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JOINT APPLICATION OF ELECTRIC TRANSMISSION TEXAS, LLC AND SHARYLAND UTILITIES, L.P. TO AMEND THEIR CERTIFICATES OF CONVENIENCE AND NECESSITY FOR THE PROPOSED NORTH EDINBURG TO LOMA ALTA DOUBLE-CIRCUIT 345-KV TRANSMISSION LINE IN HIDALGO AND CAMERON COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE** **OF** **ADMINISTRATIVE HEARINGS**

JOINT APPLICANTS' INITIAL BRIEF

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I. INTRODUCTION

Based upon an independent analysis by ERCOT Staff and participation by all transmission service providers (TSPs), the ERCOT Board of Directors endorsed a single-circuit 345 kV transmission line on double-circuit structures from the North Edinburg Substation to the Loma Alta Substation, routed "in proximity to" the South McAllen Substation, as the best short- and long-term solution to address reliability issues in the Lower Rio Grande Valley (LRGV).[1] No one has disputed the short-term need for this transmission project to reliably deliver electricity from North Edinburg to Loma Alta, and the ERCOT Board of Directors has deemed the project critical to the reliability of the ERCOT grid in the LRGV. With respect to the long-term needs of the LRGV, the independent review found that there would need to be an interconnection at South McAllen to relieve overloaded transmission lines in the McAllen area and to allow for additional north-to-south flow of electricity on the western half of the LRGV.[2] The independent review stated this connection would be needed by 2020. Since that time, additional evaluations by ERCOT suggest that the interconnection might be needed much earlier, with some more recent ERCOT documents suggesting as early as 2016.

In order to address the long-term needs of the LRGV and implement the ERCOT Board of Directors' directive that the project be routed in proximity to the South McAllen Substation (in anticipation of a future interconnection),[3] Joint Applicants balanced several factors to best facilitate a future connection (*e.g.*, routing constraints, the location of existing lines, proximity to the station, existing and future development).[4] Based on this analysis, Joint Applicants developed an approximately three-mile "Routing Circle" around the South McAllen Substation,[5] which encompasses the general area through which routes must pass in order to best facilitate a future interconnection there.[6] All of the 32 routes originally proposed passed through this Routing Circle.[7]

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[1] Application, JA Ex. 1 at 5.

[2] *Id.*, Attachment 6 at 24.

[3] *Id.* at 1-2.

[4] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 23.

[5] *Id.* at MEC-2.

[6] Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 24 and 25.

[7] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 22.

Several parties attacked the need for routing "in proximity to" the South McAllen Substation, and therefore, by extension, Joint Applicants' focus on routes that pass through the Routing Circle.[8] Following a preliminary hearing on route adequacy, the ALJ issued Order No. 6, ordering Joint Applicants to supplement the original 32 routes proposed in the Application with additional routes, using previously filed links, that do not pass through the Routing Circle (the Supplemental Routes).[9] Importantly, the ALJ did not reject the original 32 routes, but instead requested that the Application be amended to include additional routes that do not pass through the Routing Circle. In response to Order No. 6, Joint Applicants amended the Application to include ten Supplemental Routes, bringing the total number of routes under consideration to 42, 32 of which are routed through the Routing Circle and ten of which are not.[10]

Prior to the hearing on the merits, numerous intervenors coalesced around one of the Supplemental Routes (Route 3S), subject to a few proposed modifications, which ultimately was referred to as the "Agreed Route." This route is supported by the majority of the intervening parties that remain in the proceeding. Staff for the Public Utility Commission of Texas (Staff) recommended approval of another Supplemental Route (Route 1S).[11] Joint Applicants continue to support Route 32 as the route they initially identified as best satisfying the requirements of PURA and the Commission's Substantive Rules.[12] Route 32 is the only route of these three passing through the Routing Circle, it is the best long-term transmission planning solution, and it impacts the fewest number of habitable structures. That said, Joint Applicants support the work that intervenors have done to try to reach an agreement among the majority of remaining intervening parties along the Agreed Route. This is a very challenging routing project and the fact that the majority of intervening parties remaining in the case have been able to develop an Agreed Route is a considerable accomplishment. Additionally, agreement around a route is important for several reasons: it facilitates ROW acquisition and construction, reflects community values, gives landowners input into how their land is affected by the project, and

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[8] *See, e.g.*, Joint Landowners' Statement Challenging Adequacy of Routes and Request for Preliminary Hearing on Route Adequacy at 2 (Sept. 17, 2013).

[9] SOAH Order No. 6 (Oct. 21, 2013).

[10] Amended Application in Response to Order No. 6, JA Ex. 11.

[11] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 33.

[12] Supplemental Direct Testimony of Mark E. Caskey, JA Ex. 12 at 4.

generally eases the burden on the community by focusing the impacts of the line on willing landowners. As such, Joint Applicants would not oppose approval of the Agreed Route. Based on the evidence and argument at the Hearing on the Merits, the three routes upon which the parties have focused are shown on the map in Joint Applicants' Exhibit 20. However, Joint Applicants will construct any route or combination of noticed links selected by the Commission.

II. JURISDICTION, NOTICE, AND PROCEDURAL HISTORY

A. Jurisdiction

The Commission has jurisdiction under PURA §§ 14.001, 32.001, 37.051, 37.053, 37.054, and 37.056. The State Office of Administrative Hearings (SOAH) has jurisdiction over matters relating to the conduct of the hearing under PURA § 14.053 and TEX. GOV'T. CODE ANN. § 2003.049.

B. Notice

Joint Applicants complied with the requirements of P.U.C. PROC. R. 22.52 by providing proper notice to utilities, city and county governments, and directly affected landowners.[13] In addition, Joint Applicants published notice in newspapers having general circulation in the counties where the CCN is being requested.[14] Joint Applicants also provided notice for and hosted seven public meetings in Cameron and Hidalgo Counties to inform landowners and solicit additional public input about the project.[15] On August 9, 2013, Staff recommended that notice be determined sufficient.[16]

C. Procedural History

Joint Applicants filed the Application and direct testimony on July 3, 2013.[17] On July 8, 2013, the Commission issued its Order of Referral and Preliminary Order referring this proceeding to SOAH and identifying the issues to be addressed.[18]

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[13] Proof of Notice, JA Ex. 15.

[14] *Id.*

[15] Application, JA Ex. 1 at 16 and 17.

[16] Staff's Recommendation on Sufficiency of Notice (Aug. 9, 2013).

[17] Application, JA Ex. 1.

[18] Order of Referral (Jul. 8, 2013).

On July 22, 2013, SOAH held the first of two prehearing conferences, and on July 24, 2013, issued Order No. 2, adopting the proposed procedure schedule, admitting several intervenors, and modifying the service procedures. On July 24, 2013, SOAH issued Amended Order No. 2, correcting an error in Order No. 2. On August 16, 2013, SOAH issued Order No. 3, giving notice of the second prehearing conference, modifying discovery procedures, and re-urging that all parties must file testimony and/or a statement of position or be dismissed from the proceeding.

On August 30, 2013, SOAH held the second prehearing conference, and on September 9, 2013, issued Order No. 4, finding good cause pursuant to P.U.C. PROC. R. 25.101(b)(3)(D) to extend the 180-day deadline for decision in this proceeding by approximately two months although the transmission line project was designated critical to reliability. The order amended the procedural schedule, suspended traditional service, and resolved most outstanding requests to intervene.[19]

On September 17, 2013, several parties filed route adequacy challenges. On September 27, 2013, Joint Applicants filed their response, including additional direct testimony responding to the issues to be addressed in the preliminary hearing on route adequacy. The preliminary hearing on route adequacy was held on October 8, 2013. On October 21, 2013, the ALJ issued SOAH Order No. 6, finding that the Application contained an adequate number of routes, but ordering Joint Applicants to amend the original Application to include ten supplemental routes, using existing links, that were not routed through the South McAllen Substation Routing Circle.

Intervenors filed direct testimony by November 8, 2013. Commission Staff filed direct testimony on November 22, 2013. Joint Applicants filed rebuttal testimony on November 26, 2013. The hearing on the merits was held on December 3 and 4, 2013. Proposed findings of fact providing a more detailed procedural history are included in Attachment A to this brief.

[19] SOAH Order No. 4 at 1-3, 5-6, 8-9 (Sept. 9, 2013).

III. PRELIMINARY ORDER ISSUES

A. Preliminary Order Issue No. 1

Is Joint Applicants' application to amend its CCN adequate?

Yes.[20] Apart from issues relating to route adequacy, which were resolved through Order No. 6 and Joint Applicants' supplemental routes, no party has questioned the adequacy of the Application.

Does the application contain an adequate number of alternative routes to conduct a proper evaluation?

As acknowledged in Order No. 6, the Application presents an adequate number of geographically diverse alternative routes to allow the Commission to conduct a proper evaluation,[21] a finding that no party has appealed or contested.[22] Joint Applicants originally filed 32 routes routed "in proximity to" the South McAllen Substation through a reasonably developed Routing Circle to address ERCOT's recommendation, Order No. 6 directed Joint Applicants to amend the Application to include ten supplemental routes not routed through the South McAllen Routing Circle, Joint Applicants did so, and no party has challenged the adequacy of the Amended Application.

B. Preliminary Order Issue No. 2

Are the proposed facilities necessary for the service, accommodation, convenience, or safety of the public within the meaning of PURA § 37.056(a) taking into account the factors set out in PURA § 37.056(c)?

Yes, they are. This project has been endorsed and deemed "critical to reliability" by the ERCOT Board of Directors.[23] Under P.U.C. SUBST. R. 25.101(b)(3)(A)(ii)(I), ERCOT's endorsement must be given "great weight" in determining the need for a new transmission line, and no ERCOT Board-endorsed reliability project that has gone through the Regional Planning Group (RPG) has ever been rejected by the Commission.[24]

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[20] Direct Testimony of Michael J. Lee at 34, Staff Ex. 1.

[21] SOAH Order No. 6 at 24-25 (Oct. 21, 2013).

[22] *See* Joint Stipulation and Agreement Regarding Order No. 6 (Oct. 28, 2013).

[23] Application, JA Ex. 1, Attachment 6 at 1-2.

[24] Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 23. *Accord* Preliminary Hearing Tr. at 55 (Oct. 8, 2013).

As an ERCOT Tier 1 project, the project has undergone the highest possible level of scrutiny in the ERCOT process.[25] First, it underwent a six month review (beginning May 2011 and ending December 2011) by the ERCOT Regional Planning Group (RPG),[26] which includes every TSP,[27] as well as a diverse array of other stakeholders,[28] who provide extensive comments on proposed projects.[29] After the comment period, the project was further subjected to an independent review by ERCOT Staff[30] and additional comments by RPG participants,[31] before the project was sent to the Technical Advisory Committee (TAC) for review and consideration.[32] After considering multiple different proposals, TAC voted 28-2 in favor of the project.[33] After the TAC vote, the ERCOT staff presented the proposal to the Board for final approval,[34] which was memorialized in the ERCOT "endorsement letter" provided in the Application.[35] In short, there is a process—facilitated by ERCOT staff—by which stakeholders review (and the ERCOT Board endorses) transmission projects to be constructed in ERCOT,[36] and this process was properly conducted in this case.[37]

No witness in this proceeding has disputed that the project is needed by 2016 to resolve reliability issues in the Brownsville area. The primary disputed issue is whether and how closely to follow ERCOT's recommendation that the project be routed "in proximity to" the existing South McAllen Substation.[38] As more fully set forth below in response to Preliminary Order

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[25] ERCOT Protocols §§ 3.11.4.1-3.11.4.9, *available at* http://www.ercot.com/content/mktrules/nprotocols/current/03-100113_Nodal.doc.

