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PUC DOCKET NO. 48785
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PUBLIC UTILITY COMMISSION
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JOINT APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC AND AEP TEXAS INC. TO AMEND CERTIFICATES OF CONVENIENCE AND NECESSITY FOR A DOUBLE CIRCUIT 345-KV TRANSMISSION LINE IN PECOS, REEVES, AND WARD COUNTIES (SAND LAKE – SOLSTICE CCN)	§	**PUBLIC UTILITY COMMISSION OF TEXAS**

ORDER

This Order addresses the joint application of Oncor Electric Delivery Company, LLC and AEP Texas Inc. to amend their certificates of convenience and necessity (CCN) for a proposed 345-kilovolt (kV) double-circuit transmission line in Pecos, Reeves, and Ward Counties, Texas.[1] The Commission adopts the proposal for decision (PFD), including findings of fact and conclusions of law, except as discussed in this Order.

As discussed at its June 13, 2019 open meeting, the Commission adopts modified route 320 recommended in the PFD, but also includes the intervenor requested modifications to links J1 and J7. The State Office of Administrative Hearings (SOAH) Administrative Law Judges (ALJs) denied intervenor COG Operating LLC's (Concho's) requested link modifications because landowner consents for all requested modifications to route 320 had not been obtained before the record closed. Because Concho obtained landowner consents for requested modifications to links J1 and J7 after the SOAH ALJs' remanded the docket to the Commission, the Commission includes the modifications to links J1 and J7 in this Order. In addition, the Commission includes an ordering paragraph allowing Oncor and AEP Texas more flexibility in routing the Sand Lake-to-Solstice transmission line because the location is in the Permian Basin with substantial and highly concentrated oil and gas production.

[1] On the same day the Application was filed, LCRA Transmission Services Corporation and AEP Texas jointly filed an application to amend their CCNs for a proposed double-circuit 345 kV transmission line in Pecos County, Texas to interconnect the Bakersfield and Solstice stations (Bakersfield-to-Solstice project), which was assigned PUC Docket No. 48787 and SOAH Docket No. 473-19-1267. On November 15, 2018, Order No. 1 consolidated the application and the application for the Bakersfield-to-Solstice project into Docket No. 48785. SOAH Order No. 1 at 3 (Nov. 15, 2018). SOAH Order No. 10 severed and remanded the Bakersfield-to-Solstice project to the Commission because of a comprehensive settlement reached with regard to that project.

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The Commission adds findings of fact 32A through 32F to reflect the procedural history after the SOAH ALJs issued the PFD.

The Commission makes the following additions, modifications, and deletions to the proposal for decision filed by the SOAH ALJs. The Commission modifies the finding of fact heading entitled "TPWD's Comments and Recommendations" to read "Texas Parks and Wildlife Departments' Comments and Other Environmental Recommendations" to be more accurate. The Commission also modifies the heading entitled "Conditional Authority" to read "Limitation of Authority" for consistency with previous orders and accuracy. The Commission modifies finding of fact 30 for clarity. In addition, the Commission modifies finding of fact 157 and conclusions of law 7 and 9 for accuracy and to comport with other CCN orders of the Commission. Further, the Commission adds conclusion of law 3A because it is necessary under the Public Utility Regulatory Act[2] and Commission rules. Moreover, the Commission deletes conclusion of law 11 and moves its substance to new finding of fact 144A because it is not a proper conclusion of law. The Commission deletes conclusion of law 15 because it is not a proper conclusion of law and is not consistent with recent Commission orders.

In addition, the Commission makes other non-substantive changes for such matters as capitalization, spelling, grammar, punctuation, style, correction of numbering, and readability.

I. Findings of Fact

The Commission adopts the following findings of fact.

Applicants

1. Oncor is an investor-owned electric utility providing service under CCN number 30158.

2. AEP Texas Inc. is an investor-owned electric utility providing service under CCN number 30170.

Joint Application

3. On November 7, 2018, Oncor and AEP Texas filed a joint application to amend their CCNs for the proposed Sand Lake-to-Solstice double-circuit 345-kV transmission facilities in Pecos, Reeves, and Ward counties. The application was assigned Docket No. 48785.

[2] Tex. Util. Code §§ 11.001–66.016 (PURA).

4. Oncor and AEP Texas retained Halff Associates, Inc. to perform and prepare an environmental assessment and alternative route analysis for the Sand Lake-to-Solstice proposed transmission facilities.

Procedural History

5. On November 7, 2018, Oncor and AEP Texas filed the direct testimonies of their witnesses: Russell Marusak; Wilson Peppard; Thomas Reynolds, III; Brenda Perkins; and Brent Kawakami. AEP Texas filed corrected direct testimony of Thomas Reynolds, III, on November 29, 2018.

6. On November 7, 2018, Oncor and AEP Texas as well as LCRA filed a motion to consolidate the consideration of this project with AEP Texas's and LCRA's proposed Bakersfield-to-Solstice 345-kV transmission facilities originally filed in Commission Docket No. 48787, to issue a protective order, and to refer this matter to SOAH.

7. On November 14, 2018, the Commission issued an order of referral and preliminary order, referred this matter to SOAH, and identified a number of issues to be addressed.

8. In SOAH Order No. 1 issued on November 15, 2018, the SOAH ALJs established the intervention deadline, consolidated Docket Nos. 48785 and 48787 into Docket No. 48785, provided notice of a prehearing conference, described jurisdiction, and provided other information.

9. In SOAH Order No. 2 issued on December 10, 2018, the SOAH ALJs provided notice that the hearing on the merits would convene at the SOAH offices in Austin, Texas at 9:00 a.m. on February 15, 2019, and continue on February 19-22, 2019. Also in SOAH Order No. 2, the ALJs granted the motions to intervene filed by Alan Zeman, Oxy (comprised of Occidental Permian Ltd.; Oxy Delaware Basin, LLC; Oxy USA Inc.; Oxy USA WTP LP; Houndstooth Resources, LLC; and Occidental West Texas Overthrust, Inc.), the City of Garland, Elizabeth Graybill, and Mary Graybill-Rees.

