

**PUC DOCKET NO. 38743
SOAH DOCKET NO. 473-11-0945**

**APPLICATION OF ELECTRIC
TRANSMISSION TEXAS, LLC TO
AMEND ITS CERTIFICATE OF
CONVENIENCE AND NECESSITY FOR
THE TESLA TO EDITH CLARKE TO
CLEAR CROSSING TO WEST
SHACKELFORD 345-KV CREZ
TRANSMISSION LINE IN CHILDRESS,
COTTLE, HARDEMAN, FOARD,
KNOX, HASKELL, JONES, AND
SHACKELFORD COUNTIES**

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**PUBLIC UTILITY COMMISSION
OF TEXAS**

ORDER

This Order addresses the application of Electric Transmission Texas, LLC (ETT) to amend its certificate of convenience and necessity to include the Tesla-to-Edith Clarke-to-Clear Crossing-to-West Shackelford 345-kV CREZ transmission line in Childress, Cottle, Hardeman, Foard, Knox, Haskell, Jones, and Shackelford counties. This project consists of three segments. The Tesla-to-Edith Clarke (TE) segment begins at ETT's new Tesla switching station in southeast Childress County and extends to ETT's new Edith Clarke switching station in central Foard County. The Edith Clarke-to-Clear Crossing (EC) segment extends from the Edith Clarke switching station to ETT's new Clear Crossing switching station in southeast Haskell County. The Clear Crossing-to-West Shackelford (CW) segment extends from the Clear Crossing switching station to Lone Star Transmission's new West Shackelford station in southwest Shackelford County.

On March 15, 2011, the State Office of Administrative Hearings (SOAH) administrative law judge (ALJ) issued a proposal for decision in which the ALJ recommended granting ETT's application. For the TE and the EC segments, the ALJ found that the unanimous-settlement routes adequately comport with PURA and Commission CCN criteria and recommended selection of stipulated route TE12 and stipulated route EC12A, respectively. For the CW segment, the ALJ recommended that the Commission adopt route CW5, which is ETT's

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preferred route for this segment, because the ALJ concluded that route CW5 best satisfies the Commission's routing criteria.¹ As discussed in this Order, the Commission adopts in part and modifies in part the proposal for decision issued by the ALJ in this proceeding, including finding of facts and conclusions of law. Specifically, the Commission adopts the ALJ's recommendation to select the stipulated routes for the TE and EC segments, but rejects the ALJ's recommendation on the CW segment. The Commission concludes that route CW6 should be constructed for the CW segment instead of route CW5 as recommended by the ALJ.

While these two routes are comparable on many criteria, route CW6 eliminates or minimizes impacts in several areas. Route CW6 eliminates any impact that this project might have on the Cedar Ridge reservoir project currently under development by the city of Abilene. This public project will provide an important future water supply for the area. The suitability of this area for a reservoir has been recognized in statute,² the 2006 and 2011 Brazos G Regional Water Plans, and the 2007 State Water Plan. Further, engineering plans and studies for the planned dam location and corresponding reservoir have been ongoing since 2009 and the city of Abilene has authorized work on this project. While the Commission has declined to consider other types of future uses in other cases, it concludes that it is appropriate in this case to consider impacts to this well-documented future public-water-supply project. Additionally, the Texas Parks and Wildlife Department (TPWD) stated in its December 17, 2010 letter that routes using links C7, C8, and C9 were eliminated from that agency's consideration as routes with the least amount of environmental impact because the presence of a large transmission line near the proposed Cedar Ridge Reservoir increases the risk of birds colliding with the lines.³ Also, route CW6 minimizes the impact that this project will have on several landowner-intervenors on the southern links of this segment that have already been impacted by the routing of other CREZ 345-kV transmission projects. In addition, route CW6 will cross the Clear Fork of the Brazos River only once, whereas route CW5 crosses this same waterway three times, as noted by TPWD.⁴

¹ Proposal for Decision at 34.

² Tex. Water Code Ann. § 16.051(g-1) (Vernon 2009).

³ Direct testimony of Brian Almon, Commission Staff Ex. 1 at attachment BA-3, December 17, 2010 letter from Julie C. Wicker, Texas Parks and Wildlife Department.

⁴ *Id.*

To reflect the Commission's selection of route CW6 for the CW segment, the Commission deletes findings of fact 169 and 171; modifies findings of fact 33, 167, 168, 170, 172, 173, 174, 175, 177, 178, 179, 181, 182, 183, 185, 188, 189, 190, 191, 192, 193, 197, 201 and 204, and adds findings of fact 193A and 193B.

The Commission adopts the following findings of fact and conclusions of law:

I. Findings of Fact

Procedural History and General Project Description

1. Electric Transmission Texas, LLC (ETT) is an investor-owned electric utility providing service under Certificates of Convenience and Necessity (CCN) Nos. 30193 and 30194.
2. ETT was chosen by the Commission to construct the Tesla-to-PanOakMid double-circuit 345-kV competitive-renewable-energy-zone (CREZ) transmission line and the PanOakMid-to-Central C double-circuit 345-kV CREZ transmission line in *Commission Staff's Petition for Selection of Entities Responsible for Transmission Improvements Necessary to Deliver Renewable Energy from Competitive Renewable Energy Zones*, Docket No. 35665 (Mar. 30, 2009) and *Remand of Docket No. 35665 (Commission Staff's Petition for Selection of Entities Responsible for Transmission Improvements Necessary to Deliver Renewable Energy from Competitive Renewable-Energy Zones*, Docket No. 37902 (Mar. 30, 2010).
3. The Electric Reliability Council of Texas (ERCOT), in its CREZ transmission optimization (CTO) study, originally classified the Tesla-to-PanOakMid-to-Central C lines as two line segments. ERCOT subsequently endorsed the construction of Clear Crossing switching station between the PanOakMid and Central C stations, dividing the PanOakMid-to-Central C line into two segments. The Commission, in *Proceeding to Sequence Certificate of Convenience and Necessity Applications for the Subsequent Projects for the Competitive Renewable Energy Zones (CREZ)*, Docket No. 36802 (Apr. 5, 2010), required ETT to file the Tesla-to-PanOakMid-to-Clear Crossing-to-Central C project segments in a single application.
4. The PanOakMid Station has been renamed the Edith Clarke switching station and the Central C station has been renamed the West Shackelford Station.