[26] Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 20-22.

[27] ERCOT Protocols § 3.11.3, *available at* http://www.ercot.com/content/mktrules/nprotocols/current/03-100113_Nodal.doc.

[28] *Id.*; Preliminary Hearing Tr. at 114-15 (Oct. 8, 2013).

[29] Preliminary Hearing Tr. at 179-81.

[30] *See* Application, JA Ex. 1, Attachment 6 at 3-32.

[31] Preliminary Hearing Tr. at 180-82, 188.

[32] *Id.* at 73, 189.

[33] *Id.* at 74-77; ERCOT Staff Presentation to TAC, JL Ex. 8 at 10, 12; ERCOT Review Process Minutes & Memorandum, JL Ex. 6 at 13; Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 22.

[34] Preliminary Hearing Tr. at 189.

[35] *See* Application, JA Ex. 1, Attachment 6 at 1-2.

[36] Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 20-23.

[37] *Id.* at 23.

[38] *See* Application, JA Ex. 1, Attachment 6 at 1.

Question No. 4, Joint Applicants continue to believe that the routes passing through the Routing Circle present the best long-term transmission planning solution to the needs identified by ERCOT.

a) How does the proposed facility support the reliability and adequacy of the interconnected transmission system?

As outlined in the ERCOT Review[39] and Mr. Caskey's testimony,[40] the project is needed to address three severe transmission line outage scenarios in the Brownsville area that could not be relieved by re-dispatch of generation. Additional information concerning the need for the project is contained in the proposed findings of fact included in Attachment A to this brief. Additionally, as discussed above, this project represents the best long-term transmission planning solution to reliability issues in the western LRGV.

b) Does the proposed facility facilitate robust wholesale competition?

Yes. The project reduces transmission congestion and thereby facilitates the economic flow of power, it provides access to new generation, and allows for more diverse transmission configurations.[41]

c) What recommendation, if any, has an independent organization, as defined in PURA § 39.151, made regarding the proposed facility?

This project has been endorsed and been deemed "critical to reliability" by the ERCOT Board of Directors.[42] A copy of the Board's endorsement and ERCOT's independent review is provided as Attachment 6 to the Application.

ERCOT recommended this project be routed "in proximity to" the South McAllen Substation in anticipation of a future connection. Though ERCOT did not recommend a direct connection to the South McAllen Substation in this project,[43] it modeled a future direct connection.[44] To facilitate this future connection, Joint Applicants devised routes that passed as

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[39] *Id.*, Attachment 6.

[40] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 11-14.

[41] *Id.* at 20.

[42] Application, JA Ex. 1, Attachment 6 at 1-2.

[43] *Id.* at 29; Preliminary Hearing Tr. at 31-32 ("extremely close"); Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 26 n.26 ("close proximity").

[44] Application, JA Ex. 1, Attachment 6 at 24, 29. Further, it is the connectivity—not type—of the connection that is significant. Deposition of Jeff Billo, JL Ex. 12 at Exhibit 11 at 44, 100.

close as practicable to the South McAllen Substation to enable an electrically efficient and low-impedance future connection[45] (a crucial consideration in alleviating overloads).[46] Thus, the original 32 routes proposed in the Application pass through a "Routing Circle" that reflects the (1) space for a future substation adjacent to or near the South McAllen Substation; (2) space for routing into and out of the future substation to facilitate the interconnection to the South McAllen Substation; (3) location of existing 138 kV lines; (4) upgrade status of existing 138 kV lines that could be potentially used to facilitate the interconnection, as well as considering the local constraints "in proximity to" the South McAllen Substation, including dense residential areas to the west/southwest, an airport to the north, continued development in the area of the South McAllen Substation, and several 138 kV lines.[47] This approach preserves for the Commission several routing alternatives "in proximity to" the South McAllen Substation for the future connection. While intervenors are correct that ERCOT did not direct or review this Routing Circle,[48] this was because ERCOT staff views its role as providing the technical analysis to support its determination that there is a need for a future South McAllen Substation interconnection to the new 345 kV transmission line. ERCOT leaves routing decisions to the utilities and Commission.[49] According to ERCOT witness Jeff Billo, ERCOT's concern is that the line be routed "in proximity to" the South McAllen Substation such that a future connection can be made to address the overloaded conditions on the 138 kV lines in the area.[50]

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[45] Preliminary Hearing Tr. at 146-49, 190.

[46] *Id.* at 190.

[47] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 23.

[48] Statement on Position Challenging Route Adequacy on Behalf of EIA/Dougherty Properties at 4 (Sept. 17, 2013). *See also* City of McAllen's Statement of Position Challenging Route Adequacy at 3 (Sept. 17, 2013); Joint Landowners' Statement Challenging Adequacy of Routes and Request for Preliminary Hearing on Route Adequacy at 4 (Sept. 17, 2013); Barreda Gardens Partnership et al.'s Statement of Position on Route Adequacy at 4 (Sept. 17, 2013); Joint Statement of Position on Route Adequacy of Elizabeth Grace (Betty) Perez et al. at 4 (Sept. 17, 2013).

[49] Deposition of Jeff Billo, JL Ex. 12, Exhibit 11 at 72 ("our view of that situation was we wanted to provide technical analysis but leave it to the T[ransmission] S[ervice] P[roviders] and the Public Utility Commission to determine what was appropriate"); *id.* at 81-82 (stating that ERCOT's recommendation that the project be routed in proximity to South McAllen was done with the expectation that its recommendation would be interpreted by the Commission and TSPs); *id.* at 81 (ERCOT "saw a technical need to have a 345- to 138-kV connection at South McAllen," but left the determination of what constitutes proximity to the Commission and TSPs). *See also* Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 22-23.

[50] Deposition of Jeff Billo, JL Ex. 12, Exhibit 11 at 44, 100.

d) Is the proposed facility needed to interconnect a new transmission service customer?

No.

C. Preliminary Order Issue No. 3

Is the transmission project the better option to meet this need when compared to employing distribution facilities?

Yes. Since the reliability issues addressed by the Project are associated with a large area of South Texas, distribution alternatives were not a viable solution.[51] Further, Joint Applicants are not bundled utilities and so cannot control the amount or location of distributed generation (DG) in the LRGV and by law cannot provide DG themselves.[52]

If Joint Applicants are not subject to the unbundling requirements of PURA § 39.051, is the project the better option to meet the need when compared to a combination of distributed generation and energy efficiency?

Not applicable. Since the reliability issues addressed by the Project are associated with a large area of the LRGV, DG would not be a viable alternative.[53] Although DG is available in the competitive market, Joint Applicants are not bundled utilities and cannot control the amount or location of DG available in the LRGV and by law cannot provide DG themselves.[54]

D. Preliminary Order Issue No. 4

Which proposed transmission line route 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)?

All of the line links in Joint Applicants' initially proposed 32 routes and the proposed ten supplemental routes are viable and compliant with applicable routing criteria. In addition, Joint Applicants will construct any combination of noticed links selected by the Commission. Although Joint Applicants did not join the Joint Stipulation of Agreed and Supporting Parties entered into by numerous intervenors supporting the Agreed Route, Joint Applicants do not oppose the Agreed Route.

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[51] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 18; Direct Testimony of Michael J. Lee, Staff Ex. 1 at 15.

[52] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 18.

[53] *Id.*

[54] *Id.*

However, Joint Applicants continue to believe that Route 32 best addresses the requirements in PURA § 37.056(c) and P.U.C. SUBST. R. 25.101(b)(3)(B). Joint Applicants' conclusion is supported by the EA prepared by routing consultant POWER Engineers (POWER). POWER evaluated the original 32 alternative routes using 48 routing criteria addressing factors such as land use, aesthetics, cultural resources, the number of potentially affected habitable structures, and potential environmental impacts for each of the alternative routes. Based on that analysis, POWER recommended Route 32. Joint Applicants balanced POWER's environmental and land use analysis with engineering and construction constraints, costs, grid reliability, security issues, public input, community values, and ERCOT's recommendation that the Project be routed "in proximity to" the South McAllen Substation. Joint Applicants identified Route 32 as the route that best addresses the requirements of PURA and the Commission's Substantive Rules and believe Route 32 best facilitates a future connection at the South McAllen Substation.

Three factors in particular commend Route 32. First, Route 32 is the best long-term transmission planning solution, and therefore best supports a reliable and adequate transmission network. While there is an undisputed short-term need for this project in the Brownsville area on the *eastern* side of the LRGV, ERCOT also saw this project as an opportunity to address longer-term needs on the *western* side of the LRGV,[55] specifically, the need to relieve north-to-south congestion on the existing 138 kV transmission infrastructure around South McAllen.[56]

ERCOT's Independent Review, issued in December 2011, suggests that infrastructure improvements to the western LRGV will need to be deployed by 2020,[57] and subsequent documents from the past few months suggest that they might be needed even sooner than that—as early as 2016.[58] ERCOT has identified interconnecting a new 345 kV source to the existing transmission infrastructure around the South McAllen Substation as the best long-term solution to implement those infrastructure improvements.[59] Indeed, due to existing loadings, a new 345

[55] Application, JA Ex. 1, Attachment 6 at 24, 29.

[56] *Id.* at 24.

[57] *Id.*at 20.

[58] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 5-6, MEC-RT-1 & MEC-RT-2.

[59] Application, JA Ex. 1, Attachment 6 at 20.

kV source might be the **only** practicable method to relieve the overloaded 138 kV lines around the South McAllen Substation.[60]

As ERCOT recognized, this project presents an ideal opportunity to resolve these impending reliability issues on the western side of the LRGV.[61] Routing the project "in proximity to" the South McAllen Substation will help minimize the costs of implementing a future 345 kV interconnection.[62] It will also ease routing and reduce impacts on landowners by getting the 345 kV line as close as practicable to the South McAllen Substation **before** the continually growing area around South McAllen develops further.[63]

Second, Route 32 impacts the fewest habitable structures of any route. Because of the development density in the study area, all 42 routes impact a large number of habitable structures. However, Route 32 impacts the least of any route (465), more than two hundred fewer than the next route (Route 31).[64] Route 32 also minimizes the number of habitable structures that would need to be relocated (two) without significantly increasing the number of other habitable structures affected,[65] and potentially even requiring only a single mobile home to be relocated.[66] The Agreed Route, by contrast, affects 951 habitable structures (almost five hundred more than Route 32), six of which would have to be relocated.[67] Similarly, Route 1S affects 711 habitable structures, including five that would have to be relocated.