10. Barbour, Inc. filed a statement of position on January 8, 2019. Zeman and Dwight Forrister, on behalf of the Forrister Generation-Skipping Trust, filed direct testimony on January 9, 2019. Charles H. Midgely filed direct testimony on behalf of Plains Marketing, L.P. and Plains Pipeline, L.P. (together, Plains Pipeline) on

January 10, 2019. Albert Mendoza filed direct testimony on behalf of Oxy on January 10, 2019. Terry Burkes filed direct testimony on behalf of COG Operating LLC (Concho) on January 10, 2019. Other testimony was filed in the consolidated docket relating to the Bakersfield-to-Solstice project.

11. In SOAH Order No. 3 issued on January 15, 2019, the SOAH ALJs granted intervenor status to the following parties interested in the Sand Lake-to-Solstice proposed transmission facilities: Cross V Ranch, LP; Barbour, Inc.; Forrister; Plains Pipeline; and Concho. Other intervenors granted party status who only had an interest in the Bakersfield-to-Solstice proposed transmission facilities were: MMSmithfield Family Limited Partnership, Ltd.; Pettus Czar, Ltd.; Atmos Pipeline-Texas; Esther Dudley, MMEX Resources Corporation; Domingo Perez; Brockett & McNeel LLP; Kevin Wilson; and Dale and Dorothy Smith. SOAH Order No. 3 also granted the City of Garland's motion to withdraw as a party to this case.

12. On January 15, 2019, the Texas Parks and Wildlife Department filed a letter regarding the proposed transmission facilities and made various comments and recommendations.

13. On January 18, 2019, Commission Staff filed an objection to and motion to strike portions of certain intervenors' direct testimony regarding: (1) electromagnetic fields and associated health concerns; (2) anticipated future uses of property or diminution in property values; and (3) construction-related transmission outages. Alternatively, Commission Staff requested that these portions of direct testimony be accorded appropriate evidentiary weight if found to be general statements of concern.

14. On January 18, 2019, Oncor, AEP Texas, and LCRA filed a joint letter, in compliance with SOAH Order No. 3, identifying the intervenors who did not file direct testimony or a statement of position as of the date of the letter.

15. In SOAH Order No. 4 issued on January 24, 2019, the SOAH ALJs identified intervenors who failed to file testimony or a statement of position by the January 10, 2019, deadline and proposed to remove these intervenors as parties to the proceeding.

16. In SOAH Order No. 5 issued on January 30, 2019, the SOAH ALJs, which overruled Commission Staff's objections and denied the motion to strike but granted its alternative

request, determined that the challenged testimony would be considered intervenor statements of concern and given the appropriate evidentiary weight.

17. On January 30, 2019, Commission Staff filed the direct testimony of its witness, David Bautista, regarding the Sand Lake-to-Solstice project.

18. On February 4, 2019, Concho filed the cross-rebuttal testimony of Brent Lowery, and Oxy filed the cross-rebuttal testimony of Albert Mendoza.

19. On February 6, 2019, Oncor and AEP Texas filed the rebuttal testimony of Russell Marusak; Wilson Peppard; Thomas Reynolds, III; and Brenda Perkins.

20. On February 6, 2019, Oncor, AEP Texas, and LCRA moved to admit the direct testimony of Brent Kawakami into the evidentiary record because there was no challenge to the need for either project.

21. In SOAH Order No. 6 issued on February 8, 2019, the SOAH ALJs, which cancelled the need phase of the hearing on the merits, scheduled a prehearing conference in its place, and admitted into evidence Brent Kawakami's testimony supporting the need for both the Sand Lake-to-Solstice and Bakersfield-to-Solstice projects.

22. On February 19, 2019, the hearing on the merits concerning routing of the Bakersfield-to-Solstice proposed transmission line was held, at which the parties introduced their pre-filed testimony and other materials into evidence. Oncor, AEP Texas, and LCRA also filed a unanimous stipulation agreeing to the need for both the Bakersfield-to-Solstice project and the Sand Lake-to-Solstice project, which was signed by all parties in the consolidated docket.

23. In SOAH Order No. 9 issued on February 20, 2019, the SOAH ALJs dismissed the following parties from the consolidated docket for failure to file testimony or statements of position in accordance with the requirements of SOAH Order No. 2: Cross V. Ranch, L.P.; Domingo Perez; MMEX Resources Corporation; Ester Dudley; Kevin Wilson; and Brockett & McNeel LLP.

24. On February 21, 2019, the hearing on the merits concerning routing for the Sand Lake-to-Solstice project was held, at which the parties introduced their pre-filed testimony and other materials into evidence, and live testimony was presented.

25. In SOAH Order No. 10 issued on February 22, 2019, the SOAH ALJs severed the Bakersfield-to-Solstice project from consolidated Docket No. 48785 and remanding the application for the Bakersfield-to-Solstice project to the Commission to consider in light of the parties' settlement.

26. Parties filed initial briefs on March 5 and 6, 2019, and reply briefs on March 12, 2019.

27. On March 12, 2019, Concho filed a motion to admit landowner consent agreements and to keep the record open until March 19, 2019, to allow it time to receive and file additional landowner consent agreements. On the same date, Oxy filed a motion to admit landowner consent agreements and joined Concho in requesting that the record remain open until March 19, 2019.

28. In SOAH Order No. 11 issued on March 13, 2019, the SOAH ALJs, granted Concho's and Oxy's motions to admit landowner consent agreements, extended the record close date to March 19, 2019, and required Concho, Oxy, and Plains Pipeline to file reports indicating which proposed modifications to routes 320 and 325 have received landowner consents.