5. On October 20, 2010, ETT filed its application to amend its CCN to construct a double-circuit, 345-kilovolt (kV) CREZ electric transmission line from the Tesla switching station (to be constructed by ETT in southeast Childress County) to the Edith Clarke switching station (to be constructed by ETT in central Foard County) to the Clear Crossing switching station (to be constructed by ETT in southeast Haskell County) to the West Shackelford station (to be constructed by Lone Star Transmission, LLC in southwest Shackelford County). P.U.C. Docket No. 38743 was assigned to the proceeding.
6. The project consists of three separate segments, the Tesla-to-Edith Clarke (TE) segment, the Edith Clarke-to-Clear Crossing (EC) segment, and the Clear Crossing-to-West Shackelford (CW) segment. Each segment's proposed routes are independent of, and share no links with, proposed routes in the other segments.
7. On October 20, 2010, ETT mailed written notice by first class mail of the filing of the application, including a map, to each landowner of record, as determined by review of the current county tax rolls, who would be directly affected, as defined by P.U.C. PROC. R. 22.52(a)(3), if the application were granted.
8. On October 20, 2010, ETT mailed written notice by first class mail of the filing of the application, including a map, to all electric utilities within five miles of the project, including AEP Texas North Company; Oncor Electric Delivery Company, LLC; Xcel Energy/Southwestern Public Service Company (SPS); Cross Texas Transmission, LLC; Lone Star Transmission; Big Country Electric Cooperative, Inc.; Harmon Electric Association; South Plains Electric Cooperative, Inc.; Southwest Rural Electric Association, Inc.; Taylor Electric Cooperative, Inc.; and Tri-County Electric Cooperative, Inc., all of which are utilities providing utility service within five miles of the requested facilities.
9. On October 20, 2010, ETT mailed written notice by first class mail of the filing of the application, including a map, to public officials in all municipalities located within five miles of the Project, including the municipalities of Childress, Quanah, Crowell, Benjamin, Knox City, Munday, Goree, O'Brien, Rochester, Weinert, Rule, Haskell, Stamford, Lueders, and Abilene, Texas.

10. On October 20, 2010, ETT mailed written notice by first class mail of the filing of the application, including a map, to county officials in Childress, Cottle, Hardeman, Foard, Knox, Haskell, Jones, and Shackelford counties.
11. On October 22, 2010, ETT filed an affidavit attesting to delivery of a copy of the Environmental Assessment and Alternative Route Analysis (EA) to the Texas Parks and Wildlife Department (TPWD).
12. On October 25, 2010, the Commission referred this matter to the State Office of Administrative Hearings (SOAH). The order of referral listed a number of issues to be addressed and issues not to be addressed in this docket.
13. ETT caused notice of the application to be published in the *Childress Index* and the *Paducah Post* on October 26, 2010; in the *Western Observer* on October 27, 2010; in the *Foard County News*, the *Munday Courier*, the *Haskell Free Press*, and the *Albany News* on October 28, 2010; and in the *Quanah Tribune-Chief* on October 29, 2010. These are newspapers having general circulation in Childress, Cottle, Hardeman, Foard, Knox, Haskell, Jones, and Shackelford counties, Texas.
14. The hearing on the merits convened on January 18, 2011, and concluded on January 20, 2011. The record closed on February 11, 2011, with the filing of reply briefs.

Project Description

15. The project in this proceeding is a proposed double circuit 345-kV CREZ transmission line within Childress, Cottle, Hardeman, Foard, Knox, Haskell, Jones, and Shackelford Counties as shown on the maps filed with the application.
16. The right-of-way (ROW) for the project will be 150 feet wide. The transmission line will be constructed on double-circuit single-pole steel structures using 2-1590 ACSS conductors.

Application

17. ETT's application to amend its CCN is adequate. The application presented an adequate number of reasonably differentiated alternative routes to conduct a proper evaluation.

18. ETT submitted its CCN application in compliance with the orders in Docket Nos. 37902 and 36802 assigning it responsibility for the project.

Proposed Modifications to the Scope of Work Contained in the CTO Study

19. There were four modifications to the scope of work contained in the ERCOT CTO study for the project.
20. First, the ERCOT CTO study specified that only one of the Panhandle A-C circuits would terminate into Tesla switching station and the other circuit would bypass Tesla and continue to Edith Clarke (PanOakMid). ERCOT subsequently determined that the overall capacity of the Panhandle portion of the CREZ system would be increased if all of the circuits terminate into the Tesla switching station, and found that the change was a cost-effective modification to the CREZ transmission plan and consistent with the intent of the CTO study.
21. Second, ERCOT recommended that a switching station be constructed at Clear Crossing and that the transmission line from the Edith Clarke switching station to the West Shackelford station be routed through this location. ERCOT found that the construction of the Clear Crossing switching station was cost effective and consistent with the intent of the CTO Study.
22. Third, the CTO Study recommended 1433 ACSS conductor for the project but recognized that transmission service providers could modify the type of conductor as long as the adjustments do not adversely affect the performance of the plan. ETT proposed to use 2-1590 ACSS as the conductor. The 2-1590 ACSS conductor meets or exceeds the capability of the CTO Study conductor. ERCOT endorsed the use of 2-1590 ACSS conductor for the project.
23. A final deviation from the CTO study is the estimated length of the lines. Due to the final location of the substations and the differences between the straight-line estimates used in the CTO study and the actual route analysis that takes the Commission's routing criteria into consideration, the lengths of the proposed line segments in this proceeding appropriately vary from the lengths set out in the CTO study.

Need for the Proposed Transmission Line

24. As a CREZ transmission project, the application is exempt from the requirement to consider need.

Goal for Renewable Energy

25. To fulfill the renewable energy goals established by the legislature in PURA § 39.904(a), the Commission adopted, in Docket No. 33672, a transmission plan to deliver renewable energy to market.
26. In Docket No. 33672, the Commission determined that the transmission facilities identified in its final order, including the Tesla-to-Edith Clarke-to-Clear Crossing-to-West Shackelford transmission facilities, were necessary to deliver renewable energy generated in the CREZ to electric customers.