Third, Route 32 is comparable in cost to the Supplemental Routes after considering the potential cost-savings for future transmission projects. At first glance, Route 32 appears to be from approximately 4% to 27% more costly than the Supplemental Routes (and 14% and 24% more costly than the Agreed Route and Route 1S, respectively). This cost difference, however, arises from the fact that Route 32 is a better long-term transmission solution because it is routed

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[60] Preliminary Hearing Tr. at 192-93; Route Adequacy Testimony of Mark E. Caskey, JA Ex. 5 at 27-28; Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 4-5; Deposition of Jeff Billo, JL Ex. 12, Exhibit 11 at 73, 82-83.

[61] Application, JA Ex. 1, Attachment 6 at 20.

[62] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 6-7.

[63] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 5-8.

[64] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 30.

[65] *Id.*, JA Ex. 3 at 29.

[66] Tr. at 98-99 (Dec. 4, 2013).

[67] Environmental Data for Agreed Route, JA Ex. 22.

closer to the South McAllen Substation.[68] The Agreed Route and Route 1S seem less costly on the surface, but largely this is because they defer (not eliminate) the cost of routing "in proximity to" the South McAllen Substation until a later date.[69] Route 32 is only three miles from the South McAllen Substation.[70] The Agreed Route and Route 1S, by contrast, are roughly eleven miles away.[71] Resolving this eight-mile difference by constructing an additional transmission line having the same "looped" configuration proposed in the Project would cost roughly $51.68 million (assuming the shortest straight-line distance between two points).[72] Because the Agreed Route is $42,934,000 less costly than Route 32, this $51.68 million cost-difference means that in the long term, the Agreed Route is actually $8,746,000 **more** costly than Route 32 after counting all the costs:

	Base Cost	Extra Eight-Mile Loop[73]	Total Long-Term Cost
Agreed Route	$309,295,000	$51,680,000	$360,975,000
Route 1S	$283,592,000	$51,680,000	$335,272,000
Route 32	$352,229,000	---	$352,229,000

In short, the supplemental routes seem attractive now, but that is only because they defer part of the cost and impact of the project until a later date. Route 32 is a prescient solution because, after accounting for the cost savings it produces by facilitating a future South McAllen Substation interconnection, it is not significantly more costly than other routes.[74]

Below is a summary of the route development and evaluation process, including references to the record of how the Agreed Route, Route 32, and Route 1S compare for certain factors.

1. Description of Project Area

From north to south, the study area for the Project is approximately 9- to 17-miles wide, and the length of the study area from east to west is approximately 73 miles. The study area is

[68] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 6-7.

[69] *Id.* at 7.

[70] *Id.* at 6.

[71] *Id.* at 7.

[72] *Id.* at 6-7.

[73] This assumes an 11-mile distance from South McAllen.

[74] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 6-7.

characterized by relatively flat topography with a high percentage of habitat converted to croplands. The northern and southern portions of the study area are predominantly rural, while the central portion is predominantly urban. The northern portion of the study area is predominantly rangeland/pastureland, where most of the habitable structures are associated with rural ranch properties. The southern portion of the study area, bordered by the Rio Grande, is predominantly cropland. The central portion of the study area is composed of high density residential and commercial development.[75]

Habitable structures in the study area for the Project include, but are not limited to, single-family and multi-family dwellings, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools. Elevations range between less than five feet above mean sea level near the Brownsville Ship Channel to 90 feet above mean sea level near the North Edinburg Substation.[76]

2. Route Selection

The EA was prepared for Joint Applicants to analyze alternative routes from the North Edinburg Substation located in Hidalgo County to a location in proximity to the South McAllen Substation also in Hidalgo County and then terminating at the Loma Alta Substation located in Cameron County. The EA describes in detail the Project, the environmental setting for the Project, the selection of a study area, the constraints mapping process, the development of preliminary routes, public input at open-house meetings, contacts with governmental agencies and officials, and selection of the 32 alternative routes, including the route that best addresses the requirements in PURA and the Commission's Substantive Rules.

This information is described in detail in the Direct Testimony of Joint Applicants' witness Rob R. Reid.[77] Mr. Reid's testimony also summarizes the information in the EA concerning the impact of the best and alternative routes on Commission CCN criteria such as habitable structures, electronic installations, airstrips, irrigation systems, parks and recreational areas, cultural resources, environmental integrity, paralleling existing right-of-way (ROW) and property boundaries, and mitigation measures.[78]

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[75] Direct Testimony of Rob R. Reid, JA Ex. 4 at 20.

[76] *Id.*

[77] *Id.* at 8-19.

[78] *Id.* at 20-26.

Based on POWER's evaluation of the criteria, POWER selected Route 32 from among the original 32 routes as the route that best addresses the requirements of PURA and the Commission's Substantive Rules.[79] Joint Applicants evaluated POWER's recommendations and balanced them against additional factors not considered by POWER including cost, engineering constraints and reliability concerns. Based on this evaluation, Joint Applicants selected Route 32, from amongst the original 32 routes, as the route that best addresses the requirements of PURA and the Commission's Substantive Rules.[80]

In response to SOAH Order No. 6, however, Joint Applicants amended the Application and submitted ten supplemental alternative routes. These routes all consist of previously noticed links and connect the North Edinburg Substation to the Loma Alta Substation but do not pass through the Routing Circle and contain links no nearer than approximately 6 miles and as far as approximately 11 miles from the South McAllen Substation.[81] The ten supplemental routes varied in length from 86.3 miles to 101.5 miles, as compared to 96.3 to 124.5 miles for the original 32 routes. The Agreed Route is a modified version of Route 3S, which is included as one of the ten supplemental routes. The Agreed Route is 96.1 miles in length; Route 1S is 86.3 miles in length; Route 32 is 117.5 miles in length.[82]

Subsequent to the filing of the ten supplemental routes pursuant to Order No. 6, and as further addressed below, Joint Applicants reaffirmed that in their view Route 32 continued to be the route among all 32 original and ten supplemental routes that best addresses the requirements of PURA and the Commission's Substantive Rules—including Rule 25.101(b)(3)(A)(ii), which requires that great weight be given ERCOT's recommendation, which included the directive to route the new transmission line in proximity to the South McAllen Substation.[83] As compared to the supplemental alternative routes, Joint Applicants believe Route 32 provides the best short and long-term solution to the reliability needs of the LRGV.[84] In addition, Joint Applicants believe

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[79] Direct Testimony of Rob R. Reid, JA Ex. 4 at 17-19.

[80] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 26-27.

[81] Supplemental Testimony of Mark E. Caskey, JA Ex. 12 at 2; Supplemental Testimony of Rob R. Reid, JA Ex. 13 at 1.

[82] Amended Application in Response to Order No. 6, JA Ex. 11, Attachment 2S; Application, JA Ex. 1, Attachment 2.

[83] Supplemental Direct Testimony of Mark E. Caskey, JA Ex. 12 at 4.

[84] *Id.* at 4-6.

that all of the 32 alternative routes and ten supplemental alternative routes comply with the PUC's routing criteria and are acceptable from a design and constructability perspective.[85] Routing information for each proposed route is set out in Tables 4-1 and 4-1S of Joint Applicants' Amended Application, and the Environmental Data Table for the Agreed Route, which is Joint Applicants' Exhibit 22.

3. Community Values

"Community values" is not defined in PURA or the Commission's rules; however, Commission precedent describes "community values" as a shared appreciation of an area or other natural or human resource by members of a national, regional, or local community.[86] The EA evaluated the impact of the Project on community values in Sections 4.1 (impacts on land use, aesthetics, recreation, and transportation/aviation and socioeconomics) and 4.4 (aesthetics). As addressed in these sections of the EA, the proposed project would not result in the disruption or preemption of any recreational activities but would have some temporary or permanent impact on visual aesthetics.[87]

In order to ensure that the alternative routes properly reflected the values and concerns of affected communities, Joint Applicants sought input from the local community about the Project by providing written notice and holding public open-house meetings, as discussed in detail in Section 3.2 of the EA.[88] In October 2012, six public open-house meetings were held in McAllen, Mercedes, Harlingen, and Brownsville, Texas. Because a number of routing links were modified and added after the initial six open-house meetings, an additional public open-house meeting was held for the landowners potentially affected by the modifications. This meeting was held on February 25, 2013 in Edinburg, Texas.[89] Direct notice was mailed to approximately 12,000 landowners within 500 feet of the centerline for each of the routes being presented at the open-house meetings. The purpose of these public open-house meetings was to (1) promote a better understanding of the Project, including the purpose, need, potential benefits and impacts, and the

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[85] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 2-3.

[86] *Application of LCRA Transmission Services Corporation to Amend its Certificate of Convenience and Necessity (CCN) for a 138-kV Transmission Line in Kerr County*, Docket No. 33844, Final Order at 15 (FoF 65) (Mar. 4, 2008).

[87] Direct Testimony of Rob R. Reid, JA Ex. 4 at 35-36.

[88] Application, JA Ex. 1 at Attachment 1, Section 3.2.

[89] Direct Testimony of Teresa B. Trotman, JA Ex. 9 at 8.

PUC's CCN application submittal and approval process; (2) inform and educate the public about the routing procedure, schedule and decision-making process; and (3) ensure that the decision-making process adequately identifies and considers the values and concerns of the public and community leaders.[90]

Rather than making a formal presentation at these public open-house meetings, Joint Applicants and POWER used a more interactive arrangement by setting up information stations where attendees could provide input and learn about the Project.[91] Joint Applicants provided information to assist landowners in understanding the need for the Project, the routing determination process, and the PUC's CCN process. Landowners could ask questions about the routes and provide specific input. [92] Each information station was devoted to a particular aspect of the routing study and was manned with personnel representing ETT, Sharyland and/or POWER. Display maps, illustrations, and photographs were used to explain each particular topic that was presented. Interested citizens and property owners were encouraged to visit each station in order so the process could be explained in the general sequence of development.[93] A total of 477 people registered their attendance at the public open-house meetings.

Joint Applicants and POWER also distributed in each of the seven public open-house meetings questionnaires soliciting comments on landowner concerns. The questionnaire presented to landowners a list of 16 factors that they were asked to consider.[94] In addition to their responses to these factors, respondents also noted several other factors such as the location of homes, croplands, businesses, schools, wells, and irrigation systems.[95] Respondents also addressed electromagnetic fields, safety for landowners, potential fire hazards, concerns about ability to dust crops via airplanes with a transmission line on the property, placing routes along edges of property rather than crossing property, and potential impacts to property values.[96]

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[90] Application, JA Ex. 1 at Attachment 1, Section 3.2.2.

[91] Direct Testimony of Teresa B. Trotman, JA Ex. 9 at 9.

[92] *Id.*

[93] *Id.* at 9-10.

[94] *See* Application, JA Ex. 1 at Attachment 1, pp. 3-13 to 3-31 for a discussion of the factors and POWER's and Joint Applicants' analysis of the landowner input.