29. On March 19, 2019, Concho and Oxy filed a joint motion to admit additional landowner consents, but also reported that they had not yet obtained all landowner consents for their proposed modifications to routes 320 and 325.

30. On March 19, 2019, Plains Pipeline filed a response to SOAH Order No. 11 in which it agreed to the relocation of Link B2.

31. The evidentiary record closed in this docket on March 19, 2019.

32. In SOAH Order No. 12 issued on March 25, 2019, the SOAH ALJs admitted Concho Exhibit 5 and Oxy Exhibit 7-2 filed on March 19, 2019.

32A. On April 10, 2019, the SOAH ALJs issued a PFD.

32B. On April 23, 2019, Concho and Oxy filed a second joint motion to admit additional landowner consents, and reported that they had only obtained all landowner consents for their proposed modifications to links E1 and F1 on route 325.

32C. On May 6, 2019, Oncor and AEP Texas filed their motion to reopen the record and admit evidence regarding the cost of the proposed link B2 modification.

32D. On June 5, 2019, Concho filed a motion to open the record and admit additional landowner consents, and reported that they had obtained all landowner consents for their proposed modifications to link K11 on route 325 and links J1 and J7 on route 320.

32E. On June 13, 2019, Oncor and AEP Texas filed their agreement on the proposed transmission-line ownership-division point.

32F. At the June 13, 2019 open meeting, the Commission reopened the record and admitted Oncor and AEP Texas's evidence on the cost for the link B2 modification and Concho's final landowner consents for its requested modification to link K11 on route 325 and links J1 and J7 on route 320.

Description of the Transmission Line

33. The Sand Lake-to-Solstice proposed transmission line consists of a new double-circuit 345-kV line built on lattice steel tower structures, extending from Oncor's Sand-Lake switch station in Ward County to AEP Texas's Solstice-switch station in Pecos County.

34. The Sand Lake-to-Solstice project is 44.5 to 58.7 miles in length, depending on the selected route.

35. The Sand Lake-to-Solstice project also includes station work at the Sand Lake and Solstice switches.

36. Oncor and AEP Texas will own, operate, and maintain their respective portions of the transmission line facilities including conductors, wires, structures, hardware, and easements.

37. The application identified route 320 as the route that believe best meets the requirements of the Public Utility Regulatory Act and the Commission's rules. In addition, Oncor and

AEP Texas's application identified 28 other reasonable, feasible alternative routes, which Oncor, AEP Texas, and Halff identified from among 408 preliminary alternative routes Halff developed in its environmental assessment and alternative route analysis filed with the application.

38. The proposed routes are based on a right-of-way width of approximately 160 feet. None of the necessary rights of way have been acquired to date.

39. Route 320 is approximately 44.5 miles in length and is the shortest alternative route.

40. The estimated construction costs of the alternative routes range from approximately $98,220,000 to $126,903,000, excluding station costs.

41. Route 320 is the least expensive alternative route and is $28,683,000 less expensive than the most expensive alternative route.

42. All 29 routes identified in the application are viable, feasible, and reasonable from a land use, environmental, engineering, and cost perspective.

43. Oncor and AEP Texas identified route 320 as the route that best addresses the Commission's routing criteria.

Notice and Sufficiency of Application

44. On November 7, 2018, Oncor and AEP Texas provided written notice of the filing of the application, including a link table, route descriptions, and maps: (1) to each county government in which any portion of the proposed facilities may be located; (2) to each municipality within five miles of the proposed facilities; (3) to each neighboring utility service within five miles of the proposed facilities; (4) to the Texas Office of Public Utility Counsel; (5) to the United States Department of Defense Siting Clearinghouse; (6) to certain pipeline owners or operators; and (7) by first-class mail to each owner of land as stated on current county tax roll that the Sand Lake-to-Solstice project will directly affect if the requested certificate is granted. Oncor and AEP Texas also provided a copy of the environmental assessment and alternative route analysis to the Texas Parks and Wildlife Department.

45. On November 20, 2018, Oncor and AEP Texas filed an affidavit attesting to, among other things, their provision of a copy of the environmental assessment and alternative route analysis to the Texas Parks and Wildlife Department and notice of the application to the Office of Public Utility Counsel, municipalities, counties, neighboring utilities, the Department of Defense Siting Clearinghouse, and directly affected landowners.

46. On November 26, 2018, Commission Staff recommended that Oncor and AEP Texas's application be deemed sufficient.

47. On November 28, 2018, Oncor and AEP Texas filed an affidavit attesting to notice of the application being published on November 15, 2018, in newspapers having general circulation in the counties where the CCN is being requested, including the *Monahans News* (Ward County), the *Fort Stockton Pioneer* (Pecos County), and the *Pecos Enterprise* (Reeves County).

48. On December 6, 2018, Commission Staff recommended that Oncor and AEP Texas's notice be deemed sufficient.

49. In SOAH Order No. 2 issued on December 10, 2018, the SOAH ALJs found the application to be sufficient and materially complete.

50. In SOAH Order No. 2 issued on December 10, 2018, the SOAH ALJs approved of Oncor and AEP Texas's provision of notice of the application in this proceeding.

51. On January 14, 2019, Oncor and AEP Texas filed a supplemental affidavit attesting to re-sent notices provided to certain directly affected landowners.

52. In SOAH Order No. 4 issued on January 24, 2019, the SOAH ALJs approved Oncor and AEP Texas' supplemental notice affidavit as compliant with Commission rules.

53. No party challenged the sufficiency of the application.

Route Adequacy

54. Oncor and AEP Texas, together with their routing consultant, Halff, developed, evaluated, and filed 29 geographically diverse alternative routes with the application.

55. No party raised a route adequacy challenge.

56. The application's 29 geographically diverse routes are an adequate number of reasonably differentiated alternative routes to conduct a proper evaluation.

