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Filing Date - 2024-11-27 01:05:10 PM

Control Number - 57115

Item Number - 203

SOAH DOCKET NO. 473-25-02531
PUC DOCKET NO. 57115

JOINT APPLICATION OF THE CITY OF SAN ANTONIO, ACTING BY AND THROUGH THE CITY PUBLIC SERVICE BOARD (CPS ENERGY), AND SOUTH TEXAS ELECTRIC COOPERATIVE, INC. (STEC) TO AMEND THEIR CERTIFICATES OF CONVENIENCE AND NECESSITY FOR THE PROPOSED HOWARD ROAD-TO-SAN MIGUEL 345 KV TRANSMISSION LINE IN BEXAR AND ATASCOSA COUNTIES	§ § § § § § § § § §	**BEFORE THE STATE OFFICE** **OF** **ADMINISTRATIVE HEARINGS**

REBUTTAL TESTIMONY AND EXHIBIT

OF

SCOTT D. LYSSY, P.E. #103637

ON BEHALF OF APPLICANT

CPS ENERGY

November 27, 2024

SOAH DOCKET NO. 473-25-02531
PUC DOCKET NO. 57115

REBUTTAL TESTIMONY AND EXHIBIT OF SCOTT D. LYSSY

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EXHIBIT

REBUTTAL TESTIMONY AND EXHIBIT OF SCOTT D. LYSSY

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Scott D. Lyssy, P.E. I am employed by CPS Energy as the Manager of Civil Engineering.

Q. ARE YOU THE SAME SCOTT D. LYSSY THAT PROVIDED DIRECT TESTIMONY IN THIS DOCKET?

A. Yes, I am.

Q. WAS YOUR REBUTTAL TESTIMONY PREPARED BY YOU OR BY KNOWLEDGEABLE PERSONS UPON WHOSE EXPERTISE, JUDGMENT, AND OPINIONS YOU RELY IN PERFORMING YOUR DUTIES?

A. Yes, it was.

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

A. Yes, it is.

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW THE TESTIMONY FILED BY THE INTERVENORS AND STAFF IN THIS DOCKET?

A. Yes, I have read the direct and cross-rebuttal testimonies filed by the intervenors and the direct testimony filed by the Staff of the Public Utility Commission of Texas (Staff). All 34 routes and 109 segments filed by CPS Energy and STEC in the Joint Application are viable and acceptable routes and segments. In addition, as addressed in the rebuttal testimony filed in this case, Segment 62MOD2 and Routes U ALT 2 and N-AB are also viable and acceptable routes and segments. All of the 36 routes can be constructed, operated, and maintained by the Joint Applicants, and any one of 36 routes would meet the need for the Project.

I also remain confident that the cost estimates included with the Joint Application are reasonable and appropriate for consideration by the Public Utility Commission of Texas (Commission) of the costs for the proposed Howard Road to San Miguel 345 kV Transmission Line Project in Bexar and Atascosa Counties (Project) and suitable for the comparison of routes to one another.

II. PROPERTY ACCESS

Q. SEVERAL INTERVENORS EXPRESSED CONCERNS ABOUT GRANTING ACCESS TO THEIR PROPERTIES TO THIRD PARTIES. HOW DO YOU RESPOND?

A. For the portions of the Project constructed, operated, and maintained by CPS Energy (the northern 50 percent), CPS Energy will provide notice to landowners that will be crossed by the Project prior to beginning construction. The notification will generally describe the scope of the Project and provide the landowner with specific project contacts, including the appropriate CPS Energy representative for landowner issues. In addition, a CPS Energy representative will be available prior to, during, and after construction, to address a landowner's concerns related to the Project. Following construction and energization of the transmission line, CPS Energy will rarely need to access the right-of-way (ROW) or transmission facilities. When access to the ROW is required, CPS Energy will attempt to contact the landowner prior to accessing the property unless emergency conditions do not provide for such contact.

Further, as described in Section 1 of the Environmental Assessment (included as Attachment 1 to the Application), CPS Energy will follow its standard construction measures to mitigate potential impacts to the landowner's property. If CPS Energy or its contractors cause damage to a landowner's property, CPS Energy will repair the damage.

Q. SOME INTERVENORS EXPRESSED CONCERN ABOUT LIVESTOCK AND OTHER ANIMALS POTENTIALLY ESCAPING VIA GATES THAT ARE LEFT OPEN AND OTHERWISE. HOW DO YOU RESPOND?

A. During construction and maintenance of the transmission line CPS Energy's crews will be careful not to allow livestock, domestic animals, or wildlife to exit any of the fenced land

through the gates while opened for the brief period that it takes for a vehicle to pass through. The crews will immediately close the gates once the vehicle has passed through the gate. During the construction of any route over a fence, CPS Energy's crews will install a new gate within existing fences immediately upon opening the fence for gate installation. Gates will allow construction access and later, access for maintenance crews up and down the ROW, as necessary. New gates will connect to existing fences so that there will be no gaps in the fence, and the gates will be constructed of materials that prevent the movement of animals through the gate. Where landowners use high fences for large game animals, CPS Energy will use gates at least as high as the adjacent fencing, and crews will install temporary secondary fencing, approximately 10 feet tall, as necessary inside the high fence. Once in place, gates will prevent large livestock animals and large game animals from travelling into or out of any area that is currently surrounded by fence. During maintenance, CPS Energy's crews, after notifying the landowner that they will be coming through the property, will traverse down the existing ROW and pass through the gates that were installed during the construction phase.

Q. SOME INTERVENORS HAVE ALSO EXPRESSED CONCERNS REGARDING SAFETY WHILE HUNTING ACTIVITIES ARE OCCURRING ON A PROPERTY WHEN MAINTENANCE ACTIVITIES ARE BEING PERFORMED. HOW DO YOU RESPOND?

A. As described above, once constructed, CPS Energy will only rarely need to access the ROW and transmission facilities for maintenance. When this does need to happen, as described above, CPS Energy will attempt to communicate with the landowner, and a CPS Energy representative will be available to address a landowner's concerns. CPS Energy can typically work with landowners concerning maintenance during hunting seasons and will do so to the extent practical and so long as the required maintenance schedules can be met.

III. CONSTRUCTION IMPACTS, SAFETY CONCERNS, AND ONGOING IMPACTS

Q. SEVERAL INTERVENORS TESTIFIED THAT THEY ARE CONCERNED ABOUT THE VARIOUS WAYS THEIR PROPERTY MIGHT BE NEGATIVELY IMPACTED DURING THE PROJECT'S CONSTRUCTION, INCLUDING DAMAGE TO SOILS AND VEGETATION AND POST-CONSTRUCTION CLEANUP, AMONG OTHER CONCERNS. HOW DO YOU RESPOND?