[95] *Id.*

[96] *Id.*

Based on information gathered at the public open-house meetings, several links were modified to the greatest extent practicable to address the expressed concerns, particularly when more than one landowner shared the same route concern or would be directly affected by an adjustment.[97] Generally, these 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 newly constructed schools, roadways, developed communities, businesses, and ranching/farming operations, and to those areas identified by regulatory agencies.[98]

In addition, local, state and federal agencies and officials were consulted by letter to solicit information and comments regarding the potential impact of the proposed transmission line.[99] A number of responses were received and considered, and ETT, Sharyland and POWER utilized comments and information from governmental agencies in the preparation of the existing environment sections of the EA, in the development of the constraints maps, and in the selection and evaluation of alternative routes.[100]

4. Environmental Integrity

Construction and operation of Joint Applicants' proposed routes would have no significant effect on the physiographic or geological features or resources of the area. The construction, operation, and maintenance of transmission lines typically do not adversely impact soils, and potential impacts, primarily erosion and compaction, would be minimized with the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Therefore, the magnitude of potential soil impacts are considered equivalent for all of the alternative routes.[101]

Multiple surface waters within the study area would be crossed by all of the alternative routes. Since all surface waters are proposed to be spanned and a SWPPP will be implemented during construction, no significant impacts are anticipated for any of the alternative routes. The

[97] Direct Testimony of Teresa B. Trotman, JA Ex. 9 at 11.

[98] *Id.*

[99] Application, JA Ex. 1 at Attachment 1, Section 2.1.5.

[100] *Id.* at Section 3.2.3; Direct Testimony of Rob R. Reid, JA Ex. 4 at 17.

[101] Direct Testimony of Rob R. Reid, JA Ex. 4 at 30.

construction, operation, and maintenance of the proposed transmission line are not anticipated to adversely affect groundwater resources within the study area.[102]

Potential impacts to vegetation would result from clearing the ROW of woody vegetation and/or herbaceous vegetation. During the route development process, consideration was given to avoiding wooded areas and/or to maximizing the length of the routes parallel to existing linear corridors. Clearing would occur only where necessary to provide access, work space, safety, reliability, and future maintenance access to the ROW.[103] Wherever reasonable and practical, POWER and Joint Applicants delineated alternative links/routes to parallel existing cleared ROWs, cleared fence lines/property lines, wildlife management/brush control clearings, roads, etc., and to limit the amount of totally new fragmentation. Where paralleling such facilities/features, the existing fragmentation would be increased/widened. Many wildlife species are "edge" adapted species, which may benefit from the habitat edge effect resulting from creation of the cleared ROW.[104]

Construction of the proposed transmission line is not anticipated to have direct adverse impacts to wildlife and fisheries within the study area. Implementation of a SWPPP utilizing best management practices will minimize potential impacts to aquatic habitats.[105]

Regarding threatened and endangered plant species, several buffer areas historically known to have occurrences of federally listed plant species are crossed by several of the alternative routes. Once a route is approved, field surveys will be completed, if necessary, to identify potential suitable habitat for each listed plant species and also determine the need for any additional species-specific surveys. With the development of an avoidance and impact minimization plan, the potential for any of the alternative routes to adversely affect federally listed plant species is not anticipated to be significant.[106]

The Project should not result in significant conversion of farmland or ranchland. The monopole structures used by Joint Applicants will typically be approximately 850 feet apart and

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[102] *Id.*

[103] *Id.* at 31.

[104] Rebuttal Testimony of Rob R. Reid, JA Ex. 17 at 3.

[105] Direct Testimony of Rob R. Reid, JA Ex. 4 at 32.

[106] *Id.*

will occupy only a small area.[107] While these lines might be an inconvenience, particularly during construction, they will not significantly impede the ability of landowners to continue to use the land in and around these structures for cattle grazing, hunting and agricultural purposes after construction.[108] Utilities in Texas, such as Joint Applicants, regularly deal with electric lines crossing agricultural lands, and loss of cropland from the surface area of the structures is something addressed during easement acquisition. Citrus trees are generally low growing and are regularly pruned. Although some citrus trees may need to be removed for access along the ROW and for construction of the transmission structures themselves, in some locations citrus trees can continue to grow within the ROW. Some modification to pruning and chemical spraying may need to be implemented by the landowners so as not to interfere with the transmission conductors.[109]

Consistent with their commitments in other transmission CCN dockets,[110] Joint Applicants commit to working with landowners to make minor routing modifications and adjust pole placement to avoid features that affect farming or ranching operations, including existing structures, irrigation systems, watering facilities, water wells, water tanks, windmills, livestock pens, or fencing.[111] Where transmission facilities are located near existing structures, Joint Applicants commit to working with landowners to mitigate the potential impacts the lines might have on their operations.[112] Joint Applicants often make minor route adjustments on landowners' property once a final route has been chosen and approved by the Commission, and Joint Applicants have been successful in the past at addressing landowner concerns.[113]

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[107] Rebuttal Testimony of Rob R. Reid, JA Ex. 17 at 4.

[108] *Id.*

[109] *Id.* at 5.

[110] *Application of Electric Transmission Texas, LLC to Amend Its Certificate of Convenience and Necessity for the Tesla to Riley 345-kV Transmission Line in Childress, Hardeman, and Wilbarger Counties*, Docket No. 38494, Order at 22 (Ordering Paragraphs 15-16) (Dec. 20, 2010); *Application of Electric Transmission Texas, LLC to Amend a Certificate of Convenience and Necessity for the Clear Crossing to Dermott 345-kV CREZ Transmission Line (Formerly Central B to Clear Crossing) in Haskell, Jones, Stonewall, Fisher, Kent, and Scurry Counties*, Docket No. 37951, Final Order at 24 (Ordering Paragraph 10) (Oct. 5, 2010).

[111] Rebuttal Testimony of Mark E. Caskey, JA Ex. 16 at 9.

[112] *Id.*

[113] *Id.*

5. Prudent Avoidance

Prudent avoidance is the limiting of exposure to electric and magnetic fields that can be avoided with reasonable investments of money and effort.[114] Prudent avoidance is achieved by minimizing, to the extent reasonable, the number of habitable structures located in close proximity to the routes.[115] Joint Applicants and POWER specifically devised their proposed routes to accommodate concerns about prudent avoidance so that all routes proposed by Joint Applicants would conform to the Commission's policy of prudent avoidance. Joint Applicants and POWER used a constraints mapping process to identify and reduce the impact of the proposed line on various constraints including habitable structures.[116] Input received from attendees at the open-house meetings allowed Joint Applicants to make additional route modifications to further reduce the impact on habitable structures.[117] The number of habitable structures within 500 feet of the centerline of each proposed route is set out in Tables 4-1 and 4-1S of Joint Applicants' Amended Application, and the Environmental Data Table for the Agreed Route, which is Joint Applicants' Exhibit 22.

The number of habitable structures was a significant factor in Joint Applicants' selection of Route 32 as the route that best addresses the requirements of PURA and the Commission's Substantive Rules. Route 32 not only has the fewest habitable structures within 500 feet of the centerline with 465, but it also has the fewest number of "newly affected habitable structures" with 335. The number of habitable structures within 500 feet of the centerline of the original and supplemental alternative routes ranges from a low of 465 (Route 32) to a high of 1,818 (Route 26). The number of newly affected habitable structures ranges from a low of 412 (Route 17) to a high of 1,585 (Route 26). By contrast, the Agreed Route has 951 habitable structures within 500 feet of the centerline and has 793 newly affected habitable structures. Route 1S, recommended by Staff, has 711 habitable structures within 500 of the centerline and has 625 newly affected habitable structures. As many as six habitable structures (mobile homes) would potentially have

[114] P.U.C. SUBST. R. 25.101(a)(4).

[115] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 30.

[116] Direct Testimony of Rob R. Reid, JA Ex. 4 at 10.

[117] *Id.* at 10; Direct Testimony of Teresa B. Trotman, JA Ex. 9 at 10-11.

to be relocated or removed on the Agreed Route, while only two (and potentially only one)[118] would need to be relocated along Route 32.[119]

6. Recreational and Park Areas

The number of parks or recreation areas crossed by the alternative routes ranges from zero for several alternative routes to five for Route 14. The number of additional parks or recreation areas located within 1,000 feet of the alternative route centerlines ranges from none for Routes 21, 5S, and 10S to nine for Route 16. Alternative route lengths crossing portions of certain tracts of the USFWS Lower Rio Grande Valley National Wildlife Refuge range from none for several of the alternative routes to approximately 1.8 miles for Route 8. POWER anticipated no significant impacts to the use or enjoyment of the parks and recreation facilities located within the study area from any of the alternative routes.[120] Similarly, POWER anticipated no adverse impacts for any public fishing or hunting areas from any of the alternative routes.[121]

Intervenors raised concerns with the impacts the proposed line may have on recreational activities conducted on private land, particularly the impacts on hunting activities. However, in a recent CREZ CCN proceeding, the ALJ determined that private land does not represent "recreational and park areas" within the meaning of PURA § 37.056(c)(4)(B).[122]

7. Historical and Cultural Resources

All of the 42 alternative routes cross or pass within 1,000 feet of one or more previously recorded archeological sites, historical sites, or recorded cultural sites.[123] Aside from 41CF92, a site that includes the Palo Alto Battlefield National Historic Landmark (discussed more fully in the EA at Section 4.3.5) and could potentially be impacted, no impacts are expected for the archeological sites. Neither Route 32 nor the Agreed Route cross 41CF92, but Route 1S does

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[118] Tr. at 98-99.

[119] Application, JA Ex. 1 at Attachment 1, Table 4-1; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

[120] Direct Testimony of Rob R. Reid, JA Ex. 4 at 27.

[121] *Id.*

[122] *Application of Oncor Electric Delivery Company, LLC to Amend Its Certificate of Convenience and Necessity for the Brown - Newton 345-kV CREZ Transmission Line in Brown, Mills, Lampasas, McCulloch and San Saba Counties*, Docket No. 37464, Proposal for Decision at 35-36 (Mar. 5, 2010) (stating that if "recreational and parks areas" were "defined to include essentially all private property that is used for recreational purposes, then it would be so broad as to be meaningless.").

[123] Application, JA Ex. 1 at Attachment 1, Table 4-1; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

(on Link 311). Nonetheless, any potential direct impacts could be mitigated through routing and/or engineering design and construction measures that will protect the archeological sites.[124]

Route 32 crosses five recorded cultural resource sites and the Agreed Route crosses two.[125] There are 11 additional recorded cultural resource sites located within 1,000 feet of the centerline of Route 32 and none within 1,000 feet of the Agreed Route.[126] There is one listed site on the National Register of Historic Places (NRHP) that is located within 1,000 feet of Route 32 and none on the Agreed Route.[127] All of the 42 alternative routes cross areas of high archaeological/historical site potential for distances ranging from 36.8 miles to 95.9 miles,[128] with Route 32 crossing 77.7[129] miles and the Agreed Route crossing 38.9 miles.[130] However, if necessary during construction, and pursuant to Staff's recommendation,[131] Joint Applicants will obtain cultural resource clearance from the Texas Historical Commission for the proposed project ROW.

8. Aesthetic Impacts

Aesthetic impacts, or impacts to visual resources, exist when the ROW, lines and/or structures of a transmission line system create an intrusion into, or substantially alter the character of, the existing view. The significance of the impact is directly related to the quality of the view, in the case of natural scenic areas, or to the importance of the existing setting in the use and/or enjoyment of an area, in the case of valued community resources and recreational areas.[132]

Aesthetic impacts of the Project were evaluated by assessing the general aesthetic character of the area and determining the length of each alternative route that would fall within the foreground visual zone (FVZ) of recreational areas or major highways. No known high quality aesthetic resources, designated views, or designated scenic roads or highways were

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[124] Direct Testimony of Rob R. Reid, JA Ex. 4 at 28.

