

ATTACHMENT 8
ESTIMATED COST FOR ALTERNATIVE ROUTES

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**Application of CenterPoint Energy Houston Electric, LLC
for a Certificate of Convenience and Necessity
for a Proposed 345 kV Transmission Line within Grimes, Harris, and Waller Counties**

Provide cost estimates for each route of the proposed project using the following table. Provide a breakdown of "Other" costs by major cost category and amount. Provide the information for each route in an attachment to this application.

	Transmission Facilities Alternative Route 1	Transmission Facilities Alternative Route 1A	Transmission Facilities Alternative Route 2	Transmission Facilities Alternative Route 3	Transmission Facilities Alternative Route 4	Transmission Facilities Alternative Route 5	Transmission Facilities Alternative Route 6	Transmission Facilities Alternative Route 7	Transmission Facilities Alternative Route 8	Transmission Facilities Alternative Route 9	Transmission Facilities Alternative Route 10	Transmission Facilities Alternative Route 11	Transmission Facilities Alternative Route 12	Transmission Facilities Alternative Route 13	Transmission Facilities Alternative Route 14	Transmission Facilities Alternative Route 15	Transmission Facilities Alternative Route 16	
Right-of-Way and Land Acquisition	B-F-LA-LB-LC-LD-N1A-N1B-N1C-H2-V2A-L3-A3-C3-D3A-D3B-E3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-H2-V2A-L3-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-M1B-N1A-N1B-N1C-H2-V2A-L3-A3-C3-D3A-D3B-E3-R3	B-F-LA-LB-LC-M1B-N1A-N1B-N1C-H2-V2A-L3-B3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-M1B-N1A-N1B-N1C-H2-V2A-L3-B3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	B-F-LA-LB-LC-LD-N1A-N1B-N1C-F2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-O3-P3-Q3-R3	A-D-H-NA-NB-S-V-X-Z-G1-J1-O1-P1-V1-Z1-D2-G2-L2-N2-S2-Y2-C3-D3A-M3-N3-P3-Q3-R3	B-E-J-O-V-X-Z-G1-K1-O1-P1-V1-Z1-D2-G2-L2-N2-S2-Y2-C3-D3A-M3-N3-P3-Q3-R3	B-F-K-P-A1-L1-A2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-N3-P3-Q3-R3	B-F-K-P-A1-L1-A2-E2-G2-M2-O2-U2-Z2-A3-C3-D3A-M3-N3-P3-Q3-R3	B-F-K-P-A1-L1-A2-E2-G2-L2-N2-S2-Y2-C3-D3A-D3B-E3-R3
Engineering and Design (Utility)	\$104,028,000	\$103,273,000	\$102,535,000	\$107,987,000	\$111,815,000	\$115,774,000	\$110,322,000	\$110,177,000	\$107,259,000	\$116,472,000	\$104,849,000	\$110,241,000	\$109,044,000	\$118,977,000	\$123,089,000	\$113,738,000	\$111,965,000	
Engineering and Design (Contract)	\$15,525,000	\$14,995,000	\$14,427,000	\$16,147,000	\$16,008,000	\$16,630,000	\$14,882,000	\$17,954,000	\$16,203,000	\$17,016,000	\$16,131,000	\$14,977,000	\$22,752,000	\$23,053,000	\$19,118,000	\$18,787,000	\$18,822,000	
Procurement of Material and Equipment (including Stores)	\$2,117,000	\$2,045,000	\$1,968,000	\$2,202,000	\$2,183,000	\$2,268,000	\$2,030,000	\$2,449,000	\$2,210,000	\$2,321,000	\$2,200,000	\$2,043,000	\$3,103,000	\$3,144,000	\$2,607,000	\$2,562,000	\$2,567,000	
Construction of Facilities (Utility)	\$63,796,000	\$61,684,000	\$59,724,000	\$66,246,000	\$66,250,000	\$68,702,000	\$62,079,000	\$72,137,000	\$65,855,000	\$69,887,000	\$64,742,000	\$62,426,000	\$89,966,000	\$88,641,000	\$77,753,000	\$74,652,000	\$75,494,000	
Construction of Facilities (Contract)	\$3,333,000	\$3,217,000	\$3,080,000	\$3,475,000	\$3,418,000	\$3,560,000	\$3,158,000	\$3,917,000	\$3,506,000	\$3,652,000	\$3,523,000	\$3,180,000	\$5,024,000	\$5,202,000	\$4,137,000	\$4,136,000	\$4,114,000	
Other (all cost not included in the above categories)	\$79,982,000	\$77,206,000	\$73,914,000	\$83,387,000	\$82,017,000	\$85,423,000	\$75,792,000	\$94,004,000	\$84,133,000	\$87,640,000	\$84,551,000	\$76,312,000	\$120,557,000	\$124,839,000	\$99,270,000	\$99,262,000	\$98,736,000	
Estimated Total Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Other Costs-Transmission ^[1]	\$268,781,000	\$262,420,000	\$255,648,000	\$279,444,000	\$281,691,000	\$292,357,000	\$268,263,000	\$300,638,000	\$279,166,000	\$296,988,000	\$275,996,000	\$269,179,000	\$350,446,000	\$363,856,000	\$325,974,000	\$313,137,000	\$311,698,000	
Other Costs-Substation ^[2]	\$7,984,000	\$7,984,000	\$7,984,000	\$7,984,000	\$7,984,000	\$7,984,000	\$18,345,000	\$2,701,000	\$13,062,000	\$13,062,000	\$6,663,000	\$18,345,000	\$0	\$1,550,000	\$0	\$0	\$0	
Estimated Grand Total Cost	\$281,957,000	\$275,596,000	\$279,185,000	\$292,620,000	\$294,867,000	\$305,533,000	\$291,800,000	\$308,531,000	\$297,420,000	\$315,242,000	\$287,851,000	\$292,716,000	\$354,441,000	\$370,598,000	\$331,166,000	\$318,329,000	\$316,890,000	