A. Regarding potential soil compaction, upon the completion of construction or maintenance, CPS Energy will disk the soil and restore and revegetate disturbed areas the extent possible and practical. CPS Energy will obtain and comply will all necessary storm water pollution protection plan requirements. Once construction is completed, CPS Energy will remove all construction matting, vehicles, and equipment from the ROW. CPS Energy is experienced at safely constructing and operating transmission lines in many different areas, including across residential, agricultural, recreational, commercial, and rural properties. I personally reviewed the route segments proposed for the northern 50 percent of the Project and have determined that they can be safely and reliably designed, constructed, operated, and maintained in a manner that reasonably minimizes the impact to properties crossed by the Project.

Q. ONE ISSUE RAISED BY INTERVENOR TESTIMONY CONCERNED STRUCTURE COLLAPSE. HOW DO YOU RESPOND?

A. The steel monopoles proposed for the Project will be constructed in accordance with National Electrical Safety Code standards to withstand ice and wind loading beyond what can be reasonably anticipated to ever occur in the Project's area. I cannot envision a scenario in which the steel monopoles on concrete foundations would fall over, and I am not aware of any instances where that has happened in CPS Energy's service territory.

Q. SOME INTERVENORS EXPRESSED A CONCERN REGARDING LIGHTENING AND FIRE. WHAT IS CPS ENERGY ENERGY'S POSITION?

A. CPS Energy constructs, operates, and maintains its transmission facilities (including vegetation management) in a manner that mitigates any reasonable risk of wildfire resulting from its transmission facilities. I do not see any reasonable concern associated with

lightning strikes and wildfire as a result of the construction, operation, and maintenance of CPS Energy's facilities as part of the Project.

Q. WILL THE PRESENCE OF THE PROJECT'S FACILITIES SIGNIFICANTLY AFFECT AGRICULTURAL OPERATIONS?

A. No. CPS Energy owns, operates, and maintains over 1,555 miles of transmission line, and farming and ranching activities are marginally affected at all, and even less so after construction is completed. The same is true for hunting and other commercial activities. Landowners continue to own the land subject to the utility easements, and with the exception of the brief, infrequent periods when CPS Energy will need to make use of ROW, landowners can continue to conduct agriculture activities within it. When CPS Energy does need to work in the ROW, it can work with landowners concerning timing while crops are present and will do so to the extent practical and so long as the required maintenance schedules can be met.

Additionally, the conductors for the Project will be installed high enough that agricultural equipment will not be prevented from passing underneath them, even while continuing to maintain the necessary clearance. If the Project is sited on their property, they will be able, with few exceptions, to continue to use their property as they have, and as I provided above, a CPS Energy representative will be available prior to, during, and after construction, to address a landowner's concerns related to the Project.

IV. COST ESTIMATES

Q. TESTIMONY ON BEHALF OF CCS RANCH PROPERTIES EXPRESSED CONCERN THAT THE PREVIOUSLY PERFORMED COST ESTIMATES ARE NO LONGER RELIABLE GIVEN ACTIVITIES THAT HAVE RECENTLY OCCURRED AT THEIR PROPERTY AND THOSE THAT THEY EXPECT TO OCCUR IN THE NEAR FUTURE. HOW DO YOU RESPOND?

A. Costs for ROW for CPS Energy's portion of the Project have been estimated using reasonable property market values in the area and CPS Energy's experience in similar projects. This information is used to arrive at an estimated value that is somewhat abstracted from particular details about any given property. This has been a workable

method because (1) gathering detailed information about each potentially affected property at this stage in the certification process would require extensive resources and (2) in the past, average values have proved to be reliable indicators of cost.

Q. THE CONCERN ABOUT INACCURATE COST ESTIMATES BECAUSE OF UNIQUE FEATURES ON THEIR PROPERTY WAS ALSO EXPRESSED BY OTHER INTERVENORS. WOULD YOU RESPOND TO THEM IN A SIMILAR WAY?

A. Yes. The method I describe above is reasonable for larger projects because the influence of any one property on the whole is lessened, so even if one or a few properties result in a higher than estimated ROW cost, the estimated costs for the whole project remain reasonable. A detailed investigation and individual property evaluation for each potentially affected property associated with numerous routes and segments is not feasible at this stage of a project, before a route is selected by the Commission.

V. INTERACTION WITH OTHER INFRASTRUCTURE FACILITIES

Q. IN DESCRIBING THEIR PROPERTIES AND THE UNIQUE FEATURES PRESENT, SOME INTERVENORS PROVIDED THAT PIPELINES CROSS THEIR PROPERTIES AND THOSE ARE CROSSED BY PROPOSED SEGMENTS. WHAT IS CPS ENERGY'S POSITION?

A. Pipelines will not pose significant issues to either the construction, operation, or maintenance of the Project. In numerous places, CPS Energy's transmission facilities cross or parallel other infrastructure facilities, such as underground water lines, natural gas pipelines, and distribution facilities. CPS Energy can span over underground lines when the Project's transmission facilities must cross over them, and CPS Energy can mat or otherwise pad and protect the underground utilities when they must be crossed by construction and maintenance vehicles and equipment.

Q. HOW WILL THE PROJECT'S FACILITIES AFFECT OR BE AFFECTED BY ELECTRIC DISTRIBUTION FACILITIES?

A. CPS Energy's existing transmission facilities are located above, adjacent, and nearby hundreds of miles of electric distribution facilities. CPS Energy regularly coordinates with

electric distribution utilities to construct, own, and operate its transmission facilities in a manner that does not disrupt the operation and maintenance of nearby electric distribution facilities. In the northern 50 percent of the Project, I have not seen any existing electric distribution facilities that will reasonably interfere with the construction, operation, and maintenance of CPS Energy's proposed transmission line facilities.

VI. IMPACTS TO MINING

Q. TESTIMONY ON BEHALF OF CAPITAL AGGREGATES EXPRESSED CONCERN ABOUT CONSTRUCTING THE FACILITIES IN THE UNIQUE SOIL AND GROUND CONDITIONS LOCATED AT THEIR SITE. HOW DO YOU RESPOND?

A. CPS Energy regularly constructs, operates, and maintains its electric transmission line facilities in a variety of soil conditions, including those described by Capital Aggregates. Following detailed geological assessments, CPS Energy will design the proposed transmission facilities in a prudent manner consistent with all applicable safety and reliability guidelines to ensure the safety of its employees and the public.

Q. THIS TESTIMONY ALSO EXPRESSED CONCERN ABOUT THE COMPATIBILITY OF TRANSMISSION FACILITIES AND THE UNIQUE MINING EQUIPMENT PRESENT AT THEIR SITE. WHAT IS CPS ENERGY'S POSITION?

A. Following approval of a route by the Commission, CPS Energy will work with landowners crossed by the approved route to design the proposed transmission line infrastructure in a safe and reliable manner. If a route is approved crossing the Capital Aggregates property, CPS Energy will work with that landowner to design the facilities in a manner that minimizes the impact to the property and ensures to the extent possible and reasonable the safe and reliable operation of both the transmission line facilities and the mining operations. CPS Energy has safely constructed and operated transmission line facilities across and near similar properties.

