will need to be acquired by CNP from TxDOT for the crossing and occupation of FM 529, the only state-owned and maintained road or highway along a proposed alternate route for this project. No permit or authorization from TxDOT has been obtained at this time.

- Texas General Land Office ("GLO"): The GLO requires a miscellaneous easement for ROW within any state-owned riverbeds or tidally-influenced waters. No easements are anticipated from the GLO as there are no tidally-influenced waters identified within the study area. No permit or authorization from the GLO has been obtained at this time.

- Depending upon the final location of the transmission facilities, floodplain development permits may be required by Harris County.

20. Habitable structures:

List all single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230 kV or less, or within 500 feet of the centerline of a transmission project greater than 230 kV. Provide a general description of each habitable structure and its distance from the centerline of the proposed project. In cities, towns or rural subdivisions, houses can be identified in groups. Provide the number of

habitable structures in each group and list the distance from the centerline to the closest habitable structure in the group. Locate all listed habitable structures or groups of structures on the routing map.

Response: The tables below list the Structure Number, general description, and approximate distance from the centerline, of all habitable structures within 300 feet of the Preferred Route (Route 1) and all alternate routes. The locations of these structures are shown on Figure 5-1 of Attachment 1.

TABLE 20-1
HABITABLE STRUCTURES WITHIN 300 FEET OF THE PREFERRED ROUTE
ROUTE 1 (A-D-E-I)

Habitable Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline[2]
1*	Single-family residence	267
2	Single-family residence	167
3	Single-family residence	304
4	18 Single-family residences	40
5*	4 Single-family residences	193
6	3 Single-family residences	52
7*	8 Single-family residences	199
8	Single-family residence	281

[1] The Habitable Structure Number corresponds to the habitable structures identified on Figure 5-1 of Attachment 1.

[2] In groups of structures, approximate distance is to nearest structure.

* One or more habitable structures is not within 300 feet of an existing transmission line.

TABLE 20-2
HABITABLE STRUCTURES WITHIN 300 FEET OF ALTERNATE ROUTE 1
Route 2 (A-D-E-J)

Habitable Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline[2]
No habitable structures are within 300 feet of Alternate Route 1		

[1] The Habitable Structure Number corresponds to the habitable structures identified on Figure 5-1 of Attachment 1.

[2] In groups of structures, approximate distance is to nearest structure.

TABLE 20-3

HABITABLE STRUCTURES WITHIN 300 FEET OF ALTERNATE ROUTE 2

Route 6 (K-L-N-O-P-Q)

Habitable Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline[2]
9*	23 Single-family residences	112
10*	4 Associated school facilities	210
11*	Single-family residence	154
12*	16 Single-family residences	154
13*	2 Single-family residences	163
14*	7 Single-family residences	223
15*	7 Single-family residences	91
16*	6 Single-family residences	226
17*	Single-family residence	215
18*	Single-family residence	206
19*	Single-family residence	269
20*	19 Single-family residences	45
21*	Single-family residence	297
22*	Single-family residence	100
23*	Single-family residence	147
24*	12 Single-family residences	234
25*	Single-family residence	99
26*	Single-family residence	81
27*	Single-family residence	85
28*	Single-family residence	300

[1] The Habitable Structure Number corresponds to the habitable structures identified on Figure 5-1 of Attachment 1.

[2] In groups of structures, approximate distance is to nearest structure.

* One or more habitable structures is not within 300 feet of an existing transmission line.

TABLE 20-4

HABITABLE STRUCTURES WITHIN 300 FEET OF ALTERNATE ROUTE 3

Route 7 (K-R-S'-U')

Habitable Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline)[2]
29*	Commercial/SFR	92
30*	10 Commercial	150
31*	Commercial	102
32*	Commercial	184
33*	Commercial	223
34*	Commercial	185
35*	Commercial	200
36*	Commercial	171
37*	Commercial	195
38*	Commercial	159

[1] The number for the structures corresponds to the structures identified on Figure 5-1 of Attachment 1.

[2] In groups of structures, approximate distance is to nearest structure.

* One or more habitable structures is not within 300 feet of an existing transmission line.