[125] Application, JA Ex. 1 at Attachment 1, Table 4-1.

[126] *Id.*

[127] *Id.*; Environmental Data for Agreed Route, JA Ex. 22.

[128] Application, JA Ex. 1 at Attachment 1, Table 4-1; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

[129] Application, JA Ex. 1 at Attachment 1, Table 4-1.

[130] Environmental Data for Agreed Route, JA Ex. 22.

[131] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 19.

[132] Application, JA Ex. 1, Attachment 1 at Section 4.4.

identified within the study area. POWER's research on behalf of Joint Applicants did not indicate any Wild and Scenic Rivers or National Monuments within the study area, although one National Historic Park, the Palo Alto Battlefield, is located in the eastern portion of the study area in Brownsville, Texas. Thus, the study area exhibits a moderate degree of aesthetic quality for the region.[133]

Construction of the proposed 345 kV transmission line could have both temporary and permanent aesthetic effects. Temporary impacts would include views of the actual assembly and erection of the tower structures. If wooded areas are cleared, the brush and wood debris could have an additional negative temporary impact on the local visual environment. Permanent impacts from the Project would involve the views of the cleared ROW, transmission structures, and lines.[134] All of the 42 alternative routes have some portion of the routes located within the foreground visual zone of parks or recreational areas, of U.S. and state highways, and of farm-to-market roads.[135]

9. Engineering Constraints

Joint Applicants evaluated each route from an engineering design and construction perspective, together with grid reliability and security issues.[136] Each of the routes would require construction through urbanized or semi-urbanized areas.[137] All proposed alternative routes cross rivers, streams, floodplains, or other transmission lines and roadways.[138] Staff Witness Michael J. Lee testified that these possible constraints are not severe or uncommon and can be adequately addressed by utilizing design construction practices and techniques usual and customary in the electric industry.[139]

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[133] Direct Testimony of Rob. R. Reid, JA Ex. 3 at 29.

[134] *Id.*

[135] *Id.* at 30; Application, JA Ex. 1 at Attachment 1, Table 4-1; Amended Application and EA in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

[136] Direct Testimony of Teresa B. Trotman, JA Ex. 9 at 13.

[137] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 21.

[138] JA Ex. 1, Attachment 1, Table 4-1; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S.

[139] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 21.

10. Cost

The estimated costs of the initially proposed and supplemental proposed routes range from $277,264,000 for Route 9S to $405,453,000 for Route 12. Route 32 has an estimated cost of $352,229,000.[140] The cost of the Agreed Route is $309,295,000.[141] The cost of Route 1S is $283,592,000.[142] These cost estimates include the costs of acquiring ROW, materials and supplies, labor and transportation, engineering, administration, and Allowance for Funds Used During Construction.[143]

In addition, these estimated costs also include potential upgrades to existing stations owned by AEP TCC, South Texas Electric Cooperative, and Sharyland that might be required for engineering and reliability reasons. All of the 42 alternative routes parallel existing transmission facilities to some extent. Constructing a new 345 kV transmission line parallel to existing transmission lines can result in a coupling effect that results in an additional induced current applied to existing lines from the new 345 kV transmission line. In order to protect against this coupling effect, the three affected utilities might need to add or modify system protection equipment, such as relay packages and system control and data acquisition equipment.[144] These estimated upgrade costs are included in the "Other" category in the Application and range from $7 million for Route 6S to $18 million for Route 12.[145]

The costs for each alternative route in this proceeding are as follows:

Route	Estimated Cost ETT	Estimated Cost Sharyland	* Estimated Additional Cost	Estimated Cost Total
1	$ 166,998,000	$ 159,328,000	$ 10,000,000	$ 336,326,000
2	$ 196,003,000	$ 189,445,000	$ 18,000,000	$ 403,448,000
3	$ 185,151,000	$ 167,579,000	$ 14,000,000	$ 366,730,000
4	$ 178,809,000	$ 174,066,000	$ 13,000,000	$ 365,875,000
5	$ 173,809,000	$ 168,459,000	$ 16,000,000	$ 358,268,000
6	$ 180,630,000	$ 162,077,000	$ 15,000,000	$ 357,707,000
7	$ 192,061,000	$ 168,768,000	$ 15,000,000	$ 375,829,000

[140] Application, JA Ex. 1, Attachment 5 at 1.

[141] Cost Data for Agreed Route, JA Ex. 23.

[142] Amended Application in Response to Order No. 6, JA Ex. 11, Attachment 5S.

[143] Direct Testimony of Mark E. Caskey, JA Ex. 3 at 33-34.

[144] *Id.*

[145] Application, JA Ex. 1 at 11 and Attachment 5 at 1; Cost Data for Agreed Route, JA Ex. 23 at 1.

8	$ 183,518,000	$ 163,891,000	$ 17,000,000	$ 364,409,000
9	$ 175,800,000	$ 158,074,000	$ 11,000,000	$ 344,874,000
10	$ 169,199,000	$ 163,868,000	$ 10,000,000	$ 343,067,000
11	$ 183,767,000	$ 179,397,000	$ 15,000,000	$ 378,164,000
12	$ 190,058,000	$ 197,395,000	$ 18,000,000	$ 405,453,000
13	$ 183,822,000	$ 180,623,000	$ 14,000,000	$ 378,445,000
14	$ 183,832,000	$ 172,412,000	$ 14,000,000	$ 370,244,000
15	$ 180,753,000	$ 170,563,000	$ 13,000,000	$ 364,316,000
16	$ 182,450,000	$ 173,649,000	$ 15,000,000	$ 371,099,000
17	$ 170,078,000	$ 177,077,000	$ 15,000,000	$ 362,155,000
18	$ 173,686,000	$ 174,169,000	$ 15,000,000	$ 362,855,000
19	$ 179,063,000	$ 173,121,000	$ 15,000,000	$ 367,184,000
20	$ 162,683,000	$ 153,701,000	$ 13,000,000	$ 329,384,000
21	$ 180,523,000	$ 179,721,000	$ 15,000,000	$ 375,244,000
22	$ 157,462,000	$ 148,432,000	$ 8,000,000	$ 313,894,000
23	$ 185,728,000	$ 182,944,000	$ 17,000,000	$ 385,672,000
24	$ 184,558,000	$ 171,372,000	$ 14,000,000	$ 369,930,000
25	$ 181,072,000	$ 173,762,000	$ 14,000,000	$ 368,834,000
26	$ 185,884,000	$ 183,455,000	$ 14,000,000	$ 383,339,000
27	$ 166,576,000	$ 153,659,000	$ 13,000,000	$ 333,235,000
28	$ 169,517,000	$ 165,967,000	$ 12,000,000	$ 347,484,000
29	$ 176,966,000	$ 164,378,000	$ 15,000,000	$ 356,344,000
30	$ 184,020,000	$ 164,079,000	$ 14,000,000	$ 362,099,000
31	$ 159,013,000	$ 162,397,000	$ 14,000,000	$ 335,410,000
32	$ 169,766,000	$ 170,463,000	$ 12,000,000	$ 352,229,000
1S	$ 137,476,000	$ 131,116,000	$ 15,000,000	$ 283,592,000
2S	$ 145,631,000	$ 136,400,000	$ 15,000,000	$ 297,031,000
3S	$ 150,651,000	$ 139,072,000	$ 16,000,000	$ 305,723,000
4S	$ 143,206,000	$ 137,803,000	$ 12,000,000	$ 293,009,000
5S	$ 163,214,000	$ 162,133,000	$ 14,000,000	$ 339,347,000
6S	$ 142,684,000	$ 129,027,000	$ 7,000,000	$ 278,711,000
7S	$ 157,733,000	$ 149,061,000	$ 15,000,000	$ 321,794,000
8S	$ 147,834,000	$ 141,492,000	$ 13,000,000	$ 302,326,000
9S	$ 138,499,000	$ 127,765,000	$ 11,000,000	$ 277,264,000
10S	$ 139,879,000	$ 128,389,000	$ 12,000,000	$ 280,268,000
AR	$ 152,800,000	$ 140,495,000	$ 16,000,000	$ 309,295,000

11. Use of Existing Compatible Right-of-Way and Apparent Property Lines

The combined length of ROW parallel to existing transmission and other existing ROW, apparent property lines, and other natural or cultural features for all 42 of Joint Applicants' proposed alternative routes ranges from 73.0% (Route 6) to 81.5% (Route 30) of the total length of the routes. All 42 alternative routes parallel existing linear features for at least 73% of their

lengths.[146] The combined length of ROW parallel to existing transmission and other existing ROW, apparent property lines, and other natural or cultural features for Route 32 is 74%.[147] The combined length of ROW parallel to existing transmission and other existing ROW, apparent property lines, and other natural or cultural features for the Agreed Route is 80%.[148] The combined length of ROW paralleling existing transmission and other existing ROW, apparent property lines, and other natural or cultural features for Route 1S is 68%.

E. Preliminary Order Issue No. 5

Are there alternative routes or facilities configurations that would have a less negative impact on landowners? What would be the incremental cost of those routes?

There are no alternative routes that would have a less negative impact on landowners.[149] The routing and constraints mapping process employed by POWER was designed to identify and reduce the impact to land use and environmentally sensitive areas: individual residences, congested urban areas, community facilities, subdivisions, airports, cemeteries, historic sites, archeological sites, wetlands and playa lakes, parks, churches, schools, and known occupied federally listed threatened and endangered species habitat. [150] The routing process involved the delineation of numerous alternative routes, as depicted in Figure 3-2 (Appendix D) of the EA. Information of the same general type on community values, parks and recreation areas, archaeological and historic sites, aesthetics, and environmental integrity is presented for the alternative routes in the EA. These alternatives were selected, in part, to minimize landowner impact in accordance with the criteria specified in PURA and the Commission's Substantive Rules.[151]

Any number of alternatives could be formulated that might not affect presently affected landowners but would instead affect other landowners. It is unreasonable, however, to conduct a

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[146] Application, JA Ex. 1 at Attachment 1, p.4-21; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

[147] Application, JA Ex. 1 at Attachment 1, Table 4-1; Amended Application in Response to Order No. 6, JA Ex. 11, Table 4-1S; Environmental Data for Agreed Route, JA Ex. 22.

[148] Environmental Data for Agreed Route, JA Ex. 22.

[149] Direct Testimony of Rob R. Reid, JA Ex. 4 at 35.

[150] *Id.* at 10.

[151] *Id.* at 35.

routing study in that manner. On balance, the alternative routes minimize adverse impacts on directly affected landowners to a reasonable extent. Additional alternative route configurations would not have less impact on landowners.[152]

A number of intervenors have entered into a Stipulation proposing the Agreed Route, which may be characterized as including facilities configuration modifications that have a less negative impact on some landowners. Because the Stipulation was not unanimous among affected landowners along the Agreed Route, Joint Applicants did not join the Stipulation. However, Joint Applicants recognize that this is a very challenging routing project with a considerable number of intervenors, and the fact that the majority of the intervening parties still present in the case have been able to agree to a route is a considerable accomplishment. Community agreement around a route is important for several reasons: it facilitates ROW acquisition and construction, reflects community values, gives landowners input into how their land is affected by the project, and generally eases the burden on the community by focusing the impacts of the line on willing landowners. In light of these considerations, Joint Applicants would not oppose the Agreed Route.