Q. AND THIS TESTIMONY PROVIDED THAT APPROVING THE PROJECT ACROSS THEIR PROPERTY WOULD RESULT IN LOST MINING RESERVES. HOW DO YOU RESPOND?

A. As with any property crossed by an approved route of the Project, CPS Energy will work with the landowner to acquire ROW at a fair market value. Cost impacts of the route and the Project are addressed through the ROW acquisition process.

VII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

CPS Energy CCN Application
(Revised 11/25/2024)
Estimated Costs for Transmission Line Facilities

Table 1: Transmission and Substation Facilities Total Estimated Costs

Route	Total Length (miles)	Estimated Total Cost	ROW & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other Costs
A	47.77	$329,450,000	$27,399,000	$1,599,000	$7,655,000	$174,960,000	$3,354,000	$88,493,000	$25,990,000
B	56.67	$390,539,000	$30,680,000	$1,813,000	$8,576,000	$213,887,000	$3,807,000	$104,398,000	$27,378,000
C	50.70	$312,318,000	$28,056,000	$1,679,000	$7,997,000	$155,264,000	$3,566,000	$89,369,000	$26,385,000
D	55.95	$337,726,000	$30,210,000	$1,800,000	$8,522,000	$170,772,000	$3,803,000	$95,535,000	$27,024,000
E	55.81	$338,936,000	$31,094,000	$1,768,000	$8,387,000	$170,615,000	$3,788,000	$95,873,000	$27,411,000
F	53.42	$317,709,000	$28,231,000	$1,735,000	$8,237,000	$160,231,000	$3,679,000	$89,578,000	$26,018,000
G	52.23	$320,916,000	$28,695,000	$1,698,000	$8,082,000	$165,765,000	$3,615,000	$91,318,000	$26,753,000
H	50.05	$316,234,000	$27,668,000	$1,662,000	$7,926,000	$159,414,000	$3,520,000	$89,671,000	$26,426,000
I	50.80	$295,705,000	$28,885,000	$1,665,000	$7,935,000	$143,310,000	$3,511,000	$84,266,000	$26,133,000
J	58.92	$355,662,000	$31,644,000	$1,850,000	$8,732,000	$180,394,000	$4,003,000	$101,379,000	$27,666,000
K	49.78	$302,761,000	$28,483,000	$1,654,000	$7,893,000	$147,787,000	$3,513,000	$86,916,000	$26,515,000
L	49.02	$289,764,000	$27,861,000	$1,641,000	$7,837,000	$140,151,000	$3,461,000	$82,715,000	$26,098,000
M	46.99	$276,258,000	$25,544,000	$1,564,000	$7,506,000	$133,476,000	$3,263,000	$79,133,000	$25,772,000
N	47.47	$274,601,000	$25,736,000	$1,585,000	$7,596,000	$132,073,000	$3,311,000	$78,635,000	$25,675,000
N-AB	50.13	$280,181,000	$26,833,000	$1,587,000	$7,608,000	$135,327,000	$3,310,000	$79,682,000	$25,834,000
O	47.60	$290,180,000	$25,300,000	$1,607,000	$7,685,000	$143,843,000	$3,367,000	$82,616,000	$25,762,000
P	50.48	$303,129,000	$26,697,000	$1,663,000	$7,930,000	$150,180,000	$3,519,000	$86,647,000	$26,293,000
Q	48.23	$286,928,000	$25,573,000	$1,607,000	$7,688,000	$141,725,000	$3,356,000	$81,427,000	$25,552,000
R	45.32	$275,390,000	$24,399,000	$1,619,000	$7,737,000	$135,130,000	$3,387,000	$77,829,000	$25,289,000
S	49.05	$297,629,000	$26,535,000	$1,622,000	$7,752,000	$146,317,000	$3,427,000	$85,568,000	$26,407,000
T	47.90	$284,492,000	$25,871,000	$1,609,000	$7,696,000	$137,784,000	$3,390,000	$82,065,000	$26,085,000
U	49.15	$293,356,000	$27,825,000	$1,641,000	$7,832,000	$143,150,000	$3,457,000	$83,328,000	$26,129,000
U ALT 2	49.35	$295,722,000	$27,983,000	$1,641,000	$7,832,000	$144,268,000	$3,465,000	$84,195,000	$26,337,000
V	50.47	$304,288,000	$28,429,000	$1,675,000	$7,981,000	$148,370,000	$3,567,000	$87,567,000	$26,709,000
W	49.44	$295,819,000	$28,033,000	$1,642,000	$7,838,000	$144,207,000	$3,467,000	$84,406,000	$26,256,000
X	50.85	$308,218,000	$29,378,000	$1,677,000	$7,991,000	$148,791,000	$3,577,000	$88,674,000	$27,130,000
Y	48.87	$289,833,000	$26,976,000	$1,640,000	$7,828,000	$140,475,000	$3,465,000	$83,539,000	$25,910,000
Z	49.05	$287,300,000	$27,779,000	$1,622,000	$7,753,000	$137,535,000	$3,424,000	$82,895,000	$26,292,000
AA	49.34	$294,443,000	$27,944,000	$1,624,000	$7,756,000	$142,246,000	$3,433,000	$85,015,000	$26,425,000
AB	49.88	$285,232,000	$27,913,000	$1,624,000	$7,759,000	$137,639,000	$3,399,000	$81,114,000	$25,794,000
AC	48.35	$289,787,000	$27,384,000	$1,630,000	$7,784,000	$140,063,000	$3,442,000	$83,340,000	$26,144,000
AD	48.64	$293,554,000	$27,555,000	$1,631,000	$7,792,000	$142,038,000	$3,457,000	$84,634,000	$26,447,000
AE	51.03	$333,447,000	$29,693,000	$1,676,000	$7,983,000	$168,452,000	$3,582,000	$94,913,000	$27,148,000
AF	50.66	$310,425,000	$29,550,000	$1,683,000	$8,016,000	$152,961,000	$3,581,000	$87,942,000	$26,733,000
AG	50.64	$316,754,000	$29,981,000	$1,658,000	$7,908,000	$155,612,000	$3,539,000	$90,971,000	$27,085,000
AH	56.19	$333,226,000	$29,854,000	$1,784,000	$8,449,000	$167,980,000	$3,817,000	$94,410,000	$26,952,000