TABLE 20-4 (continued)
HABITABLE STRUCTURES WITHIN 300 FEET OF ALTERNATE ROUTE 3
Route 7 (K-R-S'-U')

Habitable Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline)[2]
39*	Commercial	265
40*	Single-family residence	294
41*	Single-family residence	262
42*	Single-family residence	214
43*	4 Commercial	117
44*	6 Single-family residences	277
45*	Single-family residence	255
46*	Single-family residence	196
47*	Single-family residence	131
48*	5 Single-family residences	35
49*	54 Single-family residences	36
50*	Commercial	164
51*	Single-family residence	275
52*	Single-family residence	274
53*	Single-family residence	307
54*	Single-family residence	292
55*	Single-family residence	287
56*	Single-family residence	291
57*	Single-family residence	291
58*	Single-family residence	289
59*	Single-family residence	292
60*	Single-family residence	289
61*	Single-family residence	299
62*	20 Single-family residences	29
63*	Commercial	226
64*	Single-family residence	293
65*	Single-family residence	207
66*	Commercial/SFR	41
67*	Commercial	177
68*	Commercial	177
69	Commercial	96
70	Single-family residence	175
71	Single-family residence	187
72	Single-family residence	254
73	Single-family residence	300

1 The number for the structures corresponds to the structures identified on Figure 5-1 of Attachment 1.

2 In groups of structures, approximate distance is to nearest structure.

* One or more habitable structures is not within 300 feet of an existing transmission line.

21. Electronic Installations:

List all commercial AM radio transmitters located within 10,000 feet of the centerline of the proposed project; and all FM radio transmitters, microwave relay stations or other similar electronic installations located within 2,000 feet of the centerline of the proposed project. Provide a general description of each installation and its distance from the centerline of the project. Locate all listed installations on a routing map.

Response: No FM radio transmitters or microwave relay stations are located within 2,000 feet of the proposed centerline of the Preferred Route (Route 1) or any of the three alternate routes. Table 21 lists all commercial AM transmitters located within 10,000 feet, and all cellular electronic installations located within 2,000 feet of the proposed centerline of the preferred and alternate routes, along with a general description and the approximate distance from the project centerline. The locations of these electronic installations are shown on Figure 5-1 of Attachment 1.

TABLE 21
AM RADIO TRANSMITTERS WITHIN 10,000 FEET AND OTHER ELECTRONIC INSTALLATIONS WITHIN 2,000 FEET OF THE PREFERRED AND ALTERNATE ROUTES

Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline
Preferred Route		
Route 1 (A-D-E-I)		
74	Cellular Telephone Tower	96
75	Cellular Telephone Tower	107
80	AM Electronic Communication Tower	9,976
81	AM Electronic Communication Tower	9,697
82	AM Electronic Communication Tower	9,652
83	AM Electronic Communication Tower	9,621
84	AM Electronic Communication Tower	9,341
85	AM Electronic Communication Tower	9,297
86	AM Electronic Communication Tower	9,256

[1]The number of the structures corresponds to the structures identified on Figure 5-1 of Attachment 1.

TABLE 21 (continued)
AM RADIO TRANSMITTERS WITHIN 10,000 FEET AND OTHER ELECTRONIC INSTALLATIONS WITHIN 2,000 FEET OF THE PREFERRED AND ALTERNATE ROUTES

Structure Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline
Alternate Route 1 Route 2 (A-D-E-J)		
74	Cellular Telephone Tower	96
75	Cellular Telephone Tower	107
80	AM Electronic Communication Tower	9,976
81	AM Electronic Communication Tower	9,697
82	AM Electronic Communication Tower	9,652
83	AM Electronic Communication Tower	9,621
84	AM Electronic Communication Tower	9,341
85	AM Electronic Communication Tower	9,297
86	AM Electronic Communication Tower	9,256
Alternate Route 2 Route 6 (K-L-N-O-P-Q)		
78	AM Electronic Communication Tower	8,369
79	AM Electronic Communication Tower	8,320
80	AM Electronic Communication Tower	8,268
81	AM Electronic Communication Tower	8,026
82	AM Electronic Communication Tower	7,679
83	AM Electronic Communication Tower	7,922
84	AM Electronic Communication Tower	7,969
85	AM Electronic Communication Tower	7,624
86	AM Electronic Communication Tower	9,256
Alternate Route 3 Route 7 (K-R-S'-U')		
76	Cellular Telephone Tower	286
77	Cellular Telephone Tower	372
78	AM Electronic Communication Tower	8,369
79	AM Electronic Communication Tower	8,320
80	AM Electronic Communication Tower	8,268
81	AM Electronic Communication Tower	8,026
82	AM Electronic Communication Tower	7,969
83	AM Electronic Communication Tower	7,922
84	AM Electronic Communication Tower	7,679
85	AM Electronic Communication Tower	7,624
86	AM Electronic Communication Tower	9,256

[1]The number of the structures corresponds to the structures identified on Figure 5-1 of Attachment 1.