Alternatives to the Project

27. Because the proposed transmission-line project was specifically identified in the CTO study and in the Commission's orders in Docket Nos. 33672, 35665 and 37902 as a CREZ project, no alternatives to the project have been considered.

Engineering Constraints

28. The design of the project will meet or exceed the requirements for construction as defined in the National Electric Safety Code (NESC). However, the NESC is a safety code and not a design guide, so additional design criteria will be used, including the American Society of Civil Engineers standards, ETT and American Electric Power Service Corporation (AEPSC) standard practices, and such practices as required by federal, state, and local governments and agencies.
29. No engineering constraints have been identified with respect to the project.

Coastal Management Program

30. The project is not located within the coastal management program boundary.

TPWD's Written Comments and Recommendations

31. TPWD provided recommendations and comments on the proposed line in this proceeding in a letter dated December 17, 2010.

32. The letter primarily addressed mitigation measures to reduce impacts to wildlife and wildlife habitat during construction of the proposed transmission line.
33. Of the routes evaluated by PBS&J and ETT, TPWD stated that routes TE10, EC15, and CW7 appeared to best minimize potential impacts to natural resources when compared to the other routes evaluated in the EA. TPWD further stated it supports the selection of a route, for the Clear Crossing to West Shackleford segment, that minimizes impacts to the Clear Fork of the Brazos River.
34. ETT will comply with TPWD's recommendations to the extent possible, consistent with the need to complete the project in a timely and cost-effective manner, including implementing standards for re-vegetation through its storm water pollution prevention plan, following guidelines for protection of certain avian species, consulting with the U.S. Fish and Wildlife Service (USFWS) if endangered species habitat is encountered, complying with applicable legal requirements relating to state-listed species, identifying and delineating stopover sites for whooping cranes, surveying for suitable nesting habitat for the interior least tern on or immediately adjacent to the ROW after route selection and implementing any necessary measures to minimize impacts to the species, making reasonable efforts to allow the Texas kangaroo rat and the horned lizard to vacate affected areas or to be relocated by a permitted individual, continuing to monitor the listing status of the kangaroo rat on the federal endangered-species list, and taking precautions to mitigate transmitting white-nose syndrome to bats.
35. The standard mitigation requirements included in the ordering paragraphs in this Order, coupled with ETT's plans to avoid, minimize, or mitigate impacts to natural resources, are reasonable measures for a utility to undertake when constructing a transmission line.
36. To the extent practical, ETT will avoid or mitigate adverse environmental impacts to sensitive plant and animal species and their habitats as identified by the TPWD and USFWS.
37. It is impractical and unnecessary to undertake a comprehensive on-the-ground survey of all proposed routes for habitat of rare and protected species before a final order identifying a route is issued by the Commission.

- 37A. This Order addresses only those TPWD recommendations and comments for which there is record evidence.

Community Values

38. ETT hosted five open-house meetings on March 17-25, 2010, in Childress, Crowell, Munday, Haskell, and Albany, Texas, to solicit public input and involvement in its process. Notices of the public open-house meetings were published in local newspapers in Childress, Crowell, Munday, Haskell and Albany the week before the open-house meetings.
39. Direct notice was mailed to owners of approximately 1800 properties within 500 feet of the centerline for each of the routes being presented at the open-house meetings.
40. A total of 467 people registered their attendance at the open-house meetings, which used an interactive information station format to solicit input and share information with attendees in an informal atmosphere.
41. ETT addressed with attendees the purpose and need for the project, locations of proposed routes that are under consideration, possible impacts to individual properties, and the physical parameters of the proposed line. ETT also distributed questionnaires at the meetings seeking additional input.
42. ETT received 269 completed or partially completed questionnaires addressing a variety of concerns, including impacts on agricultural lands, maximizing distance from residences, aesthetics, impacts on property value, health risks, impact on irrigation systems, impacts to possible wind generation, and possible cultural sites.
43. Questionnaire respondents favored placing lines in undeveloped areas versus in residential areas and using existing ROW when possible. Respondents also overwhelmingly indicated a preference for the monopole structure ETT intends to use in this project.
44. ETT used public input from the open-house meetings to evaluate issues and concerns and to select the preferred and alternative routes. Based on information gathered at the open houses, several links were subsequently modified to reduce impacts to habitable

- structures and other land use features to the greatest extent practicable, and new links were added and others deleted.
45. Generally, modifications were made to further reduce the number of habitable structures within 500 feet of the centerline of a proposed route, to improve the paralleling of apparent property lines, to improve the paralleling of compatible ROW, and to reduce other potential land use impacts to ranching and farming operations.
 46. In addition, local, state, and federal agencies and officials were contacted by letter in June 2009 to solicit comments, concerns, and information regarding the potential impact of the proposed transmission line. ETT utilized comments and information from governmental agencies in the preparation of the existing environment sections of the EA, the constraints map, and in the selection and evaluation of alternative routes.

Paralleling Other 345-kV Transmission Lines

47. Crossing or paralleling two CREZ transmission lines could create reliability risks and should be avoided or minimized if possible.
48. Construction of two transmission lines in parallel can create an interaction of magnetic fields between the lines known as mutual coupling. This can be addressed by appropriate changes to the protection systems to avoid misoperation of the parallel lines.

Findings Common to All Line Segments

49. ETT retained PBS&J to perform the EA for the project.
50. One of the objectives of the EA was to select and evaluate several transmission line routes and to recommend to ETT preferred and alternative routes that are feasible from environmental and land use standpoints.
51. The study area was approximately 135 miles long by 21 miles wide, for a total area of approximately 2,833 square miles.
52. PBS&J examined potential routes taking into consideration the factors that appear in § 37.056(c)(4) of the Public Utility Regulatory Act, TEX. UTIL. CODE ANN. §§ 11.001-66.016 (PURA), the Commission's substantive rules, and the information required to be provided by the Commission's CREZ CCN application form.