Table 2: Transmission and Substation Facilities Total Estimated Costs

					ROW & Land Acquisition		Engineering & Design (Utility)		Engineering & Design (Contract)		Procurement of Material & Equipment		Construction of Facilities (Utility)		Construction of Facilities (Contract)		Other Costs	
Route	Total Length (miles)	Estimated Total Cost	CPSE Cost Subtotal	STEC Cost Subtotal	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC
A	47.77	**$329,450,000**	$212,327,000	$117,123,000	$6,167,000	$19,232,000	$1,100,000	$499,000	$4,615,000	$3,040,000	$125,767,000	$49,193,000	$2,717,000	$637,000	$55,179,000	$33,314,000	$14,782,000	$11,208,000
B	56.67	**$390,539,000**	$260,428,000	$130,111,000	$7,895,000	$22,785,000	$1,309,000	$504,000	$5,500,000	$3,076,000	$159,663,000	$54,234,000	$3,239,000	$668,000	$68,040,000	$36,358,000	$14,782,000	$12,496,000
C	50.7	**$312,318,000**	$189,195,000	$123,123,000	$7,682,000	$20,374,000	$1,179,000	$500,000	$4,946,000	$3,051,000	$103,493,000	$51,571,000	$2,912,000	$656,000	$54,201,000	$35,168,000	$14,782,000	$11,803,000
D	55.95	**$337,726,000**	$210,170,000	$127,556,000	$7,841,000	$22,369,000	$1,297,000	$503,000	$5,450,000	$3,072,000	$117,398,000	$53,674,000	$3,208,000	$695,000	$60,494,000	$35,041,000	$14,782,000	$12,242,000
E	55.81	**$338,936,000**	$207,478,000	$131,458,000	$7,841,000	$23,253,000	$1,263,000	$505,000	$5,306,000	$3,081,000	$115,416,000	$55,199,000	$3,123,000	$665,000	$59,747,000	$36,126,000	$14,782,000	$12,679,000
F	53.42	**$317,709,000**	$200,306,000	$117,403,000	$7,841,000	$20,980,000	$1,235,000	$500,000	$5,185,000	$3,052,000	$110,764,000	$49,467,000	$3,053,000	$626,000	$57,446,000	$32,132,000	$14,782,000	$11,236,000
G	52.23	**$320,916,000**	$196,097,000	$124,819,000	$7,641,000	$20,849,000	$1,197,000	$501,000	$5,026,000	$3,056,000	$108,170,000	$52,590,000	$2,959,000	$656,000	$56,132,000	$35,196,000	$14,782,000	$11,871,000
H	50.05	**$316,234,000**	$196,717,000	$119,517,000	$7,532,000	$20,133,000	$1,162,000	$500,000	$4,877,000	$3,048,000	$108,342,000	$51,572,000	$2,871,000	$648,000	$55,151,000	$34,470,000	$14,782,000	$11,844,000
I	50.8	**$295,705,000**	$177,164,000	$118,561,000	$8,414,000	$20,471,000	$1,164,000	$501,000	$4,883,000	$3,052,000	$93,834,000	$49,476,000	$2,876,000	$635,000	$51,191,000	$33,075,000	$14,782,000	$11,351,000
J	58.92	**$355,662,000**	$221,633,000	$134,029,000	$7,956,000	$23,688,000	$1,344,000	$506,000	$5,647,000	$3,085,000	$124,557,000	$55,837,000	$3,325,000	$678,000	$64,022,000	$37,351,000	$14,782,000	$12,884,000
K	49.78	**$302,761,000**	$180,348,000	$122,413,000	$8,454,000	$20,029,000	$1,154,000	$500,000	$4,845,000	$3,048,000	$96,954,000	$50,833,000	$2,853,000	$660,000	$51,306,000	$35,610,000	$14,782,000	$11,733,000
L	49.02	**$289,764,000**	$171,561,000	$118,209,000	$8,106,000	$19,755,000	$1,142,000	$499,000	$4,792,000	$3,045,000	$90,705,000	$49,446,000	$2,822,000	$638,000	$49,212,000	$33,503,000	$14,782,000	$11,316,000
M	46.99	**$276,258,000**	$161,339,000	$114,919,000	$6,618,000	$18,906,000	$1,066,000	$498,000	$4,470,000	$3,016,000	$85,299,000	$48,177,000	$2,632,000	$631,000	$46,452,000	$32,681,000	$14,782,000	$10,980,000
N	47.47	**$274,601,000**	$163,657,000	$113,944,000	$6,632,000	$18,104,000	$1,087,000	$498,000	$4,558,000	$3,038,000	$84,517,000	$47,556,000	$2,664,000	$627,000	$46,397,000	$32,228,000	$14,782,000	$10,893,000
N-AB	50.12	**$280,181,000**	$166,637,000	$115,544,000	$6,632,000	$20,201,000	$1,087,000	$500,000	$4,558,000	$3,050,000	$87,410,000	$47,917,000	$2,684,000	$626,000	$47,484,000	$32,198,000	$14,782,000	$11,052,000
O	47.6	**$290,180,000**	$175,365,000	$114,815,000	$6,140,000	$19,160,000	$1,108,000	$499,000	$4,646,000	$3,039,000	$96,363,000	$47,780,000	$2,736,000	$631,000	$49,880,000	$32,726,000	$14,782,000	$10,980,000
P	50.48	**$303,129,000**	$182,952,000	$120,177,000	$6,355,000	$20,342,000	$1,163,000	$500,000	$4,879,000	$3,051,000	$100,251,000	$49,929,000	$2,873,000	$646,000	$52,649,000	$34,198,000	$14,782,000	$11,511,000
Q	48.23	**$286,928,000**	$174,228,000	$112,700,000	$6,140,000	$19,433,000	$1,108,000	$499,000	$4,646,000	$3,042,000	$94,949,000	$46,776,000	$2,736,000	$620,000	$49,867,000	$31,560,000	$14,782,000	$10,775,000
R	45.32	**$275,390,000**	$165,345,000	$110,045,000	$6,140,000	$18,259,000	$1,123,000	$497,000	$4,707,000	$3,030,000	$89,148,000	$45,982,000	$2,771,000	$618,000	$46,675,000	$31,154,000	$14,782,000	$10,507,000
S	49.05	**$297,629,000**	$176,302,000	$121,327,000	$6,772,000	$19,763,000	$1,123,000	$500,000	$4,707,000	$3,045,000	$95,831,000	$50,516,000	$2,771,000	$656,000	$50,347,000	$35,222,000	$14,782,000	$11,635,000
T	47.9	**$284,492,000**	$166,410,000	$118,082,000	$6,558,000	$19,313,000	$1,110,000	$499,000	$4,657,000	$3,041,000	$88,758,000	$49,026,000	$2,743,000	$647,000	$47,802,000	$34,253,000	$14,782,000	$11,303,000
U	49.15	**$293,356,000**	$174,878,000	$118,478,000	$7,989,000	$19,836,000	$1,141,000	$500,000	$4,784,000	$3,046,000	$93,550,000	$49,600,000	$2,818,000	$639,000	$49,814,000	$33,514,000	$14,782,000	$11,341,000
U ALT 2	49.35	**$295,722,000**	$175,104,000	$120,618,000	$7,989,000	$19,994,000	$1,141,000	$500,000	$4,784,000	$3,048,000	$93,667,000	$50,602,000	$2,818,000	$647,000	$49,923,000	$34,272,000	$14,782,000	$11,555,000
V	50.47	**$304,288,000**	$180,006,000	$124,283,000	$8,063,000	$20,366,000	$1,175,000	$500,000	$4,930,000	$3,051,000	$96,642,000	$51,728,000	$2,902,000	$665,000	$51,513,000	$36,055,000	$14,782,000	$11,918,000
W	49.44	**$295,819,000**	$176,017,000	$119,802,000	$8,063,000	$19,940,000	$1,142,000	$500,000	$4,791,000	$3,047,000	$94,142,000	$50,065,000	$2,821,000	$646,000	$50,276,000	$34,130,000	$14,782,000	$11,474,000
X	50.85	**$308,218,000**	$179,593,000	$128,625,000	$8,063,000	$21,315,000	$1,175,000	$502,000	$4,930,000	$3,061,000	$96,180,000	$53,611,000	$2,902,000	$675,000	$51,561,000	$37,113,000	$14,782,000	$12,348,000
Y	48.87	**$289,833,000**	$173,526,000	$116,307,000	$8,063,000	$18,913,000	$1,142,000	$498,000	$4,791,000	$3,037,000	$92,331,000	$48,144,000	$2,821,000	$644,000	$49,596,000	$33,943,000	$14,782,000	$11,128,000
Z	49.05	**$287,300,000**	$167,133,000	$120,167,000	$7,984,000	$19,795,000	$1,122,000	$500,000	$4,707,000	$3,046,000	$87,685,000	$49,850,000	$2,772,000	$652,000	$48,081,000	$34,814,000	$14,782,000	$11,519,000
AA	49.34	**$294,443,000**	$172,934,000	$121,509,000	$8,056,000	$19,886,000	$1,124,000	$500,000	$4,718,000	$3,046,000	$91,920,000	$50,326,000	$2,774,000	$658,000	$49,566,000	$35,449,000	$14,782,000	$11,641,000
AB	49.88	**$285,232,000**	$170,188,000	$115,044,000	$7,815,000	$20,098,000	$1,124,000	$500,000	$4,710,000	$3,049,000	$89,951,000	$47,688,000	$2,774,000	$625,000	$49,032,000	$32,062,000	$14,782,000	$11,302,000
AC	48.35	**$289,787,000**	$171,117,000	$118,670,000	$7,862,000	$19,522,000	$1,131,000	$499,000	$4,741,000	$3,043,000	$91,099,000	$49,024,000	$2,792,000	$650,000	$48,770,000	$34,570,000	$14,782,000	$11,362,000
AD	48.64	**$293,554,000**	$171,834,000	$121,720,000	$7,936,000	$19,614,000	$1,133,000	$499,000	$4,748,000	$3,044,000	$91,325,000	$50,719,000	$2,797,000	$660,000	$49,104,000	$35,930,000	$14,782,000	$11,666,000
AE	51.03	**$333,447,000**	$204,642,000	$128,805,000	$8,152,000	$20,541,000	$1,175,000	$501,000	$4,930,000	$3,053,000	$114,270,000	$54,183,000	$2,903,000	$679,000	$57,430,000	$37,483,000	$14,782,000	$12,566,000
AF	50.66	**$310,425,000**	$180,817,000	$124,608,000	$8,155,000	$20,365,000	$1,183,000	$500,000	$4,965,000	$3,061,000	$100,237,000	$53,714,000	$2,923,000	$658,000	$52,573,000	$35,370,000	$14,782,000	$11,965,000
AG	50.64	**$316,754,000**	$188,584,000	$128,170,000	$9,596,000	$20,383,000	$1,158,000	$500,000	$4,656,000	$3,052,000	$101,930,000	$53,682,000	$2,859,000	$680,000	$53,401,000	$37,070,000	$14,782,000	$12,303,000
AH	56.19	**$333,226,000**	$206,398,000	$126,828,000	$7,236,000	$22,618,000	$1,280,000	$504,000	$5,375,000	$3,074,000	$114,910,000	$53,050,000	$3,165,000	$652,000	$59,650,000	$34,760,000	$14,782,000	$12,170,000