22. Airstrips:

List all known private airstrips within 10,000 feet of the centerline of the project. List all airports registered with the Federal Aviation Administration (FAA) with at least one runway more than 3,200 feet in length that are located within 20,000 feet of the centerline of the proposed project. Indicate whether any transmission structures will exceed a 100:1 horizontal slope (one foot in height for each 100 feet in distance) from the closest point of the closest runway. List all listed airports registered with the FAA having no runway more than 3,200 feet in length that are located within 10,000 feet of the centerline of the proposed project. Indicate whether any transmission structures will exceed a 50:1 horizontal slope from the closest point of the closest runway. List all heliports located within 5,000 feet of the centerline of the proposed project. Indicate whether any transmission structures will exceed a 25:1 horizontal slope from the closest point of the closest landing and takeoff area of the heliport. Provide a general description of each private airstrip, registered airport, and registered heliport; and state the distance of each from the centerline of the proposed transmission line. Locate all airstrips, airports, and heliports on a routing map.

Response: There are no private airstrips located within 10,000 feet of the proposed centerline of the Preferred or Alternate Routes.

There are two FAA-registered airports (Weiser Air Park and Sack-O-Grande Acroport) with a runway longer than 3,200 feet within 20,000 feet of the Preferred Route (A-D-E-I) and Alternate Route 1 (A-D-E-J). There is one FAA-registered airport (Sack-O-Grande Acroport) with a runway longer than 3,200 feet within 20,000 feet of Alternate Route 2 (K-L-N-O-P-Q) and Alternate Route 3 (K-R-S'-U'). Based on the FAA slope criteria, while taking into consideration the topographical elevations of each location, no FAA notification is anticipated related to Weiser Air Park or Sack-O-Grande Acroport for the Preferred Route or Alternate Routes, because the transmission line structures will not exceed the height and slope notification criteria for public airstrips.

There are no FAA-registered airports with a runway less than 3,200 feet within 10,000 feet of the proposed centerline of the Preferred or Alternate Routes.

There is one heliport (Cy-Fair Fire Station Number 11) located within 5,000 feet of the Preferred Route (A-D-E-I) and Alternate Route 1 (A-D-E-J). Based on the 25:1 horizontal

slope notification requirements for the heliport, while taking into consideration the topographical elevations of both locations, FAA notification will be required if either the Preferred Route or Alternate Route 1 is approved by the Commission.

Table 22 below lists the FAA-registered airports and the heliport, as well as their approximate distance from the route centerlines for the Preferred Route (Route 1, A-D-E-I) and Alternate Route 1 (Route 2, A-D-E-J). The locations of these facilities are shown on Figure 5-1 of Attachment 1.

TABLE 22
AIRPORTS WITHIN 20,000 FEET AND HELIPORTS WITHIN 5,000 FEET
OF THE PREFERRED AND ALTERNATE ROUTES

Airport Number[1]	Structure or Feature	Approximate Distance (feet) from Centerline
Preferred Route Route 1 (A-D-E-I)		
87	Weiser Air Park (FAA-registered)	18,262
88	Cy-Fair Fire Station Number 11 Heliport	1,878
100	Sack-O-Grande Acroport (FAA-registered)	14,180
Alternate Route 1 Route 2 (A-D-E-J)		
87	Weiser Air Park (FAA-registered)	19,600
88	Cy-Fair Fire Station Number 11 Heliport	1,102
100	Sack-O-Grande Acroport (FAA-registered)	14,180
Alternate Route 2 Route 6 (K-L-N-O-P-Q)		
100	Sack-O-Grande Acroport (FAA-registered)	12,746
Alternate Route 3 Route 7 (K-R-S'-U')		
100	Sack-O-Grande Acroport (FAA-registered)	12,746

[1] The Airport Number corresponds to the airport facilities identified on Figure 5-1 of Attachment 1.

23. Irrigation Systems:

Identify any pasture or cropland irrigated by traveling irrigation systems (rolling or pivot type) that will be traversed by the proposed project. Provide a description of the irrigated land and state how it will be affected by the proposed project (number and type of structures etc.). Locate any such irrigated pasture or cropland on a routing map.

Response: The Preferred Route and the Alternate Routes do not cross any pasture or cropland using traveling irrigation systems (either rolling or pivot types).

24. Notice:

Notice is to be provided in accordance with Procedural Rule §22.52.