Public Input

57. To develop information on community values for the transmission facilities, Oncor and AEP Texas held a public meeting on August 15, 2018 for the Sand Lake-to-Solstice proposed transmission facilities in Pecos, Texas, in accordance with 16 Texas Administrative Code (TAC) § 22.52.

58. Oncor and AEP Texas mailed 775 individual written notices of the public meeting to all owners of property within 500 feet of the centerline of each preliminary alternative link.

59. Oncor, on behalf of itself and AEP Texas, provided the Department of Defense Siting Clearinghouse with notice of the public meeting.

60. On August 9, 2018, notice of the public meeting was published in the *Fort Stockton Pioneer*, a local newspaper of general circulation in Pecos County; the *Monahans News*, a local newspaper of general circulation in Ward County; and the *Pecos Enterprise*, a local newspaper of general circulation in Reeves County.

61. Nine people signed in as attending the public meeting, including one member of the local media and one local official.

62. Attendees of the public meeting were provided questionnaires. One person submitted a questionnaire at the public meeting and electronic data was received from the local official attendee after the meeting.

63. The public feedback Oncor and AEP Texas received from the public meeting and from local, state, and federal agencies was evaluated and considered in determining the routes to be included in the application. Based on input, comments, information received at and following the public meeting, and additional analyses conducted by Oncor, AEP Texas, and Halff, revisions were made to the preliminary alternative route analysis.

64. On September 17, 2018, the Department of Defense Siting Clearinghouse informed Oncor and AEP Texas that its informal review concluded that the Sand Lake to Solstice proposed transmission facilities would have minimal impact on military operations in the area.

65. Based on information Halff received from the public involvement program, in consultation with Oncor and AEP Texas, and subsequent reconnaissance surveys, portions of 36 existing preliminary route links were modified, and several were divided for a net increase of five alternative links.

Adequacy of Existing Service and Need for the Transmission Line

66. The Sand Lake-to-Solstice proposed transmission facilities are needed to: (1) support load growth in the Far West Texas area; (2) address reliability violations under Electric Reliability Council of Texas, Inc. (ERCOT) reliability criteria and North American Electric Reliability Corporation (NERC) reliability standards; and (3) provide the infrastructure necessary to facilitate future transmission system expansion to continue to support that load growth.

67. The Far West Texas area is experiencing rapidly growing load due primarily to oil and natural gas production, processing, and transportation, as well as associated economic expansion. On the nearby Culberson Loop transmission lines, between 2012 and 2017 the load rose from 29.3 megawatts (MW) to 246.4 MW.

68. Based solely on actual load increases for Oncor substations and confirmed customer load increases (based on financially committed customer contracts), loads on the Culberson Loop lines are expected to increase significantly, with projected 2019 non-coincident summer peak load on these lines of 902 MW, and ultimately 1,549 MW of projected non-coincident summer peak load on these lines by 2022.

69. If the load projection parameters are expanded to take into account pending requests that are currently being studied and contractually negotiated between Oncor and customers, there is a probable likelihood of even further growth for non-coincident summer peak loads. Current projections estimate that, the non-coincident summer peak load will grow to 1,406 MW by 2020; 1,563 MW by 2021; and 1,639 MW by 2022.

70. In April 2016, Oncor and AEP Texas submitted a suite of projects known as the Far West Texas Project for review by ERCOT's Regional Planning Group, an independent organization under PURA § 39.151.

71. ERCOT performed steady state and dynamic stability power flow studies during its review of the Far West Texas Project and found multiple violations under NERC Reliability Standard TPL-001-4.

72. When reviewing the Far West Texas Project, ERCOT's steady state analysis identified the following violations: thermal violations on multiple lines in the Barilla Junction Area under single contingencies in both of the generation cases it studied; unsolvable contingencies; and various voltage violations and unacceptable voltage deviations in the Culberson Loop under one or both cases studied.

73. ERCOT conducted detailed analyses and tests of four short-listed options. In June 2017, ERCOT's Board of Directors endorsed construction of, among other things, a new 345-kV transmission line extending from Bakersfield to Solstice, to be built by LCRA and AEP Texas on double-circuit-capable 345-kV structures with one 345-kV circuit initially installed, and expansion of Solstice to include the installation of a 345-kV ring-bus arrangement with two 600 MVA, 345/138-kV autotransformers.

74. In February 2018, Oncor submitted a suite of projects known as the Far West Texas Project 2 to ERCOT's Regional Planning Group.

75. ERCOT conducted a review of the Far West Texas Project 2, found multiple reliability violations under NERC Reliability Standard TPL-001-4, and conducted detailed analyses of three short-listed options. In June 2018, ERCOT's Board of Directors endorsed construction of, among other things, a variation of the proposed Far West Texas Project 2 to include the Sand Lake-to-Solstice double-circuit 345-kV line, expansion of the Sand Lake switch and additions at the Solstice switch, and a second circuit on the Bakersfield-to-Solstice line, and it endorsed them as tier 1 transmission projects needed to support the reliability of the ERCOT transmission system. Further, ERCOT's Board of Directors endorsed the proposed transmission facilities as critical to the reliability of the ERCOT transmission system under 16 TAC § 25.101(b)(3)(D).

76. The Commission's certification rule, 16 TAC § 25.101(b)(3)(A)(ii)(I), states that ERCOT's recommendation must be given great weight in determining the need for a proposed transmission line project.

77. As approved by ERCOT, the Far West Texas Project 2 includes the following components relevant to the Sand Lake-to-Solstice project: (i) expansion of the Sand Lake switch station to install two new 600 MVA, 345/138-kV autotransformers as well as additions at the Solstice switch station; and (ii) construction of an approximately 40-mile, 345-kV transmission line on double-circuit structures, with two circuits in place between Sand Lake and Solstice.

78. During the course of its reviews, ERCOT evaluated numerous alternatives based on variations of different transmission solutions before endorsing the proposed transmission facilities as components of ERCOT's overall recommended transmission solution.

