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APPLICATION OF CENTERPOINT
ENERGY HOUSTON ELECTRIC,
LLC TO AMEND ITS
CERTIFICATE OF CONVENIENCE
AND NECESSITY FOR A
PROPOSED 345 KV
TRANSMISSION LINE WITHIN
GRIMES, HARRIS AND WALLER
COUNTIES, TEXAS

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PUBLIC UTILITY COMMISSION
OF TEXAS

DIRECT TESTIMONY OF

JOHN R. KELLUM, JR.

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11

1 **DIRECT TESTIMONY OF**

2 **JOHN R. KELLUM, JR.**

3 **I. QUALIFICATIONS AND EXPERIENCE**

4 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

5 A. My name is John R. Kellum, Jr. My business mailing address is P.O. Box 1700,
6 Houston, Texas 77251-1700.

7 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am employed by CenterPoint Energy Houston Electric, LLC ("CenterPoint
9 Energy" or "Company") as Division Vice President—High Voltage Power
10 Delivery.

11 **Q. WHAT ARE YOUR RESPONSIBILITIES?**

12 A. In my current role, I am responsible for providing executive level direction for the
13 engineering, construction, operation, and maintenance of high-voltage power
14 delivery ("HVPD") assets, which include transmission, substation, and major
15 underground facilities.

16 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
17 **PROFESSIONAL EXPERIENCE.**

18 A. I earned a Bachelor of Business Administration degree in Management in 1979
19 and a Master of Business Administration degree in Management in 1981, both
20 from Texas A&M University. I began my career with CenterPoint Energy in June
21 1981 as a Power Consultant, focusing on the provision of electric service to
22 residential and commercial customers. From 1981 to 2004, I earned a number of
23 promotions and worked in a variety of capacities within the Company. My
24 resume, which is Exhibit JRK-1 to my testimony, describes the various positions I

1 have held. In November 2004, I was promoted to Director of Transmission
2 Operations, responsible for the design, construction, and maintenance of the
3 electric transmission facilities for CenterPoint Energy. In October 2011, I was
4 named to my current position, Division Vice President—High Voltage Power
5 Delivery.

6 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC UTILITY**
7 **COMMISSION OF TEXAS?**

8 A. Yes. I have provided testimony in the following proceedings:

- 9 • Docket No. 11999, *Application of Houston Lighting & Power Co. for*
10 *Approval of Tariff for Economic Improvement Service—Rate Schedule*
11 *EIS;*
- 12 • Docket No. 12065, *Complaint of Kenneth D. Williams against Houston*
13 *Lighting & Power Co.;*
- 14 • Docket No. 12957, *Application of Houston Lighting & Power Co. for*
15 *Approval of Experimental Tariff for Special Contract Pricing—Rate*
16 *Schedule SCP; and*
- 17 • Docket No. 30617, *Application of CenterPoint Energy Houston Electric,*
18 *LLC for a Certificate of Convenience and Necessity (CCN) for a Proposed*
19 *Transmission Line in Brazoria County, Texas.*

20 Most recently, as Manager of Transmission Operations, I provided testimony in
21 Docket No. 31591, *Application of CenterPoint Energy Houston Electric, LLC for*
22 *a Certificate of Convenience and Necessity for a Proposed Transmission Line*
23 *within Fort Bend, Wharton, Matagorda, and Brazoria Counties, in which the*

1 Commission granted CenterPoint Energy a CCN for the Hillje–W.A. Parish 345
2 kV transmission line.

3 **II. SUMMARY OF TESTIMONY**

4 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

5 A. CenterPoint Energy is asking the Commission to grant it a certificate of
6 convenience and necessity (“CCN”) for the Brazos Valley Connection (the
7 “Application”). The Brazos Valley Connection is a 345 kV transmission line that
8 will connect the Zenith Substation in Harris County and the Gibbons Creek
9 Substation in Grimes County (also referred to as the “Project”). This project has
10 been deemed critical to the reliability of the system by the Electric Reliability
11 Council of Texas (“ERCOT”).