53. All proposed routes would have some negative impact on aesthetic values.
54. The project could result in the disruption or preemption of recreational activities and could have some temporary or permanent impact on visual aesthetics.
55. ETT will cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the project.
56. The mitigation measures proposed in the EA will serve to reduce and mitigate potential adverse effects of construction and operation of the proposed transmission line.

Tesla-to-Edith Clarke Segment – Project Description

57. ETT proposed 12 routes for the line from the Tesla switching station to the Edith Clarke switching station, including its preferred route TE10 and 11 alternative routes.
58. The preferred and alternative routes for the TE segment were selected based on the certification criteria set out in PURA and the Commission's substantive rules, as well as input from the public, the recommendations of ETT's environmental consultant PBS&J, and ETT's evaluation of engineering constraints, costs, and grid reliability.
59. All twelve routes proposed for the TE segment of ETT's application are viable, feasible, and acceptable from environmental, engineering, and cost perspectives.
60. The proposed routes for the TE segment vary in length from 40.03 miles to 57.04 miles.
61. ETT will build the Tesla and Edith Clarke switching stations for this portion of the project. ETT will own, operate, and maintain all transmission line facilities for this portion of the project.
62. Completion of the TE segment of the project will accomplish the intended results for the CREZ project designated as Panhandle AC-to-PanOakMid double-circuit 345-kV line in the CREZ transmission plan and ordered by the Commission in Docket Nos. 37902 and 36802.
63. The projected in-service date for the TE segment is March 2013.

Tesla-to-Edith Clarke Segment – Routing

64. Considering the balance of the environmental criteria, PBS&J recommended route TE4 as its preferred route for the TE segment.

65. Based on PBS&J's evaluation and ETT's own evaluation of additional criteria including cost, engineering constraints, and reliability concerns, ETT selected route TE10 as the preferred route for the TE segment. Staff recommended route TE11 for the segment.
66. At the hearing, the parties interested in the TE segment, including ETT and Commission Staff, filed a stipulation unanimously recommending that the Commission approve route TE12 for the TE Segment.
67. Stipulated route TE12 is a viable, feasible, and acceptable route from environmental, engineering, and cost perspectives.
68. The length of stipulated route TE12 is 54.08 miles.
69. Stipulated route TE12 is electrically efficient, cost-effective, and will provide a reliable and beneficial path for the transmission of renewable energy from the CREZs to the load centers in ERCOT.
70. Stipulated route TE12 is the most desirable route because of the following attributes:
 - (a) lowest number of habitable structures within 500 feet of the centerline of the project;
 - (b) highest percentage of ROW parallel to existing transmission rights-of-way, roads, and other compatible ROW, and apparent property lines;
 - (c) least amount of right-of-way within the foreground visual zone of recreational or park areas and of U.S. and state highways;
 - (d) least amount of right-of-way crossing upland woodland or brushland; and
 - (e) fifth least amount of ROW crossing potential wetlands.
71. Although all of the routes proposed in the application are viable and compliant with applicable routing criteria, stipulated route TE12 is the best alternative weighing the factors set forth in PURA § 37.056(c) and P.U.C. SUBST. R. 25.101(b)(3)(B).
72. There are no alternative routes or facilities configurations that would have a less negative impact on landowners along the TE segment.

Tesla-to-Edith Clarke Segment – Community Values

73. No commercial AM radio transmitters were identified within 10,000 feet of the centerline of stipulated route TE12.

74. No electronic communications towers were identified within 2,000 feet of the centerline of stipulated route TE12.
75. There is one FAA-registered airport, Quannah Municipal Airport, located within 20,000 feet of stipulated route TE12. There is one private airstrip located within 10,000 feet of stipulated route TE12. There are no heliports located within 5,000 feet of stipulated route TE12.
76. Stipulated route TE12 does not cross any cropland irrigated by a traveling irrigation system.
77. ETT has evaluated community values and addressed the concerns adequately.

Tesla-to-Edith Clarke Segment – Parks and Recreation Areas

78. No parks or recreational areas were identified within 1,000 feet of the centerline of stipulated route TE12. No impacts to the use or enjoyment of any parks or recreational areas are anticipated from the construction of the transmission line.

Tesla-to-Edith Clarke Segment – Historical Values and Aesthetic Impacts

79. Stipulated route TE12 does not cross any recorded cultural resource site.
80. No cultural resource sites were identified within 1,000 feet of stipulated route TE12.
81. If determined to be necessary during construction, ETT will obtain cultural resource clearance from the Texas Historical Commission for identified project ROW.
82. Proposed routes that parallel sections of existing transmission lines, such as stipulated route TE12, would be most preferred in terms of aesthetic impacts because they would not create a significant new intrusion into or significantly alter the character of the existing view.
83. Stipulated route TE12 is within the foreground visual zone of U.S. and state highways for 2.25 miles.
84. Stipulated route TE12 is not within the foreground visual zone of any park or recreational areas.
85. The use of monopole structures along stipulated route TE12 mitigates the aesthetic impacts of this transmission line.

Tesla-to-Edith Clarke Segment – Environmental Integrity

86. PBS&J evaluated each of the twelve proposed routes in the TE segment based on potential environmental impacts, including impacts on land use, ecology, and cultural resources.
87. Stipulated route TE12 is an environmentally acceptable route. All routes and links presented for the TE segment provide environmentally acceptable routes.
88. TPWD provided comments regarding the routes as filed in the application. Of the routes evaluated in the EA, TPWD stated that, for this segment of the project, route TE10 appeared to better minimize potential impacts to natural resources when compared to the other routes evaluated in the EA.
89. The Commission must consider a wider range of factors than TPWD in evaluating transmission line routes. The route approved by the Commission for the TE segment in this case appropriately balances the relevant factors.
90. Stipulated route TE12 is not expected to significantly impact adversely any known populations of any federally-listed endangered or threatened wildlife species.
91. Stipulated route TE12 crosses upland woodland or brushland for 19.41 miles, the least of any route proposed by ETT for the TE segment.
92. Stipulated route TE12 crosses bottomland, riparian woodland, and brushland for 0.87 miles.
93. Stipulated route TE12 crosses potential wetlands for 0.25 miles.
94. Stipulated route TE12 crosses open water for 0.04 miles.
95. Stipulated route TE12 is not expected to significantly impact or alter the cultural resources within the project area.