79. ERCOT used cost and reliability performance comparisons to further narrow its analysis to several short-listed options to resolve the identified NERC violations, each of which included the Sand Lake-to-Solstice proposed transmission facilities.

80. The Sand Lake-to-Solstice proposed transmission facilities will facilitate robust wholesale competition by facilitating the delivery of economical electric power at 345-kV from existing and future generation resources located both inside and outside of the project study areas to existing and future electric customers in those areas.

81. The Sand Lake-to-Solstice project is not proposed to interconnect new transmission service customers.

82. Electric customers within the area of the Sand Lake-to-Solstice project and other customers in the ERCOT system will benefit from the improved transmission system reliability and capacity provided by the proposed transmission facilities.

83. Voltage upgrades, conductor bundling, and additional transformers were each considered and rejected as inadequate alternatives.

84. Distribution alternatives to the Sand Lake-to-Solstice proposed transmission facilities were considered and rejected because they would not improve the reliability and operational capability of the transmission system in the area.

85. All existing transmission facilities in the study areas were constructed and operate at 138-kV, and serve customers directly; thus, upgrading of voltage would require all customers and existing stations to be rebuilt to be served from 345-kV facilities.

86. Conductor bundling would not address the reliability and operational issues under the contingencies of concern because any bundled circuits would necessarily be located on the same structures as the existing 138-kV lines in the area. Additionally, bundling conductors does not provide bi-directional looped service capability, which is needed to address the reliability and operational flexibility for existing and future customers.

87. Adding transformers would not address the reliability and operational issues under the contingency of concern because new 345-138-kV transformers within the Culberson Loop would still be served from the planned Odessa EHV-to-Riverton/Moss-to-Riverton 345-kV transmission line.

88. The Sand Lake-to-Solstice proposed transmission facilities will address critical reliability issues resulting from rapid load growth in an area of oil and natural gas development and associated economic expansion; more specifically, the Sand Lake-to-Solstice project will support load growth in the area, address reliability violations under ERCOT protocols and NERC reliability standards, and provide infrastructure necessary to facilitate future transmission system expansion, all of which will improve service for new and existing customers in the area.

89. The Sand Lake-to-Solstice proposed transmission facilities will deliver 345-kV transmission to an area that is not currently served at this voltage.

90. The Sand Lake-to-Solstice proposed transmission facilities are the best way to ensure adequate voltage in the Far West Texas area based on considerations of engineering, efficiency, reliability, costs, and benefits.

91. The Sand Lake-to-Solstice proposed transmission facilities will improve transmission service in the Far West Texas area.

92. No party has challenged the need for the proposed transmission facilities, and a unanimous stipulation concerning the need for the facilities was admitted into evidence.

Effect of Granting Certificate on Other Utilities

93. The Sand Lake-to-Solstice proposed transmission facilities will not adversely affect service by other utilities in the area and will improve system reliability and capacity in the area.

Estimated Costs

94. The estimated costs for the alternative routes range from $98,220,000 to $126,903,000, excluding station costs.

95. Oncor estimates the project-related modifications at the Sand Lake switch will cost approximately $17.6 million. AEP Texas estimates the project-related modifications to the Solstice switch will cost approximately $10.1 million for upgrades to interconnect the transmission line from Sand Lake.

96. Oncor intends to finance its portion of the transmission facilities with a combination of debt and equity in compliance with its authorized capital structure.

97. AEP Texas intends to finance its portion of the transmission facilities with a combination of debt and equity.

Routes

98. Route 320 is estimated to cost $98,220,000, excluding station costs, which is the least expensive of the alternative routes and $28,683,000 less than the most expensive alternative route filed with the application.

99. Route 320 is 44.5 miles long and consists of links A, B2, B3, C2, D2, F3, G4, G51, I2, J1, J7, L1, and Z.

100. Three other routes were addressed in testimony and at the hearing on the merits. Excluding substation costs, route 41 would cost $99,818,000 and is 45.7 miles in length; route 324 would cost $105,272,000 and is 47.2 miles in length; and route 325 would cost $116,382,000 and is 53.7 miles in length.

101. Oxy and Concho proposed modifications to routes 325 and 320, but they had not obtained landowner consents from all landowners to implement those modifications as of March 19, 2019, when the record closed in this docket.

Prudent Avoidance

102. Prudent avoidance is defined in 16 TAC § 25.101(a)(6) as the "limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort."

103. The greatest number of habitable structures within 500 feet of the centerline of any alternative route is 66, and the least number of habitable structures within 500 feet of the centerline of any alternative route is two.

104. Route 320 has 38 habitable structures within 500 feet of the centerline, of which 34 are mobile living or office units that are temporarily in place and appear to have no permanent foundations or permanent utilities in place.

105. All of the alternative routes presented in the application, including route 320, conform to the Commission's policy of prudent avoidance as they reflect the limiting of exposure to electric and magnetic fields that can be avoided with reasonable investments of money and effort.

106. A modification to link B2 on route 320, proposed and agreed to by Plains Pipeline, would bisect the western turn in that link, and result in 12 of 36 habitable structures otherwise on that link being more than 500 feet from the centerline of the modified link.

Community Values

107. The majority of the Sand Lake-to-Solstice project area consists of rural, undeveloped land used primarily for oil and gas production, livestock grazing, and irrigated crop production.

108. None of the identified routes traverse a heavily populated residential area. Whenever possible, Oncor, AEP Texas, and Halff avoided identifying alternative route links near habitable structures.

109. The Sand Lake-to-Solstice proposed transmission facilities comport with the community values for the area it encompasses.

Using or Paralleling Compatible Rights-of-Way

110. In developing alternative routes, Oncor and AEP Texas took into account the use of the paralleling of existing right-of-way, apparent property boundaries, and natural or cultural features.