12 ERCOT identified and confirmed a need for a new transmission line from the
13 Zenith Substation in Harris County, to the Limestone Substation in Limestone
14 County (the “Houston Import Project”). The Brazos Valley Connection is the
15 southern portion of the larger Houston Import Project. Cross Texas Transmission,
16 LLC (“Cross Texas”) will build the northern portion, connecting the Limestone
17 Substation and the Gibbons Creek Substation. The entire Houston Import Project
18 is needed to ensure the reliable operation of the grid by increasing the
19 transmission capacity available to import needed electric supply into the Houston
20 area no later than summer 2018. The Brazos Valley Connection will improve the
21 capacity of the Texas electric grid and strengthen regional transmission
22 capabilities.

1 Texas is one of the fastest growing states in the nation. To meet the growing
2 demands of our state, a dependable power supply is vital for this region. The
3 Brazos Valley Connection will help address much needed future infrastructure
4 improvements while meeting the Company's statutory obligation to provide safe
5 and reliable power.

6 **III. PURPOSE AND SCOPE OF TESTIMONY**

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. My testimony (1) provides an overview description of the Project, (2) explains the
9 importance of the Project, and (3) introduces the other witnesses supporting the
10 Application.

11 **Q. DID YOU OR SOME OTHER KNOWLEDGEABLE PERSON UPON
12 WHOSE EXPERTISE AND JUDGMENT YOU COULD REASONABLY
13 RELY PREPARE YOUR TESTIMONY?**

14 A. Yes.

15 **Q. IS THE INFORMATION CONTAINED IN YOUR TESTIMONY TRUE
16 AND CORRECT TO THE BEST OF YOUR KNOWLEDGE AND BELIEF?**

17 A. Yes.

18 **IV. DESCRIPTION OF THE BRAZOS VALLEY CONNECTION**

19 **Q. WHAT IS THE BRAZOS VALLEY CONNECTION?**

20 A. The Brazos Valley Connection is a 345 kV electric transmission line that will
21 extend from Harris County to Grimes County. It will connect the Zenith
22 Substation in Harris County and the Gibbons Creek Substation in Grimes County.
23 Cross Texas is also proposing a new transmission line, which would connect the

1 Gibbons Creek Substation with the Limestone Substation in Limestone County.
2 Together, the two new lines will constitute the Houston Import Project approved
3 and deemed critical by ERCOT. An overview map of the Brazos Valley
4 Connection is Exhibit JRK-2 to my testimony.

5 **Q. WHY IS CENTERPOINT ENERGY SEEKING A CCN FOR THE**
6 **BRAZOS VALLEY CONNECTION AT THIS TIME?**

7 A. CenterPoint Energy is filing the Application as a result of the 2014 “ERCOT
8 Independent Review of Houston Import RPG Project” (the “ERCOT Independent
9 Review”) and subsequent actions by ERCOT. A copy of the ERCOT
10 Independent Review is included as Attachment 2 to the Application. The ERCOT
11 Independent Review identified a critical reliability need to increase the capability
12 to import electric power into the Houston area by no later than the summer of
13 2018 and concluded that the construction of a new Limestone–Gibbons
14 Creek–Zenith 345 kV double-circuit transmission line (the Houston Import
15 Project) is the preferred option for meeting that need. The ERCOT Board
16 subsequently endorsed the recommendation as well as the designation of the
17 Houston Import Project as critical for reliability.

18 **Q. WERE THERE ANY OTHER SYSTEM UPGRADES IDENTIFIED BY**
19 **ERCOT TO BE UNDERTAKEN BY CENTERPOINT ENERGY?**

20 A. Yes. In addition to the construction of the Limestone–Gibbons Creek–Zenith
21 345 kV double-circuit transmission line, the ERCOT Independent Review also
22 called for upgrades to the substations at Limestone, Gibbons Creek and Zenith to
23 accommodate the interconnections for the new transmission line, and an upgrade

1 of the existing T.H. Wharton-Addicks 345 kV transmission line to achieve 1450
2 MVA of emergency rating. The report designates CenterPoint Energy as the
3 provider of the Limestone and Zenith substation upgrades and the
4 T.H. Wharton-Addicks 345 kV line upgrade. The Application does not request
5 approval for these additional upgrades, because they fall within the exemption
6 under PUC SUBST. R. 25.101(c) from otherwise applicable CCN requirements.
7 However, CenterPoint Energy will not undertake construction of the additional
8 upgrades unless and until the Application is approved.