**Estimated Costs include a 10% Contingency for unknown project costs not evident at the time these estimates were created.

Table 3: Transmission and Substation Facilities Total Estimated Costs (Sorted Least to Most Expensive)

					ROW & Land Acquisition		Engineering & Design (Utility)		Engineering & Design (Contract)		Procurement of Material & Equipment		Construction of Facilities (Utility)		Construction of Facilities (Contract)		Other Costs	
Route	Total Length (miles)	Estimated Total Cost	CPSE Cost Subtotal	STEC Cost Subtotal	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC	**CPSE	STEC
N	47.47	**$274,601,000**	$160,657,000	$113,944,000	$6,632,000	$19,104,000	$1,087,000	$498,000	$4,558,000	$3,038,000	$84,517,000	$47,556,000	$2,664,000	$627,000	$46,397,000	$32,228,000	$14,782,000	$10,693,000
R	45.32	**$275,390,000**	$165,345,000	$110,045,000	$6,140,000	$18,259,000	$1,122,000	$497,000	$4,707,000	$3,030,000	$89,148,000	$45,982,000	$2,771,000	$616,000	$46,675,000	$31,154,000	$14,782,000	$10,507,000
M	46.99	**$276,258,000**	$161,339,000	$114,919,000	$6,638,000	$18,806,000	$1,066,000	$498,000	$4,470,000	$3,036,000	$85,299,000	$48,177,000	$2,632,000	$631,000	$46,452,000	$32,681,000	$14,782,000	$10,990,000
N-AB	50.12	**$280,181,000**	$164,637,000	$115,544,000	$6,632,000	$20,201,000	$1,087,000	$500,000	$4,558,000	$3,050,000	$87,410,000	$47,917,000	$2,684,000	$626,000	$47,484,000	$32,196,000	$14,782,000	$11,052,000
T	47.9	**$284,492,000**	$166,410,000	$118,082,000	$6,558,000	$19,313,000	$1,110,000	$499,000	$4,657,000	$3,041,000	$88,758,000	$49,026,000	$2,743,000	$647,000	$47,802,000	$34,253,000	$14,782,000	$11,303,000
AB	49.88	**$285,232,000**	$170,188,000	$115,044,000	$7,815,000	$20,098,000	$1,134,000	$500,000	$4,710,000	$3,049,000	$89,951,000	$47,668,000	$2,774,000	$625,000	$48,032,000	$32,082,000	$14,782,000	$11,002,000
Q	48.23	**$286,928,000**	$174,228,000	$112,700,000	$6,140,000	$19,433,000	$1,108,000	$499,000	$4,646,000	$3,043,000	$94,949,000	$46,776,000	$2,736,000	$620,000	$49,867,000	$31,560,000	$14,782,000	$10,775,000
Z	49.05	**$287,300,000**	$167,133,000	$120,167,000	$7,964,000	$19,795,000	$1,122,000	$500,000	$4,707,000	$3,046,000	$87,685,000	$49,850,000	$2,772,000	$652,000	$48,081,000	$34,814,000	$14,782,000	$11,518,000
L	49.02	**$289,764,000**	$171,561,000	$118,203,000	$8,106,000	$19,755,000	$1,142,000	$499,000	$4,792,000	$3,045,000	$90,705,000	$49,446,000	$2,822,000	$639,000	$49,212,000	$33,503,000	$14,782,000	$11,316,000
AC	48.35	**$289,787,000**	$171,117,000	$118,670,000	$7,862,000	$19,522,000	$1,131,000	$498,000	$4,741,000	$3,043,000	$91,039,000	$49,024,000	$2,782,000	$650,000	$48,770,000	$34,570,000	$14,782,000	$11,362,000
Y	48.87	**$289,833,000**	$173,526,000	$116,307,000	$8,063,000	$18,913,000	$1,142,000	$498,000	$4,791,000	$3,037,000	$92,331,000	$48,144,000	$2,821,000	$644,000	$49,596,000	$33,943,000	$14,782,000	$11,128,000
O	47.6	**$290,180,000**	$175,365,000	$114,815,000	$6,140,000	$19,160,000	$1,108,000	$499,000	$4,646,000	$3,039,000	$96,363,000	$47,780,000	$2,736,000	$631,000	$49,690,000	$32,726,000	$14,782,000	$10,983,000
U	49.15	**$293,156,000**	$174,878,000	$118,478,000	$7,989,000	$19,836,000	$1,141,000	$500,000	$4,784,000	$3,046,000	$93,550,000	$49,600,000	$2,818,000	$639,000	$49,814,000	$33,514,000	$14,782,000	$11,343,000
AD	48.64	**$293,554,000**	$171,834,000	$121,730,000	$7,936,000	$19,619,000	$1,132,000	$499,000	$4,748,000	$3,044,000	$91,325,000	$50,713,000	$2,797,000	$660,000	$49,104,000	$35,530,000	$14,782,000	$11,665,000
AA	49.34	**$294,443,000**	$172,934,000	$121,509,000	$8,058,000	$19,886,000	$1,124,000	$500,000	$4,710,000	$3,046,000	$91,870,000	$50,326,000	$2,774,000	$658,000	$49,566,000	$35,449,000	$14,782,000	$11,643,000
I	50.8	**$295,705,000**	$177,144,000	$118,561,000	$8,414,000	$20,471,000	$1,164,000	$501,000	$4,883,000	$3,052,000	$93,834,000	$49,476,000	$2,876,000	$635,000	$51,191,000	$33,075,000	$14,782,000	$11,351,000
U ALT 2	49.35	**$295,722,000**	$175,104,000	$120,618,000	$7,989,000	$19,894,000	$1,141,000	$500,000	$4,784,000	$3,048,000	$93,667,000	$50,602,000	$2,818,000	$647,000	$49,923,000	$34,272,000	$14,782,000	$11,555,000