111. The alternative routes are adjacent to and parallel existing transmission lines, other existing right-of-way, and apparent property lines from 17.3% to 48.7% of the length of the route.

112. Route 320 is parallel to existing compatible corridors, including existing transmission lines, public roads and highways, railroads, and apparent property boundaries, for 27.2% of its length.

Engineering Constraints

113. The area encompassing the Sand Lake-to-Solstice proposed transmission facilities is undergoing rapid development in energy infrastructure.

Radio Towers and Other Electronic Installations

114. There are no commercial AM radio transmitters within 10,000 feet of the centerline of route 320.

115. There are no known FM, microwave, and other electronic installations located within 2,000 feet of the centerline of route 320. One such installation is located within 2,000 feet of the centerline of route 325, and two such installations are located within 2,000 feet of the centerline of route 324.

Airstrips and Airports

116. The number of Federal Aviation Administration-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of the centerline of the alternative routes ranges from zero to two.

117. There are no Federal Aviation Administration-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of the centerlines of route 320, 41, 324, or 325.

118. There are no private airstrips within 10,000 feet of the centerline of any of the alternative routes.

119. There are no heliports within 5,000 feet of the centerline of any of the alternative routes.

Irrigation Systems

120. With the exception of routes 370 and 404, none of the alternative routes, including route 320, impact any agricultural cropland with mobile irrigation systems.

Recreational and Park Areas

121. None of the alternative routes, including route 320, directly cross any park or recreational areas.

122. No parks or recreational areas are located within 1,000 feet of the centerline of any of the alternative routes, including route 320.

123. No significant impacts to the use of parks or recreation facilities located within the study area are anticipated from any of the alternative routes, including route 320.

Historical and Archaeological Values

124. The number of recorded cultural resource sites crossed by an alternative route ranges from zero to two.

125. Routes 320, 41, and 324 do not cross any recorded cultural resource sites.

126. Route 325 crosses one recorded cultural resource.

127. No significant impacts to historical and archaeological values are anticipated from route 320.

Aesthetic Values

128. The length of the route within the foreground visual zone of United States and state highways of the alternative routes ranges from 14,222 to 32,979 feet.

129. Routes 320, 41, and 324 each have 20,298 feet within the foreground visual zone of United States and state highways.

130. Route 325 has 32,979 feet within the foreground visual zone of United States and state highways.

Environmental Integrity

131. The environmental assessment and alternative route analysis analyzed the possible impacts of the Sand Lake-to-Solstice proposed transmission facilities on numerous different environmental factors.

132. Oncor, AEP Texas, and Halff appropriately performed an evaluation of the impacts of the Sand Lake-to-Solstice proposed transmission facilities on the environment, including endangered and threatened species.

133. It is appropriate that Oncor and AEP Texas minimize the amount of flora and fauna disturbed during construction of the transmission facilities.

134. It is appropriate that Oncor and AEP Texas re-vegetate cleared and disturbed areas using native species and consider landowner preferences in doing so.

135. It is appropriate that Oncor and AEP Texas avoid, to the maximum extent reasonably possible, causing adverse environmental impacts to sensitive plant and animal species and their habitats as identified by the Texas Parks and Wildlife Department and the United States Fish and Wildlife Service.

136. It is appropriate that Oncor and AEP Texas implement erosion control measures and return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowners. It is not appropriate that Oncor and AEP Texas restore original contours and grades where different contours and grades are necessary to ensure the safety or stability of any transmission line's structures or the safe operation and maintenance of the transmission lines.

137. It is appropriate that Oncor and AEP Texas exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the right-of-way, and such herbicide use must comply with the rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.

138. It is appropriate that Oncor and AEP Texas use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.

139. The Sand Lake-to-Solstice proposed transmission facilities are not anticipated to significantly adversely affect populations of any federally-listed endangered or threatened species.

140. No significant impacts to geological resources, hydrological resources, wetland resources, ecological resources, endangered and threatened species, land use, or environmental integrity are anticipated because of the construction of the Sand Lake-to-Solstice proposed transmission facilities.

Probable Improvement of Service or Lowering of Consumer Cost

141. The Sand Lake-to-Solstice proposed transmission facilities are needed to satisfy reliability and load growth issues in the project area, and it will result in improved service to electric customers for the reasons described in the findings of fact addressing the need for the Sand Lake to Solstice proposed transmission facilities.

Texas Parks and Wildlife Department's Comments and Other Environmental Recommendations

142. On January 15, 2019, the Texas Parks and Wildlife Department filed a letter making various comments and recommendations regarding the Sand Lake-to-Solstice proposed transmission facilities.

143. Texas Parks and Wildlife Department's comment letter addressed issues relating to impacts on ecology and the environment, but did not consider the other factors the Commission and utilities must consider in CCN applications.

144. Oncor, AEP Texas, and Halff have taken into consideration the recommendations offered by the Texas Parks and Wildlife Department.

144A. No modifications to the Sand Lake-to-Solstice proposed transmission facilities are required because of the recommendations and comments made by the Texas Parks and Wildlife Department.

145. Halff relied on habitat descriptions from various sources, including the Texas Natural Diversity Database and other sources provided by the Texas Parks and Wildlife Department, along with observations from field reconnaissance, to determine whether habitat for some species is present in the area encompassing the transmission facilities.

146. Once the Commission approves a route, Oncor and AEP Texas can each undertake on-the-ground measures to identify potential endangered or threatened species' habitats and respond appropriately.

147. Oncor and AEP Texas each stated it will use avoidance and mitigation procedures to comply with laws protecting federally listed species.

148. Oncor and AEP Texas each stated it will revegetate the new right-of-way as necessary and according to Oncor's and AEP Texas's vegetation management practices, the storm water pollution prevention plan developed for construction of the Sand Lake-to-Solstice proposed transmission facilities, and, in many instances, landowner preferences or requests.