9 **Q. WHAT IS THE ESTIMATED COST OF THE PROJECT?**

10 A. As detailed in response to Question 13 of the Application and in the direct
11 testimony of CenterPoint Energy witness Erich F. Schoennagel, the Company has
12 proposed 32 alternative routes for the Project for the Commission's consideration,
13 and, depending on the final route approved by the Commission, the estimated cost
14 of the Project is between \$275 million and \$384 million, including the upgrades to
15 the Zenith Substation. The estimated cost does not include the costs for the
16 Limestone Substation and T.H. Wharton-Addicks upgrades.

17 **Q. WHEN MUST THE COMPANY START CONSTRUCTION OF THE**
18 **PROJECT TO COMPLETE IT BEFORE THE SUMMER OF 2018?**

19 A. To complete the Brazos Valley Connection by the critical need date, which
20 ERCOT determined is prior to the start of summer 2018, CenterPoint Energy
21 must commence route acquisition by no later than October 2015. CenterPoint
22 Energy cannot commence route acquisition or construction activities until the
23 Commission issues a final order in this proceeding approving the Application and

1 designating the route for the Project. Because ERCOT has deemed the Project
2 critical to reliability, PUC SUBST. R. 25.101(b)(3)(D) requires the Commission to
3 issue a decision approving or denying the Application within 180 days of filing,
4 unless good cause is shown for extending that period. It is important for the
5 Commission not to extend the 180-day period in its rule beyond the date by which
6 CenterPoint Energy must start work on the Project. Extending the 180-day period
7 beyond that date would jeopardize the Company's ability to meet the critical
8 reliability date determined by ERCOT.

9 **V. IMPORTANCE OF THE BRAZOS VALLEY CONNECTION**

10 **Q. DOES CENTERPOINT ENERGY BELIEVE THE BRAZOS VALLEY**
11 **CONNECTION IS IMPORTANT?**

12 **A.** Yes. CenterPoint Energy's service territory includes the Texas Medical Center,
13 the Port of Houston, NASA, and an extensive network of petrochemical and
14 refining industries. We are adding over 45,000 customers per year and have seen
15 a tremendous increase in all sectors of our service territory—residential,
16 commercial, and industrial. The existing transmission system is already
17 frequently congested, and by no later than 2018, we will have to have additional
18 transmission import capacity to meet the growing demand in our service territory.
19 If our area gains a reputation for having unreliable or costly electric power as a
20 result of transmission congestion, then investment in new or expanded businesses
21 may go to other states. The ERCOT Independent Review concluded that demand
22 would exceed the system's current capacity to import supply as early as 2018; and
23 a more recent ERCOT report (the December 2014 "Report on Existing and

1 Potential Electric System Constraints and Needs”) found such constraints as early
2 as 2017. With limited commitments made for new generation within the Houston
3 area, new transmission facilities must be constructed to provide the ability to
4 import the additional supply needed to reliably meet the projected demand.
5 Without action, the reliability of the transmission grid will be weakened in the
6 future. We need to invest in a grid for the future to ensure continued reliable
7 service for the next generation.