Tesla-to-Edith Clarke Segment – Engineering Constraints

96. No engineering constraints have been identified associated with this project.

Tesla-to-Edith Clarke Segment – Cost

97. ERCOT's CTO study and the Commission's orders in Docket Nos. 35665 and 37902 estimated the length of the TE segment of this project to be 25 miles and the planning level cost to be \$42.7 million, or \$1.71 million per mile.
98. The twelve alternative routes that are being considered for this segment range from approximately 40.0 miles in length to approximately 57.0 miles.
99. The estimated costs for the alternative routes on the TE segment range from approximately \$70.1 million to approximately \$90.1 million, with stipulated route TE12 being approximately \$86.3 million or \$1.60 million per mile.
100. The estimated cost of the Tesla Switching station is \$40.1 million. The estimated cost of the Edith Clarke switching station is \$43.9 million.
101. The costs projected in the application are only estimates because the approved line route has not yet been determined by the Commission or surveyed by ETT, and final engineering design has not been performed.

Tesla-to-Edith Clarke Segment –Compatible ROW and Property Lines

102. The combined length of ROW parallel to existing transmission ROW, roads and other compatible ROW, and apparent property lines (combined parallel criteria) for all 12 routes for the TE segment ranges from 45.6 to 81.7 % of the total length of the routes.
103. Stipulated route TE12 has the highest percentage of combined parallel criteria at 81.7 % of the total length of the route.
104. Stipulated route TE12 appropriately reflects consideration of using or paralleling existing compatible rights of way and other natural or cultural features.

Tesla-to-Edith Clarke Segment –Prudent Avoidance

105. Stipulated route TE12 complies with the policy of prudent avoidance.
106. The number of habitable structures within 500 feet of the centerline ranges from a low of none (stipulated route TE12) to a high of three.
107. ETT's proposed TE routes minimize, to the extent reasonable, the number of habitable structures in close proximity to the routes. ETT considered and reasonably avoided

population centers and other areas where people gather and live when developing its alternative routes for the project.

Edith Clarke-to-Clear Crossing Segment – Project Description

108. ETT proposed 25 routes for the line from the Edith Clarke switching station to the Clear Crossing switching station, including its preferred route EC12A and 24 alternative routes.
109. The preferred and alternative routes for the EC segment were selected based on the certification criteria set out in PURA and the Commission's substantive rules, as well as on input from the public, the recommendations of ETT's environmental consultant PBS&J, and ETT's evaluation of engineering constraints, costs, and grid reliability.
110. All 25 routes proposed for the EC segment of ETT's application are viable, feasible, and acceptable from environmental, engineering, and cost perspectives.
111. The proposed routes for the EC segment vary in length from 76.40 miles to 93.62 miles. The length of ETT's preferred route EC12A is 78.37 miles.
112. ETT will build the Edith Clarke and Clear Crossing switching stations for this portion of the project. ETT will own, operate, and maintain all transmission line facilities for this portion of the project.
113. In conjunction with the CW segment of the project, completion of the EC segment of the project will accomplish the intended results for the CREZ project designated as PanOakMid to Central C double-circuit 345-kV line in the CREZ transmission plan and ordered by the Commission in Docket Nos. 37902 and 36802.
114. The projected in-service date for the EC segment is September 2013.

Edith Clarke-to-Clear Crossing Segment – Routing

115. Considering the balance of the environmental criteria, PBS&J recommended route EC9A as its preferred route for the EC segment.
116. Based on PBS&J's evaluation and ETT's own evaluation of additional criteria including cost, engineering constraints and reliability concerns, ETT selected route EC12A as the preferred route for the EC segment. Staff also recommended route EC12A for the segment.

117. At the hearing, parties interested in the EC segment, including ETT and Commission Staff, filed a stipulation recommending that the Commission approve route EC12A for the EC segment.
118. The EC-segment stipulation also provides that along certain segments of stipulated route EC12A, totaling approximately 3.5 miles, ETT will under build an existing AEP Texas North Company 138-kV transmission line on newly-constructed triple-circuit capable structures of the CREZ transmission line in this case.
119. Stipulated route EC12A is a viable, feasible, and acceptable route from environmental, engineering, and cost perspectives.
120. Stipulated route EC12A is electrically efficient and cost-effective and will provide a reliable and beneficial path for the transmission of renewable energy from the CREZs to the load centers in ERCOT.
121. Stipulated route EC12A is the most desirable route because of the following attributes: (a) second highest ranked route by PBS&J from an environmental and land use perspective; (b) third shortest route; (c) fifth highest percentage of ROW parallel to existing transmission rights-of-way, roads and other compatible ROW, and apparent property lines; and (d) fourth least amount of ROW within the foreground visual zone of recreational or park areas and of U.S. and state highways.
122. Although all of the routes proposed in the application are viable and compliant with applicable routing criteria, stipulated route EC12A is the best alternative weighing the factors set forth in PURA § 37.056(c) and P.U.C. SUBST. R. 25.101(b)(3)(B).
123. There are no alternative routes or facilities configurations that would have a less negative impact on landowners along the EC segment.

Edith Clarke-to-Clear Crossing Segment – Community Values

124. No commercial AM radio transmitters were identified within 10,000 feet of the centerline of stipulated route EC12A.
125. No electronic communications towers were identified within 2,000 feet of the centerline of stipulated route EC12A.

126. There is one FAA-registered airport, Munday Municipal Airport, located within 20,000 feet of stipulated route EC12A. There is one private airstrip located within 10,000 feet of stipulated route EC12A. There are no heliports located within 5,000 feet of stipulated route EC12A.
127. Stipulated route EC12A does not cross any cropland irrigated by a traveling irrigation system.
128. ETT has evaluated community values and addressed the concerns adequately.