W	49.44	**$295,819,000**	$176,017,000	$119,802,000	$8,063,000	$19,940,000	$1,142,000	$500,000	$4,791,000	$3,047,000	$94,142,000	$50,065,000	$2,821,000	$646,000	$50,276,000	$34,130,000	$14,782,000	$11,474,000
S	49.05	**$297,629,000**	$176,302,000	$121,327,000	$6,772,000	$19,763,000	$1,122,000	$500,000	$4,707,000	$3,045,000	$95,801,000	$50,516,000	$2,771,000	$656,000	$50,347,000	$35,222,000	$14,782,000	$11,675,000
K	49.78	**$302,761,000**	$180,348,000	$122,413,000	$8,454,000	$20,039,000	$1,154,000	$500,000	$4,845,000	$3,048,000	$96,954,000	$50,833,000	$2,853,000	$660,000	$51,306,000	$35,610,000	$14,782,000	$11,733,000
P	50.48	**$303,129,000**	$182,952,000	$120,177,000	$6,355,000	$20,342,000	$1,163,000	$500,000	$4,879,000	$3,051,000	$100,291,000	$49,929,000	$2,873,000	$646,000	$53,649,000	$34,196,000	$14,782,000	$11,511,000
V	50.47	**$304,289,000**	$180,006,000	$124,283,000	$8,063,000	$20,366,000	$1,175,000	$500,000	$4,930,000	$3,051,000	$96,642,000	$51,728,000	$2,902,000	$665,000	$51,513,000	$36,055,000	$14,782,000	$11,918,000
X	50.85	**$308,218,000**	$179,593,000	$128,625,000	$8,063,000	$21,315,000	$1,175,000	$502,000	$4,930,000	$3,061,000	$96,180,000	$53,611,000	$2,902,000	$675,000	$51,561,000	$37,113,000	$14,782,000	$12,348,000
AF	50.66	**$310,425,000**	$185,817,000	$124,608,000	$8,155,000	$20,365,000	$1,183,000	$500,000	$4,965,000	$3,051,000	$100,237,000	$52,714,000	$2,923,000	$658,000	$52,572,000	$35,370,000	$14,782,000	$11,950,000
C	50.7	**$312,318,000**	$189,195,000	$123,123,000	$7,682,000	$20,374,000	$1,179,000	$500,000	$4,946,000	$3,051,000	$103,493,000	$51,571,000	$2,912,000	$656,000	$54,201,000	$35,168,000	$14,782,000	$11,803,000
H	50.05	**$316,234,000**	$194,717,000	$121,517,000	$7,532,000	$20,133,000	$1,162,000	$500,000	$4,877,000	$3,049,000	$108,342,000	$51,072,000	$2,871,000	$649,000	$55,151,000	$34,470,000	$14,782,000	$11,644,000
AB	50.64	**$316,754,000**	$188,584,000	$128,170,000	$8,598,000	$20,383,000	$1,158,000	$500,000	$4,856,000	$3,052,000	$101,930,000	$53,682,000	$2,859,000	$680,000	$53,401,000	$37,570,000	$14,782,000	$12,303,000
P	53.42	**$317,709,000**	$200,306,000	$117,403,000	$7,841,000	$20,390,000	$1,235,000	$500,000	$5,185,000	$3,052,000	$110,764,000	$48,467,000	$3,053,000	$626,000	$57,446,000	$32,132,000	$14,782,000	$11,236,000
G	52.23	**$320,916,000**	$196,097,000	$124,819,000	$7,841,000	$20,849,000	$1,197,000	$501,000	$5,026,000	$3,056,000	$108,170,000	$52,590,000	$2,959,000	$656,000	$56,122,000	$35,196,000	$14,782,000	$11,971,000
A	47.77	**$329,450,000**	$212,327,000	$117,123,000	$8,167,000	$19,232,000	$1,100,000	$499,000	$4,615,000	$3,040,000	$125,767,000	$49,193,000	$2,717,000	$637,000	$55,179,000	$33,314,000	$14,782,000	$11,208,000
AH	56.19	**$333,226,000**	$206,398,000	$126,828,000	$7,236,000	$22,618,000	$1,280,000	$504,000	$5,375,000	$3,074,000	$114,910,000	$53,050,000	$3,165,000	$652,000	$59,665,000	$34,760,000	$14,782,000	$12,170,000
AE	51.03	**$333,447,000**	$204,642,000	$128,805,000	$8,152,000	$20,541,000	$1,175,000	$501,000	$4,930,000	$3,063,000	$114,235,000	$54,182,000	$2,903,000	$678,000	$57,433,000	$37,483,000	$14,782,000	$12,566,000
D	55.96	**$337,726,000**	$210,170,000	$127,556,000	$7,841,000	$22,369,000	$1,297,000	$503,000	$5,450,000	$3,072,000	$117,098,000	$53,674,000	$3,208,000	$655,000	$60,494,000	$35,041,000	$14,782,000	$12,242,000
E	55.81	**$338,936,000**	$207,478,000	$131,458,000	$7,841,000	$23,253,000	$1,263,000	$505,000	$5,306,000	$3,081,000	$115,416,000	$55,198,000	$3,123,000	$665,000	$58,747,000	$36,126,000	$14,782,000	$12,629,000
I	58.92	**$355,662,000**	$221,633,000	$134,029,000	$7,956,000	$23,688,000	$1,344,000	$506,000	$5,647,000	$3,085,000	$124,557,000	$55,837,000	$3,325,000	$678,000	$64,022,000	$37,351,000	$14,782,000	$12,884,000
B	56.67	**$390,539,000**	$260,428,000	$130,111,000	$7,895,000	$22,785,000	$1,309,000	$504,000	$5,500,000	$3,076,000	$159,663,000	$54,224,000	$3,239,000	$668,000	$68,040,000	$36,358,000	$14,782,000	$12,496,000