8 **Q. DOES THE BRAZOS VALLEY CONNECTION BENEFIT ANYONE**
9 **BESIDES THOSE IN HOUSTON?**

10 A. Yes. Texas’ population growth is one of the fastest in the nation. According to
11 the U.S. Census Bureau, 106,000 people moved to Texas in 2012; more than the
12 entire population of College Station, TX. Three of the ten fastest growing cities
13 in the nation are found in our state—Austin, Dallas, and Houston. Texas as a
14 whole is home to the 14th largest economy in the world. Our large, complex
15 economy needs reliable electricity to satisfy our state-wide power demands.
16 Because the Brazos Valley Connection will be interconnected to ERCOT’s
17 state-wide transmission grid, the Project will have benefits in areas outside
18 Houston, such as:

- 19 • reducing the possibility of system-wide cascading power line outages that
20 could lead to power outages outside the Houston region;
- 21 • improving emergency power response capability through the addition of new
22 electric transmission lines to transport power to other areas, such as delivering

1 emergency power to the areas around Bryan/College Station and Dallas during
2 extremely cold or icy weather; and
3 • maintaining and perhaps even increasing the potential for economic growth
4 outside the Houston region from businesses and industries that benefit from
5 the Houston region's robust economy that relies on the transmission delivery
6 of reliable power.

7 ERCOT's December 2014 "Report on Existing and Potential Electric System
8 Constraints and Needs" included at pages 10-11 the following discussion of the
9 Houston Import Project, of which the Brazos Valley Connection is the southern
10 portion.

11 While growth in the Houston area is a primary driver for
12 the need for the project, another significant driver is growth
13 in the Bryan-College Station area. According to the City of
14 College Station, the population in Brazos County increased
15 nearly 28% between 2000 and 2010 and the population of
16 the city itself increased an estimated 2.2% between
17 November 2013 and October 2014. In fact, approximately
18 two-thirds of the area congestion experienced in 2014
19 occurred on lines from the north, which terminate at the
20 Gibbons Creek, Jack Creek, or Singleton stations located in
21 Brazos and Grimes Counties. These same lines were
22 shown to have reliability violations in the ERCOT analysis
23 of the need for the project. Therefore, the project will have
24 considerable reliability and economic congestion benefits
25 for the Brazos and Grimes Counties area.

26 The Brazos Valley Connection will provide benefits beyond just the Houston
27 region.

1 **VI. INTRODUCTION OF WITNESSES**

2 **Q. WHO ELSE WILL BE TESTIFYING IN SUPPORT OF CENTERPOINT**
3 **ENERGY'S APPLICATION?**

4 **A.** The table below identifies the witnesses supporting the Application and the
5 subject of each witness's testimony.

6 **Table of Witnesses Supporting Application**

| <u>Witness</u> | <u>Subject of Testimony</u> |
|--|--|
| John R. Kellum, Jr., CenterPoint Energy, Division Vice President—High Voltage Power Delivery | Provides an overview of the Project; and introduces the other witnesses supporting the Application. |
| Michael J. Pakeltis, P.E., CenterPoint Energy, Director, Transmission Operations | Describes CenterPoint Energy's routing practices and the Company's role in the development of adequate alternative routes; explains the role of POWER Engineers, Inc. in performing the routing study; and explains CenterPoint's determination of a recommended route; and supports the notices provided by CenterPoint Energy. |
| Wayne E. Kemper, P.E., CenterPoint Energy, Manager, Transmission Planning | Addresses the need for the Project, including a description of the existing transmission system and the conditions addressed by the Project; and describes the consideration of alternatives to the Project. |
| Erich F. Schoennagel, P.E., CenterPoint Energy, Manager, Transmission Engineering | Describes engineering considerations in the design of the Brazos Valley Connection, including the type of structures and conductor to be used, substation requirements, right-of-way requirements, project schedule, cost estimates, and financing for the Project. |

| <u>Witness</u> | <u>Subject of Testimony</u> |
|---|---|
| Rob R. Reid, POWER Engineers, Inc., Vice President/Environmental Project Development and Senior Project Manager | Presents and explains the Environmental Assessment and Alternative Routing Analysis conducted by POWER Engineers for the Brazos Valley Connection. |
| Mandhir Sahni, Ph.D., PWR Solutions, Inc., Vice President | Presents and explains a study updating and confirming the conclusion of the ERCOT Independent Review that the Houston Import Project and Brazos Valley Connection are critical for reliability. |

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 **A. Yes, it does.**

EXHIBIT JRK-1

Resume of John R. Kellum, Jr.