F. Preliminary Order Issue No. 6

If alternative routes or facility configurations are considered due to individual landowner preference:

a) Have the affected landowners made adequate contributions to offset any additional costs associated with the accommodations?

b) Have the accommodations to landowners diminished the electric efficiency of the line or reliability?

Several of the intervenors who signed the Stipulation proposing the Agreed Route are willing to allow portions of the project to be constructed on their property.[153] Allowing landowners to influence how the line will impact their community can have long-term benefits to the Project, including reducing the cost of easement acquisition and risk of appeals of this proceeding. Recent cases have acknowledged that, to the extent alternative routes or facility configurations are used due to individual landowner preference, the affected landowners have made adequate contributions to offset any additional costs associated with the accommodation by agreeing to a

[152] *Id.*

[153] Joint Stipulation of Agreed and Supporting Parties, Rhodes Alliance Ex. 14 at 8.

route across their property.[154] As discussed above, all routes (including the Agreed Route) are viable and constructible. Joint Applicants do not oppose the Agreed Route.

G. Preliminary Order Issue No. 7

On or after September 1, 2009, did the Texas Parks and Wildlife Department provide any recommendations or informational comments regarding this application pursuant to section 12.0011(b) of the Texas Parks and Wildlife Code? If so, please address the following issues:

a) What modifications, if any, should be made to the proposed project as a result of any recommendations or comments?

b) What conditions or limitations, if any, should be included in the final order in this docket as a result of any recommendations or comments?

c) What other disposition, if any, should be made of any recommendations or comments?

d) If any recommendation or comment should not be incorporated in this project or the final order, or should not be acted upon, or is otherwise inappropriate or incorrect in light of the specific facts and circumstances presented by this application or the law applicable to contested cases, please explain why that is the case.

The Texas Parks and Wildlife Department (TPWD) provided recommendations and comments in its September 13, 2013 letter to Staff's Mohammed Ally and Russell Hooten's direct testimony.[155] Like TPWD's letter, Mr. Hooten primarily addressed mitigation measures to reduce impacts to wildlife and wildlife habitat, although he also urged the selection of specific routes (29 and 9S). Mr. Hooten offered numerous observations and recommendations.[156] Some of these are reasonable in themselves or as modified below. For others, there are more suitable substitutes, which are recommended below. And some of his recommendations are not practicable and should be rejected.

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[154] *See Application of Electric Transmission Texas, LLC to Amend its Certificate of Convenience and Necessity for the Tesla to Riley 345-kV CREZ Transmission Line,* Docket No. 38494, Order at 7 (FoF 50) (Dec. 20, 2010); *Application of Southwestern Electric Power Company to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV Transmission Line*; Docket No. 38838, Final Order at 6 (FoF 47) (Sept. 2, 2011); *Application of Electric Transmission Texas, LLC to Amend its Certificate of Convenience and Necessity for the Proposed Lobo to Rio Bravo to North Edinburg Double-Circuit 345-kV Transmission Line,* Docket No. 40728, Final Order at 13 (FoF 72) (May 9, 2013).

[155] The letter to Mr. Ally, which is PUC interchange item 958 (Sept. 17, 2013), is not in evidence. Mr. Hooten's Direct Testimony is TPWD Ex. 1.

[156] This brief discusses only those TPWD comments or recommendations with practical implications for the project, in route selection, line construction/operation or both.

Both Staff's and Joint Applicants' witnesses addressed TPWD's recommendations. Staff's witness Mr. Lee did not explicitly discuss specific TPWD recommendations, but he did offer ordering paragraphs that are directed towards TWPD's concerns, are supported by precedent, and are addressed below.[157]

The measures Joint Applicants and POWER took and will take to minimize the impact of the Project on the environment are described above in Section III.D.4 (Environmental Integrity). In addition, Joint Applicants' witness Mr. Reid addressed TPWD's recommendations, point-by-point, in his rebuttal testimony.[158] Joint Applicants already follow many of TPWD's recommendations for use of existing ROW, re-vegetation of disturbed areas, avoiding impacts to water resources, erosion controls, and avoiding impacts to endangered species.[159] Mr. Reid also weighed TPWD's many specific recommendations using such factors as practices already employed in the routing analyses, feasibility, cost, impact to schedule, and more practicable choices.

The following TPWD recommendations should be rejected because they are not practicable or feasible or are otherwise unwarranted.

- That Routes 29 or 9S be selected to avoid or minimize adverse impacts to wildlife and state-owned land. Mr. Reid explained that, to the extent reasonable, links developed for the routes avoid state and federal habitable structures and lands, resulting in links that are located *between* TPWD tracts instead of *on* them. Routes 29 and 9S would each result in more than 1,000 habitable structures being located within 500 feet of the centerline, with five such structures possibly being relocated or removed.[160] Other routes, including Route 32, have far less habitable structure impact, while the impacts to wildlife and state-owned lands have been reasonably minimized.
- That impacts associated with direct habitat loss and habitat fragmentation and impacts to birds be examined further to determine quantifiable impacts. Mr. Reid countered that this recommendation is not feasible for a number of reasons and would not allow

[157] Direct Testimony of Michael J. Lee, Staff Ex. 1 at 8 -10.

[158] Rebuttal Testimony of Rob R. Reid, JA Ex. 17 at 15-29.

[159] *Id.* at 16.

[160] *Id.* at 17, 25-26.

the project's in-service date to be met. It would be more practical to employ reasonable surveying and mitigation measures *after* route selection.[161]

- That routes be selected which would preserve Northern Aplomado Falcon habitat and avoid additional impacts to this species. Mr. Reid responded that a number of alternative routes follow existing transmission lines and that these falcons (which have keen eyesight and mobility) are not very susceptible to collisions with wires.[162]
- That a survey be undertaken for state-listed species and a biological monitor be used. Mr. Reid replied that after route selection, Joint Applicants will consult with appropriate agencies about protected species. However, the Commission has rejected the requirement to employ a biological monitor for specific species. Nonetheless, Joint Applicants will make reasonable efforts to allow threatened species to vacate affected areas or be relocated by a permitted individual.[163]
- That a survey of rare plants be undertaken by a qualified botanist. Mr. Reid answered that potential impacts to rare plants have been considered in evaluating routes and that it is unwarranted to impose a requirement to conduct expensive, time-consuming surveys for non-protected species.[164]

The TPWD offers three recommendations for which a substitute should be used. Regarding these, instead of what TPWD recommends, Joint Applicants should consult with the U.S. Fish and Wildlife Services (USFWS), the agency with jurisdiction over the subject-matter and from which direction should be sought.

- That the selected route avoid impacts to federally listed plants and be surveyed using USFWS protocols. Mr. Reid explained that impacts to federally listed plants have been considered, but surveys were infeasible due to lack of access to private lands. After route selection, Joint Applicants will consult with the USFWS, if necessary, about endangered plant habitat and any harm to federally listed plants.[165]

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[161] *Id.* at 17-18.

[162] *Id.* at 21.

[163] *Id.* at 23-24.

[164] *Id.* at 24.

[165] *Id.* at 20.

- That routes be selected to preserve travel corridors for federally listed felids (cats). Mr. Reid countered that impacts to federally listed animals have been considered. After route selection, Joint Applicants will consult with the USFWS on these matters.[166]
- That line markers be used in certain situations. Mr. Reid affirmed that after route selection, Joint Applicants will determine whether any high bird use areas occur along the route and consult with the USFWS about any necessary line markers. [167]

Joint Applicants will comply with the following TPWD recommendations to the extent possible, consistent with the need to complete this project in a timely and cost-effective manner: (1) that construction personnel be familiarized with species that could be potentially encountered, and (2) that, with landowners' consent, cleared trees be used for brush piles along the ROW edge.[168] In addition, while Mr. Hooten advocates the development and use of a post-construction revegetation plan, Joint Applicants will come to the same result through the flexible approach and goal of meeting the landowners' reseeding or crop revegetation needs.[169]

Joint Applicants have already put in place mitigation measures. Those measures, combined with others discussed in Mr. Reid's rebuttal testimony and in the proposed ordering paragraphs discussed next, are sufficient to address TPWD's recommendations. Therefore, no modifications to the proposed project are necessary.

To address the TPWD's recommendations, both Mr. Lee and Mr. Reid propose five nearly identical ordering paragraphs.[170] The one, minor difference between the two sets of paragraphs is in what Mr. Lee proposes as ordering paragraph 5, corresponding to what Mr. Reid proposes in the second full paragraph on page 29 of his rebuttal testimony. After the first sentence (which in both instances specifies that appropriate erosion control measures shall be used) Mr. Reid proposes additional language, as follows:

> Said erosion control measures may include inspection of the right-of-way before and during construction to identify erosion areas and implement special

[166] *Id.* at 21-22.

[167] *Id.* at 22-23.

[168] *Id.* at 24-26.

[169] *Id.* at 26-27.

[170] *See* ordering paragraphs 2 through 6 on pages 9-10 of Mr. Lee's testimony (Staff Ex. 1), and the corresponding ones on pages 28-29 of Mr. Reid's rebuttal testimony (JA Ex. 17). Mr. Lee's other ordering paragraphs 1 and 8 are not specific to the TPWD, are standard in transmission line CCN orders, and are not objectionable to Joint Applicants.

> precautions as determined reasonable to minimize the impact of vehicular traffic over the areas. Joint Applicants will also exercise care when clearing near waterways and will take reasonable steps to minimize adverse impacts on vegetation.

Mr. Reid's language, which is included in Joint Applicants' proposed order, is similar to the language in other 345 kV transmission line CCN orders.[171] His language is identical to that in the final order in Docket No. 40728, in which ETT recently received CCN authorization to build a 345 kV transmission line from near Laredo in the west to North Edinburg in the east. Docket No. 40728 was resolved under a stipulation to which the TPWD was a party.[172]

IV. CONCLUSION

While any of the 42 alternative routes are viable, and Joint Applicants are willing to construct any proposed route selected by the Commission, Joint Applicants still believe that Route 32 best balances all the considerations at play in this proceeding, including (1) the short-term reliability needs of the Brownsville area, (2) the long-term needs of the transmission system in the LRGV, and (3) the requirements of PURA and P.U.C. SUBST. R. 25.101. In light of that, Joint Applicants believe the Commission should select Route 32 as the route that best addresses the requirements of PURA and the Commission's Substantive Rules.

[171] Rebuttal Testimony of Rob R. Reid, JA Ex. 17 at 28.

[172] *Application of Electric Transmission Texas, LLC to Amend its Certificate of Convenience and Necessity for the* Proposed *Lobo and Rio Bravo to North Edinburg Double-Circuit 345-kV Transmission Line in Webb, Zapata, Jim Hogg, Brooks, Starr, and Hidalgo Counties,* Docket No. 40728, Order at 1 (settled through stipulation), 5 (FoF 22) (TPWD a party), 23-24 (Ordering Paragraphs 4-8) (May 9, 2013).