1. Transmission cost incurred for adjustments needed to other CenterPoint Energy-owned transmission lines.
2. Substation facilities cost reflects the addition of two 345 kV line terminal positions at Zenith Substation and associated remote relay/corridor work.

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for a Proposed 345 kV Transmission Line within Grimes, Harris, and Waller Counties**

Provide cost estimates for each route of the proposed project using the following table. Provide a breakdown of "Other" costs by major cost category and amount. Provide the information for each route in an attachment to this application.

	Transmission Facilities Alternative Route 17	Transmission Facilities Alternative Route 18	Transmission Facilities Alternative Route 19	Transmission Facilities Alternative Route 20	Transmission Facilities Alternative Route 21	Transmission Facilities Alternative Route 22	Transmission Facilities Alternative Route 23	Transmission Facilities Alternative Route 24	Transmission Facilities Alternative Route 25	Transmission Facilities Alternative Route 26	Transmission Facilities Alternative Route 27	Transmission Facilities Alternative Route 28	Transmission Facilities Alternative Route 29	Transmission Facilities Alternative Route 30	Transmission Facilities Alternative Route 31	Substation Facilities	Substation Facilities
Right-of-Way and Land Acquisition	\$115,352,000	\$111,837,000	\$110,064,000	\$114,586,000	\$116,768,000	\$104,702,000	\$118,744,000	\$103,168,000	\$110,075,000	\$125,710,000	\$116,588,000	\$119,903,000	\$121,442,000	\$116,323,000	\$117,981,000	\$0	\$0
Engineering and Design (Utility)	\$20,218,000	\$18,463,000	\$18,475,000	\$21,146,000	\$19,357,000	\$21,179,000	\$22,073,000	\$21,180,000	\$21,887,000	\$23,249,000	\$22,621,000	\$22,607,000	\$24,189,000	\$20,146,000	\$22,624,000	\$284,000	\$226,000
Engineering and Design (Contract)	\$2,757,000	\$2,518,000	\$2,520,000	\$2,884,000	\$2,640,000	\$2,888,000	\$3,010,000	\$2,889,000	\$2,985,000	\$3,171,000	\$3,085,000	\$3,083,000	\$3,299,000	\$2,748,000	\$3,086,000	\$184,000	\$147,000
Procurement of Material and Equipment (including Stores)	\$78,958,000	\$73,179,000	\$74,023,000	\$82,360,000	\$76,930,000	\$85,239,000	\$87,441,000	\$84,175,000	\$87,745,000	\$91,890,000	\$87,537,000	\$88,217,000	\$93,350,000	\$80,075,000	\$88,070,000	\$2,592,000	\$2,132,000
Construction of Facilities (Utility)	\$4,516,000	\$4,077,000	\$4,046,000	\$4,718,000	\$4,259,000	\$4,616,000	\$4,867,000	\$4,660,000	\$4,784,000	\$5,135,000	\$5,079,000	\$5,047,000	\$5,440,000	\$4,428,000	\$5,047,000	\$154,000	\$135,000
Construction of Facilities (Contract)	\$108,381,000	\$97,825,000	\$97,091,000	\$113,215,000	\$102,214,000	\$110,781,000	\$116,806,000	\$111,827,000	\$114,810,000	\$123,231,000	\$121,886,000	\$121,112,000	\$130,552,000	\$106,272,000	\$121,127,000	\$1,803,000	\$1,355,000
Other (all cost not included in the above categories)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Estimated Total Cost	\$330,182,000	\$307,899,000	\$306,219,000	\$338,909,000	\$322,168,000	\$329,405,000	\$352,941,000	\$327,899,000	\$342,286,000	\$372,386,000	\$356,796,000	\$359,969,000	\$378,272,000	\$329,992,000	\$357,935,000	\$5,017,000	\$3,995,000
Other Costs-Transmission ^[1]	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$175,000	\$0
Other Costs-Substation ^[2]	\$5,192,000	\$5,192,000	\$5,192,000	\$5,192,000	\$5,192,000	\$3,995,000	\$3,995,000	\$3,995,000	\$3,995,000	\$3,995,000	\$5,192,000	\$5,192,000	\$5,192,000	\$5,192,000	\$5,192,000	\$0	\$0
Estimated Grand Total Cost	\$335,374,000	\$313,091,000	\$311,411,000	\$344,101,000	\$327,360,000	\$333,400,000	\$356,936,000	\$331,894,000	\$346,281,000	\$376,381,000	\$361,988,000	\$365,161,000	\$383,464,000	\$335,184,000	\$363,127,000	\$5,192,000	\$3,995,000

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