Direct Testimony of John R. Kellum, Jr.
P.U.C. Docket No. 44547

9122 Savannah Trails Home Phone: 281-855-0830
Houston, TX 77095 Work Phone: 713-207-6036

E-Mail: <mailto:john.kellum@CenterPointEnergy.com>

JOHN R. KELLUM, JR.

Education B.B.A. in Business Management, May 1979, Texas A&M University
M.B.A. in Business Management, May 1981, Texas A&M University

Employment History June 1981 – Present - **HL&P/Reliant Energy HL&P/CenterPoint Energy**

- Vice President – High Voltage Power Delivery 2011 – Present
- Director – Transmission Operations 2004 – 2011
- Service Area Director – Cypress and Humble S/C 1996 – 2004
- Manager Rate Design 1993 – 1996
- Manager Business Development 1991 – 1993
- Supervisor Conservation/Marketing 1987 – 1991
- Rate Design Analyst 1985 – 1987
- Sr. Power Consultant 1984 – 1985
- Power Consultant 1981 – 1984

Special Projects/Accomplishments

- Executive/Management Sponsor of the Engineering ETAC, 2009–Present
- Records Management Governance Committee, 2009 – Present
- GPS Governance Committee, 2012 - Present
- Re-established Substation Construction Crews, 2012
- Springwoods CCN Approved 2012
- Gertie-Zenith CCN Approved, 2010
- Freeport LNG Transmission CCN, 2005 – 2007
- Testified during 80th Legislative Session in Support of HB 2127, 2007
- Hillje Project CCN 68 mile 345kV, 2005 - 2007
- Coordinated and Prepared Distribution Testimony in 2001 Wires Case
- Best Practice Team, 1999 – 2000

Community/Industry Involvement

- Executive Sponsor CNP Charity Fishing Tournament, 2013-2014
- Volunteer for Meals on Wheels AniMeals Program, 2010 – Present
- EPRI Advisor, 2005 - Present
- EEI Transmission Policy Task Force, 2012 – Present
- CEHE Public Safety Committee, 2010 – Present
- Gulf Coast Power Association Member, 2012 – Present

- Member of East HVDV Tie Management Committee, 2011 – Present
- EEI Transmission Committee, 2005 - 2011
- T&D World Executive Roundtable, 2012
- Board of Directors, Humble Area Chamber of Commerce, 2000 – 2004
- Chairman, Boy Scouts of America Flaming Arrow District, 2003
- Governmental Affairs Committee, Humble Area Chamber of Commerce, 2000 - 2004
- North Harris County Criminal Justice Association, 2000 – 2004
- Board of Directors, Tomball and Cy-Fair Chambers of Commerce, 1996 - 2000
- Advisor, Tomball Education Foundation, 1998 – 2000
- Advisor Trustee, Cy-Fair Education Foundation, 1998 – 2000
- Tomball Rotary, 1996 – 2000