Edith Clarke-to-Clear Crossing Segment – Parks and Recreational Areas

129. No parks or recreational areas were identified within 1,000 feet of the centerline of stipulated route EC12A. No impacts to the use or enjoyment of any parks or recreational areas are anticipated from the construction of the transmission line.

Edith Clarke-to-Clear Crossing Segment – Historical Values and Aesthetic Impacts

130. Stipulated route EC12A crosses one recorded cultural resource site.
131. Three additional cultural resource sites were identified within 1,000 feet of stipulated route EC12A.
132. If determined to be necessary during construction activities, ETT will obtain cultural resource clearance from the Texas Historical Commission for identified project ROW.
133. Stipulated route EC12A is within the foreground visual zone of U.S. and state highways for 5.74 miles.
134. Stipulated route EC12A is not within the foreground visual zone of any park or recreational areas.
135. The use of monopole structures along stipulated route EC12A mitigates the aesthetic impacts of this transmission line.

Edith Clarke-to-Clear Crossing Segment – Environmental Integrity

136. PBS&J evaluated each of the 25 proposed routes in the EC segment based on potential environmental impacts, including impacts on land use, ecology, and cultural resources.

137. Stipulated route EC12A is an environmentally acceptable route. All routes and links presented for the EC segment provide environmentally acceptable routes.
138. TPWD provided comments regarding the routes as filed in the application. Of the routes evaluated in the EA, TPWD stated that for this segment of the project route EC15 appeared to better minimize potential impacts to natural resources when compared to the other routes evaluated in the EA.
139. The Commission must consider a wider range of factors than TPWD in evaluating transmission line routes. The route approved by the Commission for the EC segment in this case appropriately balances the relevant factors.
140. Stipulated route EC12A is not expected to significantly impact adversely any known populations of any federally-listed endangered or threatened wildlife species.
141. Stipulated route EC12A crosses upland woodland or brushland for 32.77 miles.
142. Stipulated route EC12A crosses bottomland, riparian woodland, and brushland for 8.03 miles.
143. Stipulated route EC12A crosses potential wetlands for 0.44 miles.
144. Stipulated route EC12A crosses no open water.
145. Stipulated route EC12A is not expected to significantly impact or alter the cultural resources within the project area.

Edith Clarke-to-Clear Crossing Segment – Engineering Constraints

146. No engineering constraints have been identified associated with this project.

Edith Clarke-to-Clear Crossing Segment – Cost

147. ERCOT's CTO study and the Commission's orders in Docket Nos. 35665 and 37902 estimated the length of the Edith Clarke-to-Clear Crossing-to-West Shackelford segments of this project to be 117 miles and the planning level cost to be \$220 million, or \$1.88 million per mile. The CTO Study did not contain separate cost estimates for the Edith Clarke-to-Clear Crossing and Clear Crossing-to-West Shackelford segments because the Clear Crossing station was approved by ERCOT after the CTO study was completed.

148. The 25 alternative routes that are being considered for this segment range from approximately 76.4 miles in length to about 93.6 miles.
149. The estimated costs for the alternative routes on the EC segment range from approximately \$123.8 million to about \$151.5 million, with stipulated route EC12A being approximately \$132.8 million or \$1.69 million per mile.
150. The estimated cost of the Edith Clarke switching station is \$43.9 million. The estimated cost of the Clear Crossing switching station is \$40.7 million.
151. The costs projected in the application are only estimates because the approved line route has not yet been determined by the Commission or surveyed by ETT, and final engineering design has not been performed.

Edith Clarke-to-Clear Crossing Segment – Compatible ROW and Property Lines

152. The combined length of ROW parallel to existing transmission ROW, roads and other compatible ROW, and apparent property lines (combined parallel criteria) for all 25 routes for the EC segment ranges from 59.5 to 89.7 % of the total length of the routes.
153. Stipulated route EC12A has the fifth highest percentage of combined parallel criteria at 86.4 % of the total length of the route.
154. Stipulated route EC12A appropriately reflects consideration of using or paralleling existing compatible ROW and other natural or cultural features.

Edith Clarke-to-Clear Crossing Segment – Prudent Avoidance

155. Stipulated route EC12A complies with the policy of prudent avoidance.
156. The number of habitable structures within 500 feet of the centerline ranges from a low of two to a high of 15. There are five habitable structures within 500 feet of the centerline of stipulated route EC12A.
157. ETT's proposed EC routes minimize, to the extent reasonable, the number of habitable structures in close proximity to the routes. ETT considered and reasonably avoided population centers and other areas where people gather and live when developing its alternative routes for the project.

Clear Crossing-to-West Shackelford Segment – Project Description

158. ETT proposed 18 routes for the line from the Clear Crossing switching station to the West Shackelford station, including its preferred route CW5 and 17 alternative routes.
159. The preferred and alternative routes for the CW Segment were selected based on the certification criteria set out in PURA and the Commission's substantive rules, as well as input from the public, the recommendations of ETT's environmental consultant PBS&J, and ETT's evaluation of engineering constraints, costs and grid reliability.
160. All 18 routes proposed for the CW segment of ETT's application are viable, feasible, and acceptable from environmental, engineering, and cost perspectives.
161. The proposed routes for the CW segment varied in length from 30.30 miles to 37 miles. The length of ETT's preferred route CW5 is 32.29 miles.
162. ETT will build the Clear Crossing switching station for this portion of the project. Lone Star Transmission will build the West Shackelford station. With the exception of the West Shackelford Station, ETT will own, operate, and maintain all transmission line facilities for this portion of the project.
163. In conjunction with the EC Segment of the project, completion of the CW segment of the project will accomplish the intended results for the CREZ project designated as PanOakMid-to-Central C double-circuit 345-kV line in the CREZ transmission plan and ordered by the Commission in Docket Nos. 37902 and 36802.
164. The projected in-service date for the CW segment is September 2013.

Clear Crossing-to-West Shackelford Segment – Routing

165. Considering the balance of the environmental criteria, PBS&J recommended route CW11 as its preferred route for the CW Segment.
166. Based on PBS&J's evaluation and ETT's own evaluation of additional criteria, including cost, engineering constraints, and reliability concerns, ETT selected Route CW5 as the preferred route for the CW segment. Staff recommended Route CW11 for the segment.
167. Route CW6 is a viable, feasible, and acceptable route from environmental, engineering, and cost perspectives.