**Estimated Costs include a 20% Contingency for unknown project costs not evident at the time these estimates were created.

Table 4: Transmission Facilities Total Estimated Costs

					ROW & Land Acquisition		Engineering & Design (Utility)		Engineering & Design (Contract)		Procurement of Material & Equipment		Construction of Facilities (Utility)		Construction of Facilities (Contract)		Other Costs	
Route	Total Length (miles)	Estimated Total Cost	CPSE Cost Subtotal	STEC Cost Subtotal	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC
A	47.77	**$301,665,000**	$189,542,000	$112,123,000	$7,424,000	$19,232,000	$940,000	$418,000	$3,995,000	$2,782,000	$111,833,000	$46,171,000	$2,350,000	$321,000	$49,662,000	$32,088,000	$13,338,000	$11,111,000
B	56.67	**$361,087,000**	$235,976,000	$125,111,000	$7,177,000	$22,785,000	$1,130,000	$433,000	$4,800,000	$2,818,000	$142,648,000	$51,202,000	$2,824,000	$352,000	$61,354,000	$35,132,000	$16,043,000	$12,599,000
C	50.7	**$288,612,000**	$170,489,000	$118,123,000	$6,983,000	$20,374,000	$1,011,000	$418,000	$4,296,000	$2,793,000	$91,584,000	$48,549,000	$2,527,000	$340,000	$48,773,000	$33,942,000	$15,315,000	$11,706,000
D	55.96	**$313,604,000**	$191,048,000	$122,556,000	$7,128,000	$22,369,000	$1,119,000	$422,000	$4,754,000	$2,814,000	$103,962,000	$50,663,000	$2,796,000	$339,000	$54,494,000	$33,815,000	$16,805,000	$12,149,000
E	55.81	**$314,631,000**	$188,171,000	$126,458,000	$7,128,000	$23,253,000	$1,088,000	$424,000	$4,623,000	$2,823,000	$102,423,000	$52,177,000	$2,719,000	$348,000	$53,815,000	$34,800,000	$16,377,000	$12,533,000
F	53.42	**$293,699,000**	$181,296,000	$112,403,000	$7,128,000	$20,390,000	$1,062,000	$418,000	$4,513,000	$2,794,000	$98,194,000	$46,445,000	$2,655,000	$310,000	$51,733,000	$30,806,000	$16,031,000	$11,138,000
G	52.23	**$296,820,000**	$177,001,000	$119,819,000	$7,128,000	$20,849,000	$1,028,000	$420,000	$4,369,000	$2,798,000	$95,836,000	$49,568,000	$2,570,000	$340,000	$50,520,000	$33,970,000	$15,550,000	$11,874,000
H	50.05	**$291,819,000**	$175,302,000	$116,517,000	$6,847,000	$20,133,000	$996,000	$418,000	$4,233,000	$2,791,000	$95,992,000	$48,050,000	$2,490,000	$333,000	$49,637,000	$33,344,000	$15,107,000	$11,547,000
I	50.8	**$270,648,000**	$157,067,000	$113,561,000	$7,648,000	$20,471,000	$998,000	$420,000	$4,239,000	$2,794,000	$82,803,000	$46,454,000	$2,494,000	$319,000	$46,037,000	$31,849,000	$12,867,000	$11,254,000
J	58.92	**$330,911,000**	$201,882,000	$129,029,000	$7,733,000	$23,688,000	$1,161,000	$425,000	$4,933,000	$2,827,000	$119,785,000	$52,819,000	$2,902,000	$362,000	$57,701,000	$36,125,000	$17,220,000	$12,787,000
K	49.78	**$279,270,000**	$161,857,000	$117,413,000	$7,685,000	$20,039,000	$989,000	$418,000	$4,204,000	$2,790,000	$85,640,000	$47,811,000	$2,473,000	$344,000	$46,141,000	$34,364,000	$14,725,000	$11,636,000
L	49.02	**$266,241,000**	$153,038,000	$113,203,000	$7,369,000	$19,755,000	$978,000	$418,000	$4,156,000	$2,787,000	$79,959,000	$46,424,000	$2,445,000	$323,000	$44,238,000	$32,277,000	$13,893,000	$11,219,000
M	46.99	**$252,430,000**	$142,511,000	$109,919,000	$6,034,000	$18,806,000	$909,000	$417,000	$3,863,000	$2,778,000	$75,044,000	$45,155,000	$2,272,000	$315,000	$41,729,000	$31,455,000	$12,860,000	$10,893,000
N	47.47	**$251,333,000**	$142,389,000	$108,944,000	$6,029,000	$19,104,000	$928,000	$417,000	$3,943,000	$2,780,000	$74,333,000	$44,534,000	$2,320,000	$311,000	$41,679,000	$31,202,000	$13,157,000	$10,796,000
N-AB	50.12	**$257,578,039**	$147,094,039	$110,544,000	$6,029,000	$20,201,000	$928,000	$418,000	$3,943,000	$2,792,000	$76,963,000	$44,895,000	$2,320,000	$310,000	$42,667,000	$31,972,000	$14,184,039	$10,955,000
O	47.6	**$266,868,000**	$157,053,000	$109,815,000	$6,581,000	$19,160,000	$947,000	$418,000	$4,033,000	$2,781,000	$84,830,000	$44,758,000	$2,367,000	$315,000	$44,854,000	$31,500,000	$14,451,000	$10,883,000
P	50.48	**$279,818,000**	$164,641,000	$115,177,000	$6,777,000	$20,342,000	$997,000	$418,000	$4,235,000	$2,793,000	$88,637,000	$46,907,000	$2,491,000	$330,000	$47,362,000	$33,972,000	$15,142,000	$11,414,000
Q	48.23	**$263,719,000**	$156,019,000	$107,700,000	$6,581,000	$19,433,000	$947,000	$418,000	$4,033,000	$2,784,000	$83,817,000	$43,754,000	$2,367,000	$304,000	$44,833,000	$30,834,000	$14,451,000	$10,673,000
R	45.32	**$252,124,000**	$147,079,000	$105,045,000	$5,581,000	$18,259,000	$960,000	$416,000	$4,079,000	$2,772,000	$78,543,000	$42,360,000	$2,399,000	$300,000	$41,931,000	$29,928,000	$13,586,000	$10,410,000