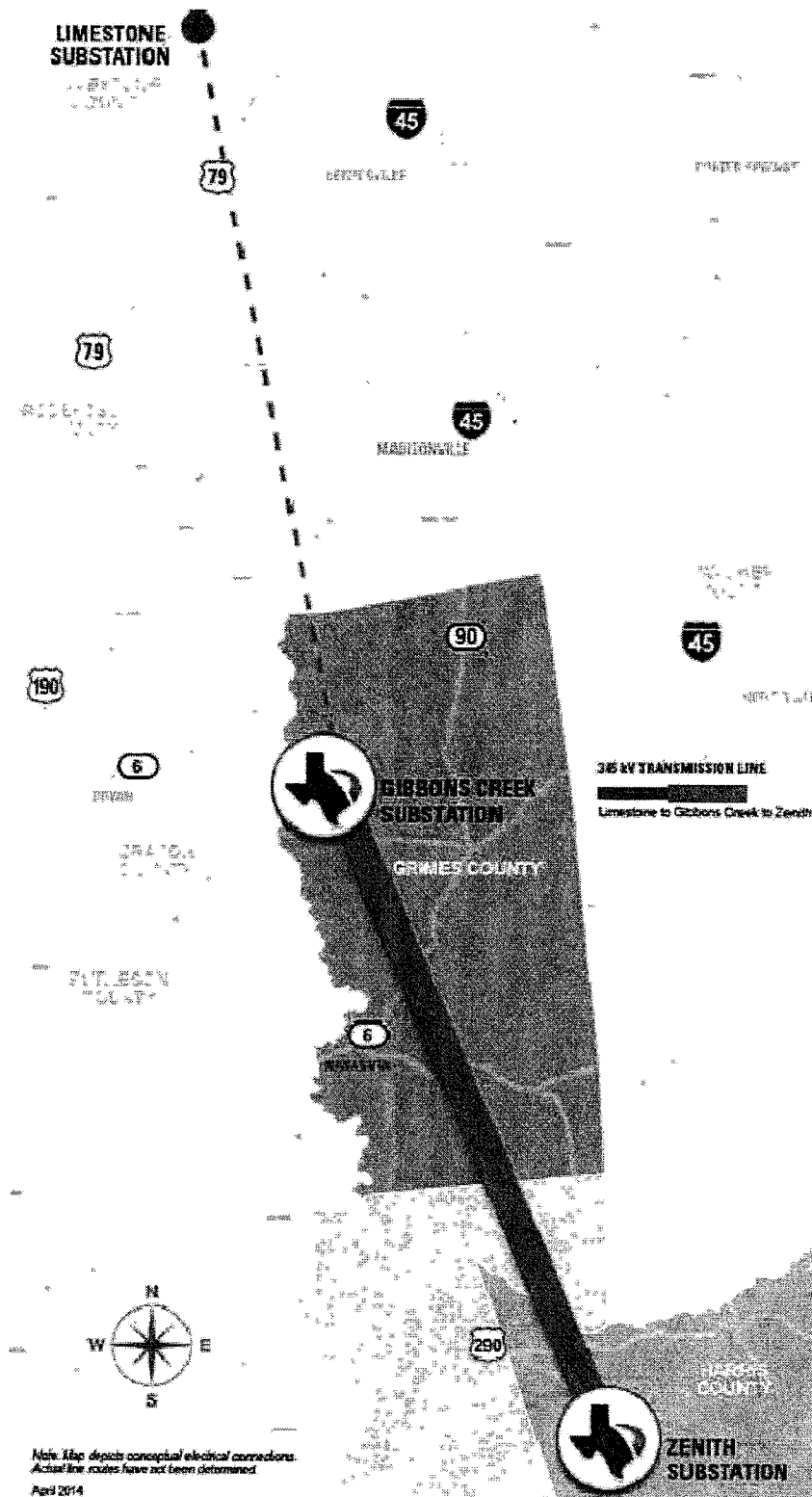
Interests

- Spending time with family including a new grandson
- Fishing
- Hunting
- Yard Work
- Membership at Memorial Drive United Methodist Church

EXHIBIT JRK-2

Overview Map

Direct Testimony of John R. Kellum, Jr.
P.U.C. Docket No. 44547



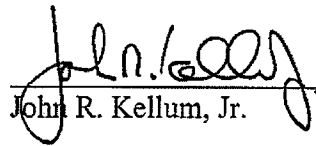
STATE OF TEXAS §
 §
COUNTY OF HARRIS §

AFFIDAVIT OF JOHN R. KELLUM, JR.

BEFORE ME, the undersigned authority, on this day personally appeared John R. Kellum, Jr., who being by me first duly sworn, on oath, deposed and said the following:

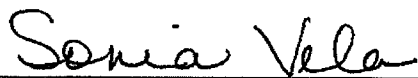
1. "My name is John R. Kellum, Jr. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge. My current position is Vice President of High Voltage Power Delivery for CenterPoint Energy Houston Electric, LLC.
2. The foregoing direct testimony and the attached exhibits have been prepared by me or under my direct supervision and are true and correct to the best of my knowledge."

Further affiant sayeth not.



John R. Kellum, Jr.

SUBSCRIBED AND SWORN TO BEFORE ME on this 17th day of April, 2015.



Notary Public in and for the State of Texas