168. Route CW6 is electrically efficient, cost-effective, and will provide a reliable and beneficial path for the transmission of renewable energy from the CREZs to the load centers in ERCOT.
169. Deleted.
170. Although all of the routes proposed in the application are viable and compliant with applicable routing criteria, route CW6 is the best alternative weighing the factors set forth in PURA § 37.056(c) and P.U.C. SUBST. R. 25.101(b)(3)(B).
171. Deleted.

Clear Crossing-to-West Shackelford Segment – Community Values

172. No commercial AM radio transmitters were identified within 10,000 feet of the centerline of route CW6.
173. No electronic communications towers were identified within 2,000 feet of the centerline of route CW6.
174. There are no FAA-registered airports located within 20,000 feet of route CW6. There is one private airstrip located within 10,000 feet of route CW6. There are no heliports located within 5,000 feet of route CW6.
175. Route CW6 does not cross any cropland irrigated by a traveling irrigation system.
176. ETT has evaluated community values and addressed the concerns adequately.

Clear Crossing-to-West Shackelford Segment – Recreational and Park Areas

177. No parks or recreational areas were identified within 1,000 feet of the centerline of route CW6. No impacts to the use or enjoyment of any parks or recreational areas are anticipated from the construction of the transmission line.

Clear Crossing-to-West Shackelford Segment – Historical Values and Aesthetic Impacts

178. Route CW6 crosses one recorded cultural resource sites.
179. No additional cultural resource sites were identified within 1,000 feet of route CW6.
180. If determined to be necessary during construction activities, ETT will obtain cultural resource clearance from the Texas Historical Commission for identified Project ROW.

181. Route CW6 is within the foreground visual zone of U.S. and state highways for 3.69 miles.
182. Route CW6 is not within the foreground visual zone of any park or recreational areas.
183. The use of monopole structures along route CW6 mitigates the aesthetic impacts of this transmission line.

Clear Crossing-to-West Shackelford Segment – Environmental Integrity

184. PBS&J evaluated each of the eighteen proposed routes in the CW segment based on potential environmental impacts, including impacts on land use, ecology, and cultural resources.
185. Route CW6 is an environmentally acceptable route. All routes and links presented for the CW Segment provide environmentally acceptable routes.
186. TPWD prefers route CW7 because it better minimizes potential impacts to natural resources when compared to the other routes evaluated in the EA.
187. The Commission must consider a wider range of factors than TPWD in evaluating transmission line routes. The route approved by the Commission for the CW Segment in this case appropriately balances the relevant factors.
188. Route CW6 is not expected to significantly impact adversely any known populations of any federally-listed endangered or threatened wildlife species.
189. Route CW6 crosses upland woodland or brushland for 21.02 miles.
190. Route CW6 crosses bottomland, riparian woodland, and brushland for 2.05 miles.
191. Route CW6 crosses potential wetlands for 0.10 miles.
192. Route CW6 crosses open water for 0.02 miles.
193. Route CW6 is not expected to significantly impact or alter the cultural resources within the project area.
- 193A. Route CW6 will not impact the proposed Cedar Ridge Reservoir.
- 193B. Route CW6 will only cross the Clear Fork of the Brazos River once.

Clear Crossing-to-West Shackelford Segment – Engineering Constraints

194. No engineering constraints have been identified associated with this project.

Clear Crossing-to-West Shackelford Segment – Cost

195. ERCOT's CTO study and the Commission's orders in Docket Nos. 35665 and 37902 estimated the length of the Edith Clarke-to-Clear Crossing-to-West Shackelford segments of this project to be 117 miles and the planning level cost to be \$220 million, or \$1.88 million per mile. The CTO study did not contain separate cost estimates for the Edith Clarke-to-Clear Crossing and Clear Crossing-to-West Shackelford segments because the Clear Crossing station was approved by ERCOT after the CTO study was completed.

196. The 18 alternative routes that were considered for this segment range from approximately 30.3 miles in length to about 36.8 miles.

197. The estimated costs for the alternative routes on the CW segment range from approximately \$55.2 million to about \$65.0 million, with route CW6 being approximately \$57.7 million or \$1.78 million per mile.

198. The estimated cost of the Clear Crossing switching station is \$40.7 million.

199. The costs projected in the application are only estimates because the approved line route has not yet been determined by the Commission or surveyed by ETT, and final engineering design has not been performed.

Clear Crossing-to-West Shackelford Segment – Compatible ROW and Property Lines

200. The combined length of ROW parallel to existing transmission ROW, roads and other compatible ROW, and apparent property lines (combined parallel criteria) for all 12 routes for the CW segment ranges from 45.8 % to 85.4 % of the total length of the routes.

201. Route CW6 has combined parallel criteria of 81.1 % of the total length of the route.

202. Route CW6 appropriately reflects consideration of using or paralleling existing compatible ROW and other natural or cultural features, criteria contained in P.U.C. SUBST. R. 25.101(b)(3)(B)(i)-(iii).

Clear Crossing-to-West Shackelford Segment – Prudent Avoidance

203. Route CW6 complies with the policy of prudent avoidance.

204. The number of habitable structures within 500 feet of the centerline ranges from a low of two to a high of nine. There are four habitable structures within 500 feet of the centerline of route CW6.
205. ETT's proposed CW routes minimize, to the extent reasonable, the number of habitable structures in close proximity to the routes. ETT considered and reasonably avoided population centers and other areas where people gather and live when developing its alternative routes for the project.