S	49.05	**$274,415,000**	$158,088,000	$116,327,000	$6,156,000	$19,763,000	$960,000	$418,000	$4,079,000	$2,787,000	$84,591,000	$47,494,000	$2,399,000	$340,000	$45,270,000	$33,996,000	$14,633,000	$11,528,000
T	47.9	**$260,764,000**	$147,682,000	$113,082,000	$5,961,000	$19,313,000	$949,000	$418,000	$4,033,000	$2,763,000	$78,189,000	$46,004,000	$2,373,000	$331,000	$42,966,000	$33,027,000	$13,221,000	$11,206,000
U	49.15	**$270,184,000**	$156,706,000	$113,478,000	$7,362,000	$19,836,000	$977,000	$418,000	$4,149,000	$2,788,000	$82,545,000	$46,578,000	$2,441,000	$323,000	$44,785,000	$32,288,000	$14,547,000	$11,246,000
U ALT 2	49.35	**$272,529,000**	$156,911,000	$115,618,000	$7,362,000	$19,894,000	$977,000	$418,000	$4,149,000	$2,790,000	$82,951,000	$47,580,000	$2,441,000	$331,000	$44,884,000	$33,046,000	$14,547,000	$11,458,000
V	50.47	**$280,640,000**	$161,357,000	$119,283,000	$7,330,000	$20,366,000	$1,008,000	$418,000	$4,281,000	$2,793,000	$85,356,000	$48,706,000	$2,518,000	$348,000	$46,328,000	$34,829,000	$14,535,000	$11,821,000
W	49.44	**$272,307,000**	$157,506,000	$114,802,000	$7,330,000	$19,940,000	$978,000	$418,000	$4,155,000	$2,789,000	$83,083,000	$47,043,000	$2,444,000	$330,000	$45,206,000	$32,804,000	$14,310,000	$11,377,000
X	50.85	**$284,606,000**	$160,981,000	$123,625,000	$7,330,000	$21,315,000	$1,008,000	$421,000	$4,281,000	$2,803,000	$84,936,000	$50,589,000	$2,518,000	$359,000	$46,378,000	$35,887,000	$14,535,000	$12,251,000
Y	48.87	**$266,548,000**	$155,241,000	$111,307,000	$7,330,000	$18,913,000	$978,000	$417,000	$4,155,000	$2,779,000	$81,437,000	$45,122,000	$2,444,000	$328,000	$44,587,000	$32,717,000	$14,310,000	$11,031,000
Z	49.05	**$264,840,000**	$149,673,000	$115,167,000	$7,258,000	$19,795,000	$960,000	$418,000	$4,079,000	$2,788,000	$77,213,000	$46,828,000	$2,400,000	$336,000	$43,210,000	$33,588,000	$14,553,000	$11,413,000
AA	49.34	**$271,576,000**	$155,067,000	$116,509,000	$7,325,000	$19,886,000	$961,000	$418,000	$4,081,000	$2,788,000	$81,963,000	$47,354,000	$2,401,000	$343,000	$44,560,000	$34,273,000	$14,676,000	$11,546,000
AB	49.88	**$260,363,000**	$150,319,000	$110,044,000	$7,104,000	$20,098,000	$961,000	$418,000	$4,081,000	$2,791,000	$79,273,000	$44,666,000	$2,401,000	$309,000	$44,074,000	$30,856,000	$13,425,000	$10,905,000
AC	48.35	**$265,885,000**	$152,215,000	$113,670,000	$7,147,000	$19,522,000	$968,000	$418,000	$4,110,000	$2,785,000	$80,262,000	$46,002,000	$2,418,000	$334,000	$43,836,000	$33,344,000	$13,474,000	$11,266,000
AD	48.64	**$269,350,000**	$152,620,000	$116,730,000	$7,214,000	$19,618,000	$969,000	$418,000	$4,116,000	$2,786,000	$80,522,000	$47,691,000	$2,422,000	$344,000	$44,140,000	$34,304,000	$13,237,000	$11,568,000
AE	51.03	**$308,367,000**	$184,562,000	$123,805,000	$8,320,000	$20,541,000	$1,008,000	$420,000	$4,281,000	$2,795,000	$101,381,000	$51,160,000	$2,519,000	$363,000	$51,709,000	$36,257,000	$15,344,000	$12,269,000
AF	50.66	**$285,806,000**	$166,198,000	$119,608,000	$8,322,000	$20,365,000	$1,015,000	$418,000	$4,313,000	$2,793,000	$88,624,000	$49,692,000	$2,537,000	$342,000	$47,293,000	$34,144,000	$14,095,000	$11,853,000
AG	50.64	**$292,915,000**	$169,745,000	$123,170,000	$8,725,000	$20,383,000	$992,000	$418,000	$4,214,000	$2,794,000	$90,163,000	$50,660,000	$2,479,000	$364,000	$48,046,000	$36,344,000	$15,126,000	$12,206,000
AH	56.19	**$308,118,000**	$186,290,000	$121,828,000	$6,578,000	$22,618,000	$1,108,000	$423,000	$4,686,000	$2,816,000	$101,963,000	$50,038,000	$2,757,000	$336,000	$53,727,000	$33,534,000	$15,476,000	$12,073,000

Table 5: Substation Facilities Total Estimated Costs

		ROW & Land Acquisition		Engineering & Design (Utility)		Engineering & Design (Contract)		Procurement of Material & Equipment		Construction of Facilities (Utility)		Construction of Facilities (Contract)		Other Costs	
Substation Site	Estimated Total Substation Cost		STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC	CPSE	STEC
Howard 345kV Sub (CPS Energy)	**$3,480,000**	$0		$60,000		$200,000		$2,500,000		$120,000		$500,000		$100,000	
San Miguel 345kV Sub (STEC)	**$5,000,000**		$0		$81,000		$258,000		$3,022,000		$136,000		$1,226,000		$97,000

The following files are not convertible:

Exhibit SDL-1R - Attachment 2 Revised - Howard to San Miguel Cost Estimate.xlsx

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

Contact centralrecords@puc.texas.gov if you have any questions.