A. Provide a copy of the written direct notice to owners of directly affected land. Attach a list of the names and addresses of the owners of directly affected land receiving notice.

Response: A copy of the written direct notice is provided in Attachment 7. A list of the names and addresses of the persons receiving notice is provided in Attachment 8. CNP mailed direct notice, on the date the CCN Application was filed, to the owners of land having a habitable structure within 300 feet of the centerline of the Preferred Route and each of the Alternate Routes and to all owners whose land would be crossed by any of the proposed routes, as stated on the current county tax rolls. CNP provided additional notice to all landowners within 400 feet of the proposed project, regardless of whether they had a habitable structure within 400 feet of the centerline of the project. This additional notice provides the Commission flexibility in determining the site of the new transmission facilities. The Texas Department of Transportation ("TxDOT") was also provided notice because Alternate Route 3 both crosses and will be located within FM 529, a state-owned and maintained roadway.

B. Provide a copy of the written notice to utilities that are located within five miles of the proposed transmission line.

Response: There are no utilities within five miles of the proposed transmission line project; therefore, no notice was required.

C. Provide a copy of the written notice to county and municipal authorities.

Response: A copy of the written notice to county and municipal officials and a list of officials notified are provided as Attachment 9.

D. Provide a copy of the notice that is to be published in newspapers of general circulation in the counties in which the proposed facilities are to be constructed. Attach a list of the newspapers that will publish the notice for this application. After the notice is published, provide the publisher's affidavits and tear sheets.

Response: A copy of the notice published in the newspapers of general circulation in the study area is provided as Attachment 10. The Houston Chronicle, a daily newspaper with general circulation in Harris County, will publish the notice. Publisher's affidavits and tear sheets will be provided after the notice is published.

25. Parks and Recreation Areas:

List all parks and recreational areas owned by a governmental body or an organized group, club, or church located within 1,000 feet of the centerline of the project. Provide a general description of each area and its distance from the centerline. Identify the owner of the park or recreational area (public agency, church or club). List the sources used to identify parks and recreational areas. Locate the listed sites on a routing map.

Response: Parks and recreation areas were identified through federal, state, and local agency websites, county documents, published maps and reconnaissance surveys. A list of all the identified parks and recreation areas is shown in Table 25 below, and their locations are illustrated on Figure 5-1 of Attachment 1.

TABLE 25
PARKS AND RECREATION AREAS WITHIN 1,000 FEET
OF THE PREFERRED AND ALTERNATE ROUTES

Park Number[1]	Structure or Feature/Owner	Approximate Distance (feet) from Centerline	Sources Used to Identify
Preferred Route Route 1 (A-D-E-I)			
89	John Paul's Landing / Harris County[2]	0	Agency letter
90	Welcome Center / Towne Lake, Section 1 Subdivision	344	Field Observation
91	The Heritage Lodge / Towne Lake Subdivision	552	Field Observation
Alternate Route 1 Route 2 (A-D-E-J)			
89	John Paul's Landing / Harris County[2]	0	Agency letter
92	Postma Elementary School Playground / Cypress-Fairbanks ISD	485	Field Observation
94	Langham Creek Park / Harris County	37	Agency letter
Alternate Route 2 Route 6 (K-L-N-O-P-Q)			
89	John Paul's Landing / Harris County[2]	0	Agency letter
93	Andre Elementary School Playground / Cypress-Fairbanks ISD	489	Field Observation
94	Langham Creek Park / Harris County	37	Agency letter
95	Cy-Springs High School Sports Fields / Cypress-Fairbanks ISD	216	Field Observation
96	Yaupon Ranch Neighborhood Recreation Area / Subdivision	624	Field Observation
Alternate Route 3 Route 7 (K-R-S'-U')			
89	John Paul's Landing (Harris County)[2]	0	Agency letter
98	Highland Creek Village Neighborhood Recreation Area (Subdivision)	172	Field Observation
99	Remington Neighborhood Recreation Area (Subdivision)	474	Field Observation

[1] The Park Number corresponds to the parks and recreation area locations identified on Figure 5-1 of Attachment 1.

[2] Portions of CNP's existing T. H. Wharton-Zenith Corner and Obrien-Zenith Corner transmission ROWs are located within easements inside the property boundaries of Harris County's John Paul's Landing Park.

26. Historical and Archeological Sites:

List all historical and archeological sites known to be within 1,000 feet of the centerline of the proposed project. Include a description of the site and its distance to the centerline of the project. List the sources (national, state or local commission or societies) used to identify the sites. Locate all historical sites on a routing map. For the protection of the sites, archeological sites need not be shown on maps.