149. Oncor's and AEP Texas's standard vegetation removal, construction, and maintenance practices adequately mitigate concerns expressed by the Texas Parks and Wildlife Department.

150. Oncor and AEP Texas each stated it will use appropriate avian protection procedures.

151. Oncor and AEP Texas each stated it will comply with all environmental laws and regulations, including those governing threatened and endangered species.

152. Oncor and AEP Texas each stated it will comply with all applicable regulatory requirements in constructing the Sand Lake-to-Solstice proposed transmission facilities, including any applicable requirements under Section 404 of the Clean Water Act.

153. Oncor and AEP Texas each stated it will coordinate with the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department if threatened or endangered species' habitats are identified during field surveys.

154. Environmental permitting and mitigation measures are determined after a route is approved by the Commission and on-the-ground surveys are completed for the route. Should construction affect federally-listed species or their habitat or affect water under the jurisdiction of the United States Army Corps of Engineers or the Texas Commission on Environmental Quality, Oncor and AEP Texas each stated it will coordinate with the United States Fish and Wildlife Service, United States Army Corps of Engineers, and the

Texas Commission on Environmental Quality as appropriate to coordinate permitting and any required mitigation.

155. The standard mitigation requirements included in the ordering paragraphs in this Order, coupled with Oncor's and AEP Texas's current practices, are reasonable measures for a transmission service provider to undertake when constructing a transmission line and are sufficient to address the Texas Parks and Wildlife Department's comments and recommendations.

Permits

156. Before beginning construction of the Sand Lake-to-Solstice proposed transmission facilities, it is appropriate for Oncor and AEP Texas to each conduct a field assessment of each utility's portion of the transmission line to identify water resources, cultural resources, potential migratory bird issues, and threatened and endangered-species' habitats impacted as a result of the transmission line. As a result of these assessments, Oncor and AEP Texas will each identify any additional permits that are necessary, will consult any required agencies, will obtain all necessary permits, and will comply with the relevant permit conditions during construction and operation of their respective portions of the transmission line.

Coastal Management Program

157. Under 16 TAC § 25.102(a), the Commission may grant a certificate for the construction of generating or transmission facilities within the coastal boundary only when it finds that the proposed facilities are consistent with the applicable goals and policies of the Coastal Management Program or that the proposed facilities will not have any direct and significant impacts on any of the applicable coastal natural resource areas.

158. No part of the Sand Lake-to-Solstice proposed transmission facilities are located within the boundary of the Coastal Management Program as defined in 31 TAC § 501.3(b).

Effect on the State's Renewable Energy Goal

159. The Texas Legislature established a goal in PURA § 39.904(a) for 10,000 megawatts of renewable capacity to be installed in Texas by January 1, 2025. This goal has already been met.

160. The Sand Lake-to-Solstice proposed transmission facilities will not adversely affect the goal for renewable energy development established in PURA § 39.904(a).

Limitation of Authority

161. It is reasonable and appropriate for a CCN order not to be valid indefinitely because it is issued based on the facts known at the time of issuance.

162. Seven years is a reasonable and appropriate limit to place on the authority granted in this Order to construct the transmission facilities.

II. Conclusions of Law

1. Oncor is a public utility as defined in PURA § 11.004 and an electric utility as defined in PURA § 31.002(6).

2. AEP Texas is a public utility as defined in PURA § 11.004 and an electric utility as defined in PURA § 31.002(6).

3. Oncor and AEP Texas each must obtain the approval of the Commission to construct the proposed transmission facilities and provide service to the public using those facilities.

3A. PURA § 37.0541 required the consolidation of this proceeding (the application to amend Oncor's and AEP Texas's CNNs for construction of the Sand Lake-to-Solstice transmission line) with a separate proceeding (the application in Docket No. 48787 to amend LCRA's and AEP Texas's CCNs for construction of the Bakersfield-to-Solstice transmission line) because the two lines share a common point of intersection.

4. The application is sufficient under 16 TAC § 22.75(d).

5. This docket was processed in accordance with the requirements of PURA, the Administrative Procedure Act,[3] and the Commission's rules.

6. Oncor and AEP Texas each provided proper notice of the application in compliance with PURA § 37.054 and 16 TAC § 22.52(a).

[3] Administrative Procedure Act, Tex. Gov't Code §§ 2001.001–.902.

7. Additional notice of the modified routes is not required under 16 TAC § 22.52(a)(3)(c). Oncor and AEP Texas are required to provide notice under 16 TAC § 22.52(a)(6).

8. Oncor and AEP Texas each provided notice of the public open house meeting in compliance with 16 TAC § 22.52(a)(4).

9. The Sand Lake-to-Solstice proposed transmission facilities using route 320, with a modifications to link B2, J1 and J7 are necessary for the service, accommodation, convenience, or safety of the public within the meaning of PURA § 37.056(a).

10. The Texas Coastal Management Program does not apply to any of the transmission facilities proposed in the application, and the requirements of 16 TAC § 25.102 do not apply to the application.

11. [Deleted]

12. The Commission has jurisdiction and authority over this matter under PURA §§ 14.001, 32.001, 37.051, 37.053, 37.054, and 37.056.

13. SOAH has jurisdiction to conduct a hearing on the merits and to prepare a proposal for decision under PURA § 14.053 and Texas Government Code §§ 2003.021 and 2003.049.

14. The hearing on the merits was set, and notice of the hearing was provided, in compliance with PURA § 37.054 and Texas Government Code §§ 2001.051 and 2001.052.

15. [Deleted]

III. Ordering Paragraphs

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

1. The Commission adopts the proposal for decision, including findings of fact and conclusions of law, except as discussed in this Order.

2. The Commission approves the construction and operation of the Sand Lake-to-Solstice proposed transmission facilities, as specified in this Order on route 320, comprised of the following links: A, B2, B3, C2, D2, F3, G4, G51, I2, J1, J7, L1, Z, with the modification

to link B2 as recommended in the PFD and the modification to links J1 and J7 proposed by Concho (as reflected in Concho exhibit 2, page 15).