Respectfully submitted,

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December 18, 2013

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on all parties of record this 18th day of December, 2013 via the Commission's filing interchange, e-mail, or first-class mail in accordance with Order No. 4.

Sarah Merrick

ATTACHMENT A

PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

SOAH DOCKET NO. 473-13-5207
PUC DOCKET NO. 41606

JOINT APPLICATION OF ELECTRIC TRANSMISSION TEXAS, LLC AND SHARYLAND UTILITIES, L.P. TO AMEND THEIR CERTIFICATES OF CONVENIENCE AND NECESSITY FOR THE PROPOSED NORTH EDINBURG TO LOMA ALTA DOUBLE-CIRCUIT 345-KV TRANSMISSION LINE IN HIDALGO AND CAMERON COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

PROPOSED ORDER

This Order addresses the application of Electric Transmission Texas, LLC (ETT) and Sharyland Utilities, L.P. (Sharyland) (collectively, Joint Applicants) for approval to amend their certificates of convenience and necessity (CCNs) for the proposed North Edinburg to Loma Alta transmission line in Hidalgo and Cameron counties, Texas (the Project). The Project consists of a 345 kV transmission line from the existing North Edinburg Substation to the existing Loma Alta Substation, routed in proximity to the existing South McAllen Substation.

The Public Utility Commission of Texas (Commission) adopts the following findings of fact and conclusions of law:

I. FINDINGS OF FACT

Procedural History

1. ETT is an investor-owned electric utility providing service under CCN Nos. 30193 and 30194.

2. Sharyland is an investor-owned electric transmission and distribution utility providing service under CCN Nos. 30026, 30114, 30191 and 30192.

3. On July 3, 2013, Joint Applicants filed an application to amend their CCNs to allow them to build, own, and operate a new double-circuit capable 345 kV transmission line in Cameron and Hidalgo counties, from the existing North Edinburg Substation to the existing Loma Alta Substation, routed in proximity to the existing South McAllen Substation (the Application). That same day, Joint Applicants filed the direct testimonies of Barrett A. Thomas, Teresa B. Trotman, Rob R. Reid, and Mark E. Caskey.

4. On July 8, 2013, the Commission referred the Application to the State Office of Administrative Hearings (SOAH), and issued a list of issues to be addressed.

5. Several hundred parties filed requests to intervene.

6. On July 12, 2013, SOAH issued Order No. 1 regarding the jurisdiction of the Commission and SOAH, the deadline for a decision in this proceeding, notice requirements, the requirement that Joint Applicants file a proposed procedural schedule, the deadline for identifying deficiencies in the Application, issues relating to filing procedures, service, deadlines, responsive pleadings, discovery, and the requirement that all parties file testimony and/or a statement of position.

7. On July 22, 2013, SOAH held the first of two prehearing conferences, and on July 24, 2013, issued Order No. 2, adopting the proposed procedure schedule, admitting several intervenors, and modifying the service procedures. On July 24, 2013, SOAH issued Amended Order No. 2, correcting an error in Order No. 2.

8. On August 16, 2013, SOAH issued Order No. 3, giving notice of the second prehearing conference, modifying discovery procedures, and re-urging that all parties must file testimony and/or a statement of position or be dismissed from the proceeding.

9. On August 30, 2013, SOAH held the second prehearing conference, and on September 9, 2013, issued Order No. 4, finding good cause pursuant to P.U.C. PROC. R. 25.101(b)(3)(D) to extend the 180-day deadline for decision in this proceeding by approximately two months, although the transmission line project was designated critical to reliability. The order amended the procedural schedule, suspended traditional service, and resolved most outstanding requests to intervene.

10. On September 17, 2013, several parties requested a hearing on route adequacy.

11. On September 25, 2013, SOAH issued Order No. 5, granting the request for a preliminary hearing on route adequacy.

12. On September 27, 2013, Joint Applicants filed their response, including additional direct testimony responding to the issues to be addressed in the preliminary hearing on route adequacy.

13. On October 8, 2013, SOAH held a route adequacy hearing, and on October 21, 2013, issued Order No. 6 finding that the Application contained an adequate number of routes, but ordering Joint Applicants to amend the original Application to include supplemental routes, using existing links, that were not routed through the South McAllen Substation Routing Circle. Order No. 6 also adopted an amended procedural schedule.

14. On October 28, 2013, Joint Applicants supplemented their application to include ten additional routes (Routes 1S through 10S) pursuant to Order No. 6 and filed supplemental direct testimony supporting those routes.

15. On November 14, 2013, all intervenors that did not file direct testimony or statements of position were dismissed from the proceeding.

16. Commission Staff filed its direct testimony on November 22, 2013.

17. Joint Applicants filed their rebuttal testimony on November 26, 2013.

18. A hearing on the merits was convened on December 3, 2013, and the hearing concluded the next day. Evidence was admitted and witnesses were cross-examined.

19. On December 6, 2013, the ALJ issued SOAH Order No. 10 establishing briefing deadlines and admitting additional evidence.

Notice

20. On July 12, 2013, SOAH issued Order No. 1, requiring Commission Staff (Staff) to file a recommendation on the sufficiency of the notice.

21. Notice was published in the *Texas Register* on July 19, 2013, and supplemental notice reflecting the Project's location within the Coastal Management Program (CMP) was published in the *Texas Register* on October 4, 2013.

22. On July 30, 2013, Joint Applicants filed proof of notice in the form of an affidavit indicating that notice of the Application was (a) published in newspapers having general circulation in Hidalgo and Cameron counties; (b) sent in both English and Spanish by priority mail to owners of all land within 500 feet of the proposed centerline of any route; (c) sent by first-class mail to utilities providing similar service within five miles of the alternative routing options; (d) sent by first-class mail to county officials in Hidalgo and Cameron counties and the Mayors of the cities within five miles of the project; and (e)

sent by first-class mail to the Office of Public Utility Counsel (OPUC). A copy of the Application was also provided to the Texas Parks & Wildlife Department (TPWD). Joint Applicants' proof of notice also contained copies of the notices provided.

23. On August 9, 2013, Staff recommended that notice be determined sufficient.

24. Consistent with Joint Applicants' July 30, 2013 proof of notice and Staff's August 9, 2013 recommendation of sufficiency, the Commission finds that notice was adequate.

The Application

25. The Project is a double-circuit capable 345 kV transmission line in Cameron and Hidalgo counties constructed primarily on single-pole structures, from the existing North Edinburg Substation to the existing Loma Alta Substation.

26. In its endorsement letter, the Board of Directors of the Electric Reliability Council of Texas (ERCOT) recommended the Project be routed "in proximity to" the existing South McAllen Substation to accommodate the long-term needs of the Lower Rio Grande Valley (LRGV).

27. In their Application, Joint Applicants implemented ERCOT's recommendation by proposing 32 alternative routes, each passing within approximately three miles of the existing South McAllen Substation.

28. On July 24, 2013, Staff found that the Application was sufficient for further review on the merits.

29. Based on the evidence filed, Staff's July 24, 2013 finding, and Joint Applicants' supplementation of the Application pursuant to SOAH Order No. 6, the Commission finds that the Application is sufficient.

Need for the Proposed Project

30. As described in the January 23, 2012 ERCOT endorsement letter and Independent Review filed as Attachment 6 to the Application, the Project is needed to address the short- and long-term reliability needs of the LRGV and has been deemed critical to the reliability of the ERCOT System pursuant to P.U.C. SUBST. R. 25.101(b)(3)(D).

31. According to ERCOT, an east-west "cross valley" 345 kV line is needed by 2016 to prevent several violations of ERCOT and NERC planning criteria on the west side of the

LRGV, including scenarios for catastrophic load shed and the potential for voltage collapse.

32. An east-west "cross valley" 345 kV line would also provide needed additional transmission infrastructure to the City of Brownsville, reducing reliability concerns and likely fostering economic development by providing additional capacity for industrial load in and around the Port of Brownsville.

33. According to ERCOT, routing the Project from the existing North Edinburg Substation to "in proximity to" the existing South McAllen Substation would defer or eliminate multiple line upgrades in and be the best long-term solution for the western LRGV

34. Pursuant to P.U.C. SUBST. R. 25.101(b)(3)(A)(ii)(1), ERCOT's recommendation shall be given "great weight" in determining the need for a proposed transmission line project.

35. ERCOT does not define the phrase "in proximity to" in its endorsement letter or the Independent Review, leaving that to Joint Applicants and the Commission.

36. Based on their review of the Independent Review and the transmission infrastructure in the area, Joint Applicants implemented ERCOT's proximity recommendation by routing each alternative route within approximately three miles of the existing South McAllen Substation to facilitate a future low-impedance interconnection.

37. In his deposition, ERCOT witness Jeff Billo testified that the precise character of the interconnection was not as important as the connectivity between whichever substation was connected to the 345 kV source (*i.e.*, the Project) and the overloaded 138 kV lines in the area.

38. Due to the extent of line loadings, upgrading the existing overloaded 138 kV transmission lines is not a practicable alternative to connecting a new 345 kV source to the South McAllen Substation.

39. In recommending the Project be routed "in proximity to" the South McAllen Substation in anticipation of a future interconnection, the Independent Review indicates that such an interconnection would likely be needed by 2020.

40. Subsequent ERCOT documents indicate that an interconnection between the Project and the South McAllen Substation could be needed as early as 2016.

41. Electric customers in the LRGV and other customers in the ERCOT system will benefit from the improved transmission system reliability and capacity provided by the Project.

Routing of the Project

42. Joint Applicants retained POWER Engineers, Inc. (POWER) to prepare an Environmental Assessment and Routing Study for the Project. POWER used a Project Team with expertise in different disciplines (geology/soils, hydrology, terrestrial ecology, wetland ecology, land use/aesthetics, socioeconomics, and cultural resources [archaeological and historical]) to delineate and evaluate potential alternative routes for the proposed Project based upon environmental and land use conditions present along each potential route, reconnaissance surveys, and the public involvement process.

43. POWER examined potential routes taking into consideration the factors that appear in the Public Utility Regulatory Act, TEX. UTIL. CODE ANN. §§ 11.001-66.016 (Vernon 2007 & Supp. 2012) (PURA) § 37.056(c)(4)(A)-(D), P.U.C. SUBST. R. 25.101, and the Commission's CCN application form, which includes addressing the potential impacts of the Project within the Coastal Management Program (CMP) boundary as defined by the Coastal Coordination Council (CCC) Rule 31 T.A.C. § 503.1.

44. Joint Applicants held six public open-house meetings in October 2012 to solicit comments from landowners, public officials, and other interested residents regarding the preliminary alternative links. A notice of the public open-house meetings, in both English and Spanish, was mailed to the approximately 12,000 landowners who own property located within 500 feet of the preliminary alternative routing links. After revising the routing options in response to public input, Joint Applicants held an additional two open house meetings in February 2013 for new potentially affected landowners that were not mailed notice of the October 2012 meetings.

45. Information received from the public open-house meetings and from local, state and federal agencies was considered and incorporated into both POWER's routing analysis and the eventual selection by Joint Applicants of alternative routes.

46. POWER evaluated 42 primary alternative routes using 48 criteria that consider land use, aesthetics, ecology, and cultural resources. POWER also considered route impacts to the Coastal Natural Resource Areas (CNRAs) as part of its evaluation.

47. The routes that were filed in the Application varied in length from 96.3 miles to 125.5 miles. The ten supplemental routes varied in length from 86.3 miles to 101.5 miles.

48. Joint Applicants considered and submitted an adequate number of geographically diverse routes.

49. All routes are viable, feasible, and reasonable from an environmental, engineering, and cost perspective.

50. POWER identified Route 32 as the Route that best addresses the requirements of PURA and the Commission's Substantive Rules from a land use and environmental standpoint.

51. Among the 42 primary alternative routes considered, Route 32 is the best long-term transmission planning solution, and therefore best supports a reliable and adequate transmission network.

52. Route 32 is 117.5 miles in length and has an estimated cost of $352,229,000.

53. Route 32 is composed of the following noticed links: 1-4-7-10-17-26-32-33-43-45-51-48-54-56-60-64-342-71a-71b-75-78-81-82-83-85a-85c-84b-84c-87-89-92-94-96-97-105-107-114-117-116-118a-118c-125a-125b-128-175-179-185-187a-187b-196a-196b-200-203-212-214-219-226-233-235-256-258-265-271-270-269-268-267-274-277-304-305-312-313-357-339-341, as defined in Attachment 10c to the Application (Joint Applicants Exhibit 1).

54. No significant impact to existing land use, socioeconomic, geological, hydrological, or wetland resources and no adverse effects to historical or archeological resources are anticipated as a result of construction of Route 32.

Community Values, Land Use, Socioeconomics

55. The term "community values" is not formally defined by statute or in Commission rules. However, in several CCN dockets the Commission and Commission Staff have recognized a working definition as "a shared appreciation of an area or other mutual resource by a national, regional, or local community."

56. Route 32 does not cross any U.S. Fish and Wildlife Service (USFWS) National Wildlife Refuge system land.

57. Route 32 crosses 5.8 miles of International Boundary Water Commission (IBWC)-managed right-of-way.

58. Route 32 crosses 70.8 miles of cropland, 4.1 miles of orchards, 26.4 miles of pasture/rangeland, and no land irrigated by traveling irrigation systems.

59. There are four FAA-registered airstrips with at least one runway more than 3,200 feet in length within 20,000 feet of the centerline of Route 32, two FAA-registered airstrips with no runway more than 3,200 feet in length within 10,000 feet of the centerline of Route 32, one private airstrip within 10,000 feet of the centerline of Route 32, and no heliports within 5,000 feet of the centerline of Route 32.

60. There are no significant impacts to any airports, airstrips, or heliports anticipated from the construction of Route 32.

61. There are no AM radio transmitter located within 10,000 feet of the centerline of Route 32 and are 12 FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of the centerline of Route 32.

62. Staff recommends that Joint Applicants cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the Project.

Parks and Recreation Areas

63. No parks or recreational areas are crossed by the right-of-way of Route 32, and four parks or recreational areas are located within 1,000 feet of the centerline of Route 32.

Historical and Aesthetic Values

64. Five recorded cultural resource sites are located within the right-of-way of Route 32, and eleven additional cultural resource sites are within 1,000 feet of the centerline of Route 32.

65. One National Register-listed site is located within the right-of-way of Route 32, and one additional National Register-listed site is within 1000 feet of the centerline of Route 32.

66. Route 32 crosses 77.7 miles of area with high archeological site potential.

67. No impacts to historical or archeological sites are anticipated as a result of the construction of the proposed line along Route 32.

68. Potential visibility impacts were evaluated by tabulating the linear feet of each route that would potentially create a new or additional impact to potential sensitive viewers from publicly accessible areas. The length of each route within the foreground visual zone of parks/recreational areas (within one-half mile with unobstructed views), and the lengths within the foreground visual zone of FM roads, Interstate, State, and U.S. Highways (within one-half mile with unobstructed views) were tabulated.

69. Route 32 crosses within an estimated 18.7 miles of foreground visual zone of US and State highways, 32.3 miles of foreground visual zone of farm-to-market roads, and 12.3 miles of foreground visual zone of parks/recreational areas.

70. During construction, some temporary impacts to aesthetics may occur. These would result from the presence of construction equipment, recent disturbance from clearing and construction, clearing debris, and construction materials along the right-of-way. However, following construction, the right-of-way would be revegetated, construction equipment and material used or removed, and debris and trash disposed. The Project right-of-way would not present a view dissimilar to other linear rights-of-way throughout the area following completion of construction and restoration activities.

71. Aesthetic impacts of the proposed transmission line have been considered and minimized to the extent possible.

Environmental Integrity

72. POWER contacted the USFWS and the TPWD to obtain information regarding the possibility of encountering any endangered or threatened species in the area affected by the Project.

73. POWER studied and analyzed potential impacts to water resources, ecology (including endangered/threatened vegetation and fish and wildlife), and land use within the study area for the Project.

74. POWER appropriately performed an evaluation of the impacts of the Project on endangered and threatened species.

75. No significant impacts to wetland resources, ecological resources, endangered and threatened species, or land use are anticipated as a result of the construction of the Project.

76. Construction of the Project will have no significant impact on geological features or resources of the area.

77. To protect raptors and migratory birds, Commission Staff recommends that Joint Applicants follow the procedures outlined in the following publications 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.

78. Commission Staff recommends that Joint Applicants minimize the amount of flora and fauna disturbed during construction of the Project, except to the extent necessary to establish appropriate right-of-way clearance for the Project. In addition, Joint Applicants shall revegetate using native species and shall consider landowner preferences in doing so. Furthermore, to the maximum extent practicable, Joint Applicants shall avoid adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and USFWS.

79. Commission Staff recommends that Joint Applicants implement erosion control measures as appropriate and return each affected landowner's property to its original contours unless otherwise agreed to by the landowners. Joint Applicants shall not be required to restore original contours and grades where different contour or grade is necessary to ensure the safety or stability of the Project's structures or the safe operation and maintenance of the line.

80. Commission Staff recommends that Joint Applicants exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides to control vegetation within the right-of-way.

81. Commission Staff recommends that Joint Applicants use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.

Compatible Corridors

82. Route 32 uses or parallels existing compatible corridors (including apparent property boundaries and existing transmission lines) to a reasonable extent. Route 32 parallels 24.8 miles of existing transmission line right-of-way, 44.0 miles of other existing right-of-way, and 18.3 miles of apparent property lines.

Prudent Avoidance

83. The proposed transmission line has been routed in accordance with the Commission's policy of prudent avoidance.

84. Prudent avoidance is achieved by minimizing, to the extent reasonable, the number of habitable structures located in close proximity to the routes.

85. Joint Applicants and POWER used a constraints mapping process to identify and reduce the impact of the proposed line on various constraints, including habitable structures. Input gathered at the public open-house meetings further reduced the impact of the proposed line on habitable structures.

86. There are 465 habitable structures within 500 feet of the centerline of Route 32, 335 of which are newly affected (*i.e.*, not within 500 feet of the centerline of any existing transmission line), the least of any route.

87. There are two habitable structures within the right-of-way of Route 32, though it is likely that only one (a mobile home) would have to be relocated.

Coastal Management Program

88. The Project is located within the CMP boundary as defined in 31 T.A.C. § 503.1 of the CCC's rules.

89. The Project is located seaward of the Coastal Facilities Designation Line as defined in 31 T.A.C. § 19.2(a)(21) of the CCC's rules.

90. P.U.C. SUBST. R. 25.102 states that the Commission "may grant a certificate for the construction of generating or transmission facilities within the coastal boundary as defined in 31 T.A.C. § 503.1 only when it finds that the proposed facilities are consistent with the applicable goals and policies of the Coastal Management Program specified in 31 T.A.C. § 501.14(a), or that the proposed facilities will not have any direct and

significant impacts on any of the applicable coastal natural resource areas specified in 31 T.A.C. § 501.3(b)."

91. CCC rule 31 T.A.C. § 501.14(a) was repealed and replaced without substantive changes by 31 T.A.C. § 501.16. (*Texas Register*, Vol. 29, Number 30, July 23, 2004, p. 7039.)

92. CCC rule 31 T.A.C. § 501.16(a)(4) delineates the policies for the construction of electric transmission lines to or on Coastal Barrier Resource System Units and Otherwise Protected Areas (barrier islands). The rule states that transmission lines constructed on coastal barriers shall:

- be located, where practicable, in existing rights-of-way or previously disturbed areas if necessary to avoid or minimize adverse effects; and
- be located at sites at which future expansion shall avoid construction in critical areas, Gulf beaches, critical dunes, and washovers to the greatest extent practicable.

93. Though this Project is not located on a barrier island, Joint Applicants selected alternative routes that comply with this goal by paralleling existing ranch roads and previously disturbed areas to the greatest extent practicable. In addition, any future expansion that will require a CCN will be reviewed for consistency with CCC goals and policies by the Commission.

94. The proposed Project is consistent with the goals and policies of the Texas CMP specified in CCC rule 31 T.A.C. § 501.16 [formerly § 501.14(a)].

95. CNRAs as designated in 31 T.A.C. § 501.3(b) include waters of the open Gulf of Mexico, waters under tidal influence, submerged lands, coastal wetlands, submerged aquatic vegetation, tidal sound and mud flats, oyster reefs, hard substrate reefs, coastal barriers, coastal shore areas, gulf beaches, critical dune areas, special hazard areas (floodplains, etc.), critical erosion areas, coastal historic areas, and coastal preserves.

96. To determine whether any CNRAs are located along the alternative routes, POWER conducted a review of the CMP and performed field reconnaissance in the study area. POWER also reviewed aerial photography and associated mapping provided by the

Texas General Land Office, Federal Emergency Management Agency, USFWS, and the U. S. Geological Survey. Based on this review, POWER determined that the following CNRAs are located along the alternative routes to varying extents: coastal wetlands, special hazard areas, and coastal historic areas.

97. The goals of the Texas CMP are enumerated in CCC rule 31 T.A.C. § 501.12. The goals applicable to the Project are:

- to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of CNRAs;
- to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone;
- to minimize loss of human life and property due to the impairment and loss of protective features of CNRAs;
- to balance the benefits from economic development and multiple human uses of the coastal zone, the benefits from protecting, preserving, restoring, and enhancing CNRAs, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the coastal zone; and
- to make coastal management processes visible, coherent, accessible, and accountable to the people of Texas by providing for public participation in the ongoing development and implementation of the Texas CMP.

98. The foregoing findings of fact demonstrate consistency with the applicable goals of the Texas CMP as enumerated in CCC rule 31 T.A.C. § 501.12:

- The Project minimizes impacts on CNRAs by routing in previously disturbed areas where practicable;
- The Project is routed, designed, and will be constructed using the best utility practices;
- Notice was given to the public, directly affected landowners, municipalities, counties, and neighboring utilities; and
- The Project received public comment filings, directly affected landowner