II. Conclusions of law

1. ETT is an electric utility as defined in sections 11.004 and 31.002(6) of PURA.
2. The Commission has jurisdiction over this matter pursuant to sections 14.001, 32.001, 37.051, 37.053, 37.054, and 37.056 of PURA.
3. SOAH has jurisdiction over this proceeding pursuant to section 14.053 of PURA and TEX. GOV'T CODE ANN. §2003.049 (Vernon 2008).
4. ETT provided proper notice of the application in compliance with section 37.054 of PURA and P.U.C. PROC. R. 22.52(a).
5. This docket was processed in accordance with the requirements of PURA and Administrative Procedure Act, TEX. GOV'T CODE ANN. chapter 2001 (Vernon 2008 & Supp. 2010).
6. The project is necessary for the service, accommodation, convenience, or safety of the public within the meaning of section 37.056(a) of PURA, taking into consideration the applicable factors set out in section 37.056(c) of PURA.
7. This application does not constitute a major rate proceeding as defined by P.U.C. PROC. R. 22.2.
8. ETT has met the requirements of P.U.C. SUBST. R. 25.101(b)(3).
9. The proposed transmission-line project is consistent with the Commission's goals for the CREZ program and P.U.C. SUBST. R. 25.174.

10. No issue is presented by the application subject to P.U.C. SUBST. R. 25.102 (Coastal Management Program).
11. The approved route segments adhere to the Commission's prudent avoidance policy contained in P.U.C. SUBST. R. 25.101(a)(4) and (b)(3)(B)(iv).
12. Pursuant to P.U.C. SUBST. R. 25.174(d)(10), the level of financial commitment by generators is sufficient under PURA § 39.904(g)(3) to grant ETT's application for a CCN in this docket.
13. ETT's application is entitled to approval as described in the findings of fact, taking into consideration the factors set out in section 37.056 of PURA and P.U.C. SUBST. R. 25.101.

III. Ordering Paragraphs

In accordance with these findings of fact and conclusions of law, the Commission issues the following orders:

1. ETT's application is approved. ETT's CCN Nos. 30193 and 30194 are amended to include the construction, ownership, and operation of the project. The project shall follow the approved route, which is stipulated route TE12 for the TE segment, stipulated route EC12A for the EC Segment, and route CW6 for the CW segment.
2. If ETT or its contractors encounter any archaeological artifacts or other cultural resources during construction of the transmission line, ETT shall cease work immediately in the vicinity of the resource and report the discovery to the Texas Historical Commission and take action as directed by that commission.
3. ETT shall follow the procedures outlined in the following publication for protecting raptors: *Suggested Practices for Avian Protection on Power Lines, The State of the Art in 2006*, Avian Power Line Interaction Committee (APLIC), 2006 and the *Avian Protection Plan Guidelines* published by APLIC in April 2005.
4. ETT shall identify stopover sites for the whooping crane on or immediately adjacent to the ROW and implement necessary measures to avoid or minimize impacts by consultation with USFWS if such stopover sites are identified.

5. ETT shall survey for suitable nesting habitat for the interior least tern along the approved route and implement any necessary measures to minimize impacts to that species.
6. ETT shall comply with the requirements of the Migratory Bird Treaty Act in connection with construction and maintenance of the project.
7. ETT shall allow state-listed threatened species observed during construction to leave the site or be relocated to a suitable nearby area by a permitted individual.
8. ETT shall continue to monitor the listing status of the Texas kangaroo rat on the federal endangered-species list and will consult with the USFWS should the kangaroo rat's listing status change and additional measures need to be taken to protect its habitat.
9. ETT shall evaluate measures to avoid and minimize project impacts to bats if caves or karst features are encountered during ROW preparation or construction.
10. ETT shall exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the ROW.
11. ETT shall minimize the amount of flora and fauna disturbed during construction of the proposed transmission line, except to the extent necessary to establish appropriate ROW clearance for the transmission line. In addition, ETT shall re-vegetate using native species and shall consider landowner preferences in doing so. Furthermore, to the maximum extent practicable, ETT shall avoid adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and the USFWS.
12. ETT shall use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.
13. ETT shall implement erosion control measures as appropriate. Also, ETT shall return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowner.
14. ETT shall cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the project. Any minor deviation to the approved route shall only directly affect landowners who were sent notice of the transmission line in accordance with P.U.C. PROC. R. 22.52(a)(3) and shall directly affect only those landowners that have agreed to the minor deviation. Any agreed minor

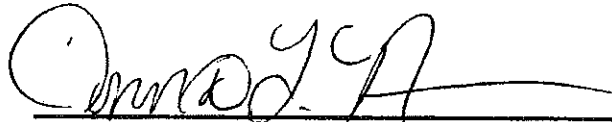
- deviations shall not delay the project beyond its Commission-required completion date nor shall any minor deviation add any significant cost to the project.
15. ETT shall be permitted to deviate from the approved route in any instance in which the deviation would be more than a minor deviation, but only if the following two conditions are met. First, ETT shall receive consent from all landowners who would be affected by the deviation regardless of whether the affected landowner received notice of or participated in this proceeding. Second, the deviation shall result in a reasonably direct path towards the terminus of the line and not cause an unreasonable increase in cost or delay. Unless these two conditions are met, this paragraph does not authorize ETT to deviate from the approved route except as allowed by the other ordering paragraphs in this Order.
 16. To lessen the burden on property owners affected by this project, ETT shall be permitted to under hang AEP Texas North Company's existing 138-kV transmission line that runs parallel to ETT's new 345-kV line approved in this Order to lessen the burden on property owners affected by the project provided that the under hanging does not result in unreasonable increases in cost.
 17. ETT is required to update the reporting of this project on its monthly construction progress report prior to the start of construction to reflect final estimated cost and schedule in accordance with P.U.C. SUBST. R. 25.83(b). In addition, ETT shall provide final construction costs, with any necessary explanation for cost variance, after completion of construction and when all charges have been identified. ETT shall file in Project No. 37858 information pursuant to P.U.C. SUBST. R. 25.216(f) and the order in Docket No. 37902.
 18. All other motions, requests for entry of specific findings of fact or conclusions of law, and any other requests for general or specific relief, if not expressly granted, are denied.

SIGNED AT AUSTIN, TEXAS the 18th day of April 2011.

PUBLIC UTILITY COMMISSION OF TEXAS



BARRY T. SMITHERMAN, CHAIRMAN



DONNA L. NELSON, COMMISSIONER



KENNETH W. ANDERSON, JR., COMMISSIONER

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