3. The Commission amends Oncor's CCN number 30158 to include the construction and operation of the transmission facilities requested along links A, B2 modified, C2, D2, F3, and G4, including the dead-end structure located at the node between the links G4 and G51 and labeled as the Sand Lake-to-Solstice terminus that will establish a new interconnections between Oncor and AEP Texas.

4. The Commission amends AEP Texas's CCN number 30170 to include the construction and operation of the transmission facilities requested along links Z, L1, J7 modified, J1 modified, I2 and G51, excluding the dead-end structure located at the node between the links G4 and G51 and labeled as the Sand Lake-to-Solstice terminus..

5. The Commission limits the authority granted by this Order to a period of seven years from the date the order is signed unless the Sand Lake-to-Solstice transmission line is commercially energized before that time.

6. If Oncor or AEP Texas or their contractors encounter any archaeological artifacts or other cultural resources during project construction, work must cease immediately in the vicinity of the artifact or resource and the discovery must be reported to the Texas Historical Commission. In that situation, Oncor and AEP Texas each must take action as directed by the Texas Historical Commission.

7. Oncor and AEP Texas each must follow the procedures to protect raptors and migratory birds as outlined in the following publications: *Reducing Avian Collisions with Power Lines: State of the Art in 2012*, Edison Electric Institute and Avian Power Line Interaction Committee (APLIC); Washington, D.C. 2012; *Suggested Practices for Avian Protection on Power Lines, The State of the Art in 2006*, Edison Electric Institute, APLIC and the California Energy Commission, Washington, DC and Sacramento, CA, 2006; and the *Avian Protection Plan Guidelines*, APLIC and United States Fish and Wildlife Service, April 2005. Oncor and AEP Texas each must take precautions to avoid disturbing occupied nests and take steps to minimize the impact of construction on migratory birds during the nesting season of the migratory bird species identified in the area of construction.

8. Oncor and AEP Texas each must exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within rights-of-way. Oncor and AEP Texas each must ensure that the use of chemical herbicides to control vegetation within the rights-of-way complies with the rules and guidelines established in the Federal Insecticide, Fungicide, and Rodenticide Act and with Texas Department of Agriculture regulations.

9. Oncor and AEP Texas each must minimize the amount of flora and fauna disturbed during construction of the transmission line, except to the extent necessary to establish appropriate right-of-way clearance for the transmission line. In addition, Oncor and AEP Texas each must re-vegetate using native species and must consider landowner preferences and wildlife needs in doing so. Furthermore, to the maximum extent practical, Oncor and AEP Texas each must avoid adverse environmental impact to sensitive plant and animal species and their habitats, as identified by the Texas Parks and Wildlife Department and the United States Fish and Wildlife Service.

10. Oncor and AEP Texas each must implement erosion control measures as appropriate. Erosion control measures may include inspection of the right-of-way before and during construction to identify erosion areas and implement special precautions as determined reasonable to minimize the impact of vehicular traffic over the areas. Oncor and AEP Texas each must return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowner or the landowner's representative. Neither Oncor nor AEP Texas will be required to restore original contours and grades where a different contour or grade is necessary to ensure the safety or stability of the structures or the safe operation and maintenance of the line.

11. Oncor and AEP Texas each must use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.

12. Oncor and AEP Texas each must cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the proposed transmission line facilities. Any minor deviations in the approved route must only directly affect

landowners who received notice of the transmission line in accordance with 16 TAC § 22.52(a)(3) and landowners that have agreed to the minor deviation.

13. Due to the specific circumstances related to the Permian Basin and in the area of the proposed transmission facilities in particular, Oncor and AEP Texas are each 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 condition are met. First, Oncor and AEP Texas each must 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 must result in a reasonably direct path toward the terminus of the line and not cause an unreasonable increase in cost or delay the project. Unless these two conditions are met, this paragraph does not authorize either Oncor or AEP Texas to deviate from the approved route.

14. Oncor and AEP Texas each must conduct surveys, if not already completed, to identify metallic pipelines that could be affected by the transmission line and coordinate with pipeline owners in modeling and analyzing potential hazards because of alternating-current interference affecting pipelines being paralleled.

15. If possible, and subject to the other provisions of this Order, Oncor and AEP Texas each must prudently implement appropriate final design for the transmission lines to avoid being subject to the FAA's notification requirements. If required by federal law, Oncor and AEP Texas each must notify and work with the FAA to ensure compliance with applicable federal laws and regulations. Neither Oncor nor AEP Texas are authorized to deviate materially from this Order to meet the FAA's recommendations or requirements. If a material change would be necessary to comply with the FAA's recommendations or requirements, Oncor and AEP Texas each must file an application to amend their CCNs as necessary.

16. Oncor and AEP Texas each must identify any additional permits that are necessary, each must consult any required agencies (such as the United States Army Corps of Engineers and the United States Fish and Wildlife Service), each must obtain all necessary

environmental permits, and each must comply with the relevant conditions during construction and operation of the proposed transmission facilities.

17. Oncor and AEP Texas each must include the transmission facilities approved by this Order on their monthly construction progress reports before the start of construction to reflect the final estimated cost and schedule in accordance with 16 TAC § 25.83(b). In addition, Oncor and AEP Texas each must provide final construction costs, with any necessary explanation for cost variance, after completion of construction when all costs have been identified.

18. The Commission denies all other motions, and any other requests for general or specific relief, if not expressly granted.

Signed at Austin, Texas the 26th day of June 2019.

PUBLIC UTILITY COMMISSION OF TEXAS

DEANN T. WALKER, CHAIRMAN

ARTHUR C. D'ANDREA, COMMISSIONER

SHELLY BOTKIN, COMMISSIONER

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