Response: A literature review and records search of the Texas Historical Commission databases revealed no recorded historical or archaeological sites within 1,000 feet of the Preferred and Alternate Routes.

27. Coastal Management Program:

Indicate whether the proposed project is located, either in whole or in part, within the coastal management program boundary as defined in 31 T.A.C. §503.1. If the project is, either in whole or in part, in the coastal management program, indicate whether if any part of the proposed facilities are seaward of the Coastal Facilities Designation Line as defined in 31 T.A.C. §19.2(a)(21). Identify the type(s) of Coastal Natural Resource Area(s) using the designation in 31 T.A.C. §501.3(b) impacted by any part of the proposed facilities.

Response: The proposed transmission line project is not located, either in whole or in part, within the coastal management program boundary as defined in 31 T. A. C. §503.1.

28. Environmental Impact:

Provide copies of any environmental impact studies or assessments of the project. If no formal study was conducted for this project, explain how the routing and construction of this project will impact the environment. List the sources used to identify the existence or absence of sensitive environmental areas. Locate any environmentally sensitive areas on the routing map. In some instances, the location of the environmentally sensitive areas or the location of protected or endangered species should not be included on maps to insure preservation of the areas or species.

Response: CNP contracted with POWER to evaluate the environmental impact of the proposed project. A copy of the Study prepared by POWER is included as Attachment 1 to this Application. The Study includes environmental sources, routing maps with environmentally-sensitive areas identified, and information on protected and endangered species within or near the study area.

AFFIDAVIT

Attach a sworn affidavit from a qualified individual authorized by the applicant to verify and affirm that to the best of knowledge; all information provided, statement made, and matters set forth in this application and attachments are true and correct.

Response: An affidavit of John R. Kellum, Jr. is provided as Attachment 11.

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ATTACHMENT 1

ENVIRONMENTAL ASSESSMENT AND ALTERNATIVE ROUTE ANALYSIS PREPARED BY POWER ENGINEERS, INC.

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Environmental Assessment and Alternative Route Analysis for The 138 kV Zenith Project Harris County, Texas

Prepared for:

CenterPoint Energy Houston Electric, LLC
1111 Louisiana Street
Houston, Texas 77002

Prepared by:

POWER Engineers, Inc.
15621 Blue Ash
Suite 110
Houston, Texas 77090

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POWER PROJECT NUMBER:
118109

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EXECUTIVE SUMMARY

CenterPoint Energy Houston Electric, LLC ("CNP") proposes to construct a new 138 kilovolt ("kV") double-circuit transmission line located in northwestern Harris County, Texas that will extend for approximately five to seven miles and connect the Zenith Substation with the existing 138 kV transmission lines serving Gertie Substation. CNP retained POWER Engineers, Inc. ("POWER") to prepare this Environmental Assessment and Alternative Route Analysis to support their application for a Certificate of Convenience and Necessity for the proposed project.

CNP provided the project endpoints, and the study area boundary was delineated utilizing potential paralleling features. Data collection was conducted to identify the environmental and land use constraints within the project study area that were pertinent to the identification of preliminary routing segments. Data collection activities included review of readily available data, coordination with federal and state regulatory agencies and local officials, and reconnaissance surveys from public viewpoints. POWER and CNP identified 24 geographically diverse preliminary routing segments that were presented at a public meeting on December 10, 2009, to solicit public input and concerns. Input received from the public meeting, local agencies, and reconnaissance surveys in conjunction with consideration of the project objectives, including geographic diversity, resulted in the identification of ten primary alternative routes.

The potential environmental and land use impacts for each primary alternative route were tabulated by POWER for each of the 52 evaluation criteria. CNP provided the engineering review and estimated construction cost for each primary alternative route. The primary alternative routes were grouped into geographically diverse route families and key evaluation criteria were used to compare potential impacts for each primary alternative route within each family. The process culminated with the selection of one or more primary alternative routes from each family. The selected primary alternative routes were compared and a preferred route and three alternate routes were recommended. CNP reviewed these recommendations, considering engineering and cost factors, and concurred that the preferred route and each alternate route represent feasible and acceptable routing options. A preferred route, and three alternate routes were selected, providing geographically diverse options.

The preferred route represents the shortest, most direct pathway between the project endpoints and is proposed entirely within the existing T.H. Wharton – Zenith Corner transmission right of way ("ROW"). The preferred route minimizes potential environmental and land use impacts, eliminates the need for new ROW acquisition, and is the most economical route.

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