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PUC DOCKET NO. 53727

JOINT APPLICATION OF AEP TEXAS INC.§AND SHARYLAND UTILITIES, L.L.C. TO§AMEND THEIR CERTIFICATES OF§CONVENIENCE AND NECESSITY FOR THE§LA PALMA TO KINGFISHER DOUBLE-§CIRCUIT 345-KV TRANSMISSION LINE IN§CAMERON COUNTY§

BEFORE THE

PUBLIC UTILITY COMMISSION

OF TEXAS

DIRECT TESTIMONY

OF

GARY L MCCLANAHAN, JR.

ON BEHALF OF APPLICANTS

AEP TEXAS INC. AND

SHARYLAND UTILITIES, L.L.C.

JUNE 29, 2022

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EXHIBITS

Exhibit GLM-1	Resume of Gary L. McClanahan, Jr.
Exhibit GLM-2	PURA § 37.056(c)
Exhibit GLM-3	16 Tex. Admin. Code § 25.101(b)(3)(B)

I. <u>INTRODUCTION</u>

1	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
2	A.	My name is Gary L. McClanahan, Jr. My business address is 7600B North Capital of
3		Texas Highway, Suite 320, Austin, Texas 78731.
4	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
5	A.	I am employed by POWER Engineers, Inc. (POWER), a 100 percent employee-owned
6		consulting and engineering firm, as Project Manager in the Environmental Division.
7	Q.	PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
8		QUALIFICATIONS AND BUSINESS EXPERIENCE.
9	A.	After having served in active duty from 1995 to 1998 as a Cavalry Scout in the United
10		States Army, I returned to school and earned a Bachelor of Science degree in Wildlife
11		and Fisheries Sciences from Texas A&M University in 2003 with an emphasis in
12		wildlife ecology and management. Since then, I received certification in 2005 from the
13		Wetland Training Institute in conjunction with Section 307(e) of the Water Resources
14		Development Act of 1990 as a wetland delineator under the Wetland Delineation
15		Certification Program. In 2009, I was granted the designation of Certified Wildlife
16		Biologist from The Wildlife Society. In 2011, I was issued a Texas Parks and Wildlife
17		Department ("TPWD") Scientific Research Permit No. SPR-111-376 that allows me
18		and sub-permittees under my direction to handle and capture small and medium
19		mammals, reptiles, and amphibians, including species listed by TPWD as threatened or
20		endangered, throughout Texas for scientific purposes. I have worked as a full-time
21		professional environmental scientist, ecologist, and environmental consultant since

1 2003. During that time, I have assisted clients with environmental planning, 2 environmental assessment, and environmental permitting and licensing for multiple 3 energy-related projects, including lignite surface mines, oil and gas pipelines, and 4 electric transmission lines. I have authored or co-authored over 80 technical 5 environmental reports, including wetland delineation reports, threatened and environmental 6 endangered species habitat assessments. assessments. and 7 environmental impact statements. I have managed or been involved in over 70 transmission line routing studies for projects in Texas and surrounding states. 8 9 including managing environmental assessments and routing analyses for five 10 Competitive Renewable Energy Zone ("CREZ") projects approved by the Public 11 Utility Commission of Texas (Commission or PUC). Transmission line projects I have 12 been involved in range in size from 69-kilovolt ("kV") to 500-kV and range from less 13 than five miles to over a hundred miles in length. My résumé is attached as Exhibit 14 GLM-1.

15 Q. HAVE YOU PREVIOUSLY PERFORMED WORK RELATED TO 16 TRANSMISSION LINE ADMINISTRATIVE PROCEEDINGS?

17 A. Yes, I have. My resume, attached as Exhibit GLM-1, lists all of the administrative
18 proceedings in which I have performed work related to transmission line projects.

19 Q. HAVE YOU EVER SUBMITTED TESTIMONY BEFORE THE PUBLIC UTILITY20 COMMISSION OF TEXAS?

A. Yes. I submitted testimony in Commission Docket Nos. 45622, 46248, 47462, 48625,
 48668, 48909, 49151, 49715, 49603, 50830, 52241, and 52304.

II. <u>PURPOSE OF TESTIMONY</u>

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2	A.	The purpose of my testimony is to introduce, support, and sponsor the document
3		entitled La Palma to Kingfisher 345-kV Transmission Line Project Environmental
4		Assessment and Alternative Route Analysis Cameron County, Texas (Environmental
5		Assessment or EA) prepared by POWER at the request of AEP Texas Inc. (AEP Texas)
6		and Sharyland Utilities L.L.C. (Sharyland). The EA is Attachment 1 to the Application
7		of AEP Texas Inc. and Sharyland Utilities L.L.C. to Amend Their Certificates of
8		Convenience and Necessity for the AEP Texas and Sharyland La Palma to Kingfisher
9		Double-Circuit 345-kV Transmission Line in Cameron County (Application) that was
10		filed in this docket.
11		The Application is publicly available at the Commission and will be offered into
12		evidence by AEP Texas and Sharyland as an exhibit in this proceeding.
13	Q.	WHAT PORTIONS OF THE APPLICATION DO YOU SPONSOR?
14	A.	I am sponsoring in whole or in part the responses to Application Questions Nos. 6, 17
15		through 24, and 26 through 29. I also sponsor the majority of the EA, which is
16		Attachment 1 of the Application, and Attachment 2 (in part), Attachment 7 (in part),
17		and Attachment 8 (in part) of the Application.
18	Q.	WERE YOUR TESTIMONY AND THE INFORMATION YOU HAVE BEEN
19		IDENTIFIED AS SPONSORING PREPARED BY YOU OR BY
20		KNOWLEDGEABLE PERSONS UNDER YOUR SUPERVISION AND UPON

- WHOSE EXPERTISE, JUDGMENT AND OPINIONS YOU RELY IN
 PERFORMING YOUR DUTIES?
- 3 A. Yes, they were.
- 4 Q. IS THE INFORMATION THAT IS CONTAINED IN YOUR TESTIMONY AND
 5 THAT YOU ARE SPONSORING TRUE AND CORRECT TO THE BEST OF YOUR
 6 KNOWLEDGE AND BELIEF?
- 7 A. Yes, it is.

III. **PROJECT DESCRIPTION**

- 8 Q. PLEASE DESCRIBE THE TRANSMISSION LINE PROJECT THAT IS
 9 ADDRESSED IN YOUR TESTIMONY AND IN THE EA.
- 10 A. The proposed Project will be a new double-circuit capable 345-kV transmission line
 11 with one circuit installed initially.

The project will begin at the existing AEP Texas La Palma Station, located in the City of San Benito approximately 620 feet south of US Highway (US Hwy) Business 77 and approximately 0.30 mile east of North Oscar Williams Road. The Project will extend to the proposed Sharyland Kingfisher Station located on Casey Road approximately 0.80 mile south of Farm-to-Market Road (FM) 3462 and approximately 0.73 mile southeast of FM 510. Depending on which route is selected in this process, the total length of the proposed Project would be approximately 4.5 to 11 miles long.

IV. ENVIRONMENTAL ASSESSMENT AND ROUTING ANALYSIS

1 Q. WHY DID POWER PREPARE THE EA?

A. AEP Texas and Sharyland contracted with POWER to perform a routing study and prepare the EA for this Project. As Project Manager, I am responsible for the EA and its findings. I oversaw all elements of the EA from baseline data acquisition and analysis through selection of the route for this Project that POWER determined best meets the requirements of the Public Utility Regulatory Act (PURA) and the PUC's Substantive Rules from an environmental and land use perspective.

8 Q. PLEASE DESCRIBE THE PURPOSE OF THE EA.

9 A. The objective of the EA was to identify and evaluate several alternative transmission
10 line routes and ultimately to recommend a route to AEP Texas and Sharyland that
11 POWER believes best meets the requirements of PURA and the PUC's Substantive
12 Rules from environmental and land use standpoints.

The environmental planning process completed by POWER consisted of a series of tasks to address the requirements of PURA, the Commission's Rules, and AEP Texas and Sharyland's standard design practices for the development of an EA to address essential elements for a Certificate of Convenience and Necessity (CCN) application.

17 Q. WHAT DOES THE EA ADDRESS?

18 A. The EA provides a detailed description of the procedures and methodology followed 19 and the factors considered in identifying alternative routes for AEP Texas and 20 Sharyland. The EA was prepared to address land use, visual resources, socioeconomic 21 elements, biological/ecological resources, geology and soils, hydrology, and cultural

1 resources within the regional study area and along the alternative routes. The EA 2 specifically addresses the environmental and land use factors that appear in PURA 3 § 37.056(c)(4)(A)-(D), which is included as Exhibit GLM-2 of this testimony. The EA 4 also addresses the PUC's policy of prudent avoidance, the PUC's CCN application 5 requirements, and the issues commonly addressed in PUC preliminary orders associated with CCN applications that appear in PUC Substantive Rule 16 Texas 6 7 Administrative Code (TAC) § 25.101(b)(3)(B), which is included as Exhibit GLM-3 of this testimony. 8

9 Q. WHO PARTICIPATED IN PREPARATION OF THE EA?

A. A team of professionals under my direction, representing various environmental
 disciplines, was assembled from the POWER staff and was involved in data
 acquisition, routing analysis, and environmental impacts assessment of the subject
 Project. Section 6.0 of the EA presents a list of the primary preparers of the EA.

14 Q. PLEASE DESCRIBE THE STEPS TAKEN IN PREPARING THE EA.

A. The tasks included project scoping and study area delineation, data collection, constraint mapping, preliminary alternative links identification, review and adjustment of preliminary alternative links following field review, consideration of open-house input, local/state/federal agency input, primary alternative route identification, analysis and impact assessment, and the identification of alternative routes for AEP Texas and Sharyland, including the primary alternative route believed to best meet the requirements of PURA and the PUC's Substantive Rules.

Project Scoping and Study Area Delineation

1	Project scoping and study area delineation required the selection of a study area. This
2	area needed to encompass the existing substations involved in the Project and include
3	a large enough area within which a geographically diverse set of alternative routes
4	could be delineated.
	Data Collection and Agency Contact
5	After the study area was identified, the POWER Project Team initiated a variety of data
6	collection activities. Data collection activities consisted of file and record reviews.
7	Data used by POWER in the delineation and evaluation of the preliminary and primary
8	alternative links/routes were drawn from a variety of sources, including published
9	literature (documents, reports, maps, aerial photography, etc.) and information from
10	local, state, and federal agencies. Throughout the identification and evaluation of
11	primary alternative routes, POWER used readily available recent color aerial and
12	electronic, high-resolution digital photography; various scale U.S. Geological Survey
13	(USGS) topographic maps; Texas Department of Transportation (TxDOT) county
14	highway maps; and ground reconnaissance surveys. Computer-based evaluation of
15	digital aerial imagery was utilized for both refinement and evaluation of alternative
16	routes. The data collection effort, although concentrated in the early stages of the
17	Project, was an ongoing process and continued up to the point of alternative route
18	selection.

19 One of the data collection activities was the development of a list of local officials and 20 departments and local, state, and federal regulatory agencies to receive a consultation letter in December 2021 regarding the proposed transmission line Project. The purpose
 of the letter was to inform the various officials and agencies of the Project and to give
 those officials and agencies the opportunity to provide any information they had
 regarding the Project and/or general Project area. In response, POWER and AEP Texas
 and Sharyland received written and verbal information from various public officials
 and agencies. Written responses to consultation letters are included in Appendix A of
 the EA.

Constraint Mapping

8 Since a number of potential routes could be drawn to connect the existing and planned 9 stations, a constraints mapping process was used in identifying and refining possible alternative routes. The geographic locations of environmentally sensitive and other 10 restrictive areas within the study area were located and considered during alternative 11 12 transmission line route delineation. The overall impact of the alternative routes has 13 been greatly reduced by avoiding, to the extent reasonably possible, such constraints as 14 individual residences, rural subdivisions, airstrips, mobile irrigation systems, 15 cemeteries, known historic and archaeological sites, wetlands, parks, churches, and 16 schools. Impacts have also been reduced by efforts to parallel existing compatible 17 rights-of-way (ROW) and property lines where reasonable and practical.

Preliminary Alternative Route Delineation/Adjustments

Based on a review of recent aerial photographs, environmental and land use constraints, existing transportation and utility ROW, and the location of existing facilities, POWER delineated a network of links, which were presented to AEP Texas and Sharyland for review and comment. These initial preliminary routing links were examined in the field on January 4th and 5th, 2022, March 8th and 9th, 2022, and April 12, 2022 by POWER staff. Following environmental and engineering review by the Project Team, adjustments were made to the location and alignment of several routing links resulting in a set of preliminary alternative links.

Public Meeting Input/Route Revisions

6 These adjusted preliminary alternative routing links were presented during three public 7 meetings held on March 8, March 9, and April 12, 2022, from 5:00 pm to 8:00 pm. 8 POWER staff and/or AEP Texas and Sharyland performed additional reviews to look 9 at areas of concern discussed after the public meetings, communicated with individual 10 landowners, evaluated the public comments, and considered revisions to the preliminary links. In response to public and landowner concerns, some preliminary 11 12 alternative routing links were modified and added to improve paralleling of existing 13 compatible ROWs (including apparent property lines) and to reduce impacts to other 14 constraints to the greatest extent practicable. The Project Team, utilizing this input, 15 made final revisions to develop the 50 primary alternative routing links, and identified 16 the 19 primary alternative routes to be further evaluated by POWER in the EA for the 17 Project.

Primary Alternative Route Evaluation/POWER Route Recommendation

As detailed in the EA, 19 primary alternative routes, comprised of 50 different links, were ultimately selected for evaluation by the POWER staff and AEP Texas and Sharyland. As discussed below, AEP Texas, Sharyland, and POWER believe that the 50 primary alternative routing links and the 19 primary alternative routes are all viable
and provide an adequate number of geographically differentiated routes to consider for
this Project. The results of POWER's effort are presented in Sections 4.0 and 5.0 of
the EA. These primary alternative routes are shown on Figures 3-4 and 5-1 (located in
Appendix C) of the EA. In evaluating the primary alternative routes, 41 environmental
criteria were considered.

The number or amount of each environmental criterion was determined by reviewing
various maps and recent color aerial photography and by performing field verification,
where possible. The environmental and land use advantages and disadvantages of each
primary alternative route were then evaluated.

11 The EA prepared by POWER provides a comparison of the primary alternative routes 12 strictly from an environmental and land use standpoint, based upon professional expertise and on the measurement of 41 separate routing criteria for route evaluation. 13 14 The routing criteria are listed in Table 2-1, and the data associated with the criteria are 15 provided in Table 4-1 of the EA, and address the factors set forth in PURA 16 \S 37.056(c)(A)-(D) and 16 TAC \S 25.101(b)(3)(B). POWER professionals with 17 expertise in different environmental disciplines (wildlife biology, plant ecology, land 18 use/planning, and archaeology) evaluated the primary alternative routes based upon 19 environmental conditions present along each primary alternative route, augmented by 20 aerial photograph interpretation and field surveys, where possible, and the general 21 routing methodology used by POWER and environmental criteria. Each POWER 22 evaluator independently analyzed the primary alternative routes and the environmental

1 criteria data. The evaluators then met as a group and discussed their independent 2 The relationship and relative sensitivity among the major environmental results. 3 criteria were determined by the group as a whole. The POWER evaluators then ranked 4 the primary alternative routes based strictly upon the environmental and land use 5 criteria evaluation, considering the relationships and relative sensitivities among the criteria, and selected a primary alternative route determined to best meet the 6 7 requirements of PURA and the PUC's Substantive Rules from a land use and 8 environmental perspective.

9 Q. HAVE AN ADEQUATE NUMBER OF GEOGRAPHICALLY DIVERSE
10 ALTERNATIVE ROUTES BEEN FORMULATED TO CONDUCT A PROPER
11 EVALUATION?

A. Yes. Given the relatively short distance between the La Palma and Kingfisher stations
(the Project's two endpoints) and the nature of the Project area, I believe that the routes
evaluated in the EA provide an adequate number of geographically diverse alternative
routes for evaluation.

Data for the environmental/land use criteria were collected for each link, and all of the links were used to develop the alternative routes filed in the Application. I believe the primary alternative routes filed in the Application represent an adequate number of reasonable, viable, geographically-varied alternative routes.

> DIRECT TESTIMONY GARY L. MCCLANAHAN

- Q. WHAT ROUTE DID POWER IDENTIFY AS BEST MEETING THE
 REQUIREMENTS OF PURA AND THE PUC'S SUBSTANTIVE RULES FROM
 AN ENVIRONMENTAL AND LAND USE PERSPECTIVE?
- 4 A. For the transmission line Project, POWER identified primary Alternative Route 4 as 5 the route that best meets the requirements of PURA § 37.056(c) and 16 TAC § 25.101(b)(3)(B). The reasons POWER identified Alternative Route 4 as the route that 6 7 meets these requirements are contained in Section 5.0 of the EA. The other top four primary alternative routes that POWER ranked from an environmental and land use 8 9 perspective are primary Alternative Routes 2, 5, 19, and 6. However, all of the primary 10 alternative routes and links in the Application are viable, feasible, and acceptable from 11 an environmental and land use perspective.

V. INFORMATION ADDRESSING THE PUC'S CCN CRITERIA

12 Q. HOW WAS THE INFORMATION COMPILED BY POWER USED FOR13 PURPOSES OF THE APPLICATION?

A. POWER provided environmental and land use information for all of the primary
 alternative routes, which was used to complete several specific questions in the
 Application.

17 Q. WHAT ARE POWER'S FINDINGS REGARDING PROXIMITY TO HABITABLE
18 STRUCTURES IN THE VICINITY OF THE PROPOSED PRIMARY
19 ALTERNATIVE ROUTES?

A. As shown in Table 4-1 of the EA, between 30 and 121 habitable structures are located
within 500 feet of the centerlines of the primary alternative routes.

General descriptions of the habitable structures that are within 500 feet of the centerline of each primary alternative route and their distances from the centerlines are provided in Tables 5-2 through 5-20 of the EA. The habitable structures (by ID number) that are located within 500 feet of the route centerlines are shown on Figure 5-1 (located in Appendix C) of the EA. These same ID numbers will be found in Attachments 7 and 8 of the Application.

7	Q.	WHAT ARE POWER'S FINDINGS WITH RESPECT TO AM RADIO
8		TRANSMITTERS WITHIN 10,000 FEET OF THE CENTERLINE AND OTHER
9		TYPES OF ELECTRONIC INSTALLATIONS WITHIN 2,000 FEET OF THE
10		CENTERLINES OF THE PROPOSED PRIMARY ALTERNATIVE ROUTES?

A. No AM radio transmitters were identified within 10,000 feet of the centerlines the
primary alternative routes.

As shown in Table 4-1 of the EA, there are between zero (0) and two FM radio transmitter or electronic communication towers located within 2,000 feet of the centerlines of the primary alternative routes.

16 Section 4.2.8 of the EA contains a general description of all of the electronic 17 installations within 10,000 feet of the primary alternative routes, the nearest routing 18 links, and the distances from the links to the electronic installations.

19Tables 5-2 through 5-20 are organized by primary alternative route and provide the20distances of the electronic installations from the centerline of each primary alternative21route. Figure 5-1 (located in Appendix C) of the EA is a map that shows the locations

- 1 of the electronic installations (by ID number) within 2,000 feet of the primary 2 alternative routes.
- Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO KNOWN PRIVATE
 AIRSTRIPS WITHIN 10,000 FEET, FAA REGISTERED AIRPORTS WITHIN
 20,000 FEET, AND HELIPORTS WITHIN 5,000 FEET OF THE CENTERLINES OF
 THE PROPOSED ALTERNATIVE ROUTES?
- A. As shown in Table 4-1 of the EA, there is one FAA registered public-use or military
 airport (Valley International Airport) having at least one runway over 3,200 feet in
 length, located outside the study area but within 20,000 feet of Alternative Routes 8, 9,
 10, 13, and 14.
- 11 There are zero (0) FAA registered public-use airports having no runways over 3,200 12 feet in length within 10,000 feet of the alternative routes and zero (0) public or private-13 use heliports within 5,000 feet of the alternative routes.
- Based on POWER's preliminary calculations, FAA notification requirement is not anticipated for any of the alternative routes. Following PUC approval of a route for the proposed transmission line, AEP Texas/Sharyland will make a final determination of the need for FAA notification, based on specific route location and structure design of the approved route. The result of this notification, and any subsequent coordination with the FAA, although not expected, could include changes in the line design and/or potential requirements to mark the conductors and/or light the structures.

There is also one known private airstrip (Kornegay Airstrip) located within 10,000 feet
of all of the alternative routes. Kornegay Airstrip is a private airstrip that is not included
in the Airport/Facility Directory and is not subject to FAA notification requirements.
When developing alternative routes for the project, POWER attempted to maximize
distance to the Kornegay Airstrip where practical so as not to adversely affect aviation
operations.

Section 4.2.7 of the EA contains a general description of all of the FAA registered
public-use or military airports having at least one runway over 3,200 feet in length
within 20,000 feet of the alternative routes, the nearest routing links, and the distances
from the links to airports.

Tables 5-2 through 5-20 are organized by primary alternative route and provide the
distances of the airports from the centerline of each primary alternative route. Figure
5-1 (located in Appendix C) of the EA is a map that shows the locations of the airports
(by ID number) within 20,000 feet of the primary alternative routes.

Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO AREAS IRRIGATED BY
TRAVELING IRRIGATION SYSTEMS IN THE VICINITY OF THE PROPOSED
ALTERNATIVE ROUTES?

18 A. As shown in Table 4-1, none of the primary alternative routes cross agricultural lands
19 with known mobile irrigation systems (rolling or pivot).

	PLEASE DESCRIBE THE PERMITS OR APPROVALS THAT WILL BE
2	OBTAINED AS NECESSARY TO CONSTRUCT THE PROJECT.
3 A.	Permits/approvals to be obtained as necessary are:
4 5 6	• Floodplain development permits and road crossing permits might be required by the counties in which the approved route is located, depending on the location of the approved transmission line structures.
7 8	• Permits for crossing state-maintained roads/highways will be obtained from TxDOT.
9 10	• Cultural resource clearance will be obtained from the Texas Historical Commission for the proposed Project right-of-way as necessary.
11 12 13 14 15	• A Storm Water Pollution Prevention Plan (SWPPP) might be required by the Texas Commission on Environmental Quality (TCEQ). AEP Texas and Sharyland or their contractor, as necessary, will submit a Notice of Intent to the TCEQ at least 48 hours prior to the beginning of construction; and will have the SWPPP on site at the initiation of clearing and construction activities.
16 17 18 19 20	• A Miscellaneous Easement from the Texas General Land Office (GLO) will be obtained as necessary for any right-of-way that crosses a state-owned riverbed or navigable stream. Permitting action might be required by the GLO under the Texas Coastal Management Program (CMP) for an approved route that is located within the CMP boundary.
21 22 23 24	• Notification to the Federal Aviation Administration (FAA) might be required depending on the alignment of the approved route, structure locations, and structure designs. Requirements to alter the design of the structures or potential requirements to mark and/or illuminate the line will be coordinated with the FAA as necessary.
25 26 27	• Permits or other requirements associated with possible impacts to endangered/threatened species will be coordinated with the U.S. Fish and Wildlife Service as necessary.
28 29 30 31 32	• Permits or other requirements associated with possible impacts to waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers (USACE) will be coordinated with the USACE as necessary. None of the routing links for this Project crosses property that is owned by the USACE, and no easements on USACE property will be necessary.

Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO THE NUMBER OF
 PARKS AND RECREATIONAL AREAS WITHIN 1,000 FEET OF THE
 CENTERLINE OF THE PROPOSED ALTERNATIVE ROUTES?

A. POWER reviewed the federal, state, and local websites and maps, and conducted field
reconnaissance in order to identify parks and recreation facilities located within the
study area. None of the primary alternative routes cross any parks and recreation
facilities. The number of parks and recreation facilities located within 1,000 feet of the
primary alternative routes ranges from 0 (zero) each for 13 of the primary alternative
routes, to one each (Las Palomos-WMA Carricitos Unit) for six of the primary
alternative routes.

No significant impacts to the use or enjoyment of the parks and recreation facilities
located within the study area are anticipated from any of the primary alternative routes.

Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO POTENTIAL IMPACTS
ON HISTORICAL AND AESTHETIC VALUES FROM THE PROPOSED
ALTERNATIVE ROUTES, INCLUDING KNOWN CULTURAL RESOURCES
SITES WITHIN 1,000 FEET FROM THE CENTERLINE OF THE PROPOSED
ALTERNATIVE ROUTES?

A. No recorded cultural resource sites are crossed or located within 1,000 feet of the
 centerlines of the primary alternative routes. All of the proposed alternative routes are
 located entirely within the Cameron County Irrigation District No. 2, which has been
 determined to be eligible for listing on the National Register of Historic Places

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(NRHP). No NRHP sites are located within 1,000 feet of the centerlines of any of the
 primary alternative routes.

The ROWs of the primary alternative routes traverse between 4.35 miles and 9.17 miles of land with high archeological site potential. There are two cemeteries located within 1,000 feet of the primary alternative routes. This information was determined by a literature review and records search at the Texas Historical Commission and the Texas Archeological Research Laboratory at the University of Texas at Austin.

8 For each primary alternative route, the numbers of known or recorded archaeological 9 sites crossed and within 1,000 feet of the ROW centerline are shown in Table 4-1 of 10 the EA. General descriptions of the known or recorded archaeological sites and their 11 distances from the centerlines of the routes are provided in Section 4.4 and in Tables 12 5-2 through 5-20 of the EA.

The study area is primarily rural with some residential, commercial, and industrial development scattered throughout. 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 structures. Where wooded areas are cleared, the brush and wood debris could have an additional temporary negative impact on the local visual environment. Permanent impacts from the Project would involve the views of the structures and lines.

All of the primary alternative routes have a portion of their ROW length located within the foreground visual zone of US or State Highways and FM roads. Alternative Route

1 17 has the longest length within the foreground visual zone of US or State Highways, 2 approximately 4.75 miles, while Alternative Route 5 has the shortest length, 3 approximately 1.82 miles. Alternative Route 13 has the longest length within the 4 foreground visual zone of FM roads, approximately 5.77 miles, while Alternative 5 Route 1 has the shortest length, approximately 2.15 miles. None of the alternative 6 routes have any portion of their ROW length located within the foreground visual zone 7 of parks or recreational areas.

8 A summary of the lengths for each of the primary alternative routes within the 9 foreground visual zone of these areas is presented in Section 4.5 and in Table 4-1 of 10 the EA.

11 Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO COASTAL
12 MANAGEMENT ZONE IMPACTS IN THE VICINITY OF THE PROPOSED
13 ALTERNATIVE ROUTES?

A. None of the primary alternative routes of the Project are located within the Coastal
Management Program boundary as defined in 31 Tex. Admin. Code § 503.1.

16 Q. WHAT ARE POWER'S FINDINGS WITH RESPECT TO IMPACTS ON
17 ENVIRONMENTAL INTEGRITY FROM THE PROPOSED ALTERNATIVE
18 ROUTES?

A. Review of information from the Texas Natural Diversity Database (TXNDD), Texas
Parks and Wildlife Department (TPWD), and United States Fish and Wildlife Service
(USFWS) indicate records of two plant species that are federally listed and three state
listed as endangered within the study area county. There are 12 animal species that are

federally listed for the study area county. There are also 50 animal species that are
 state listed for the study area county (see Table 2-15 in Section 2.8.5 of the EA). None
 of the primary alternative routes has any length of ROW across known habitat of
 federally listed endangered or threatened species.

5 The impacts on environmental integrity are discussed further in Section 4.6 of the EA. 6 The Project is anticipated to have short-term minimal impacts to soil, water, and 7 ecological resources. If necessary, prior to construction, a field survey will be 8 completed on the PUC approved route to determine if suitable habitat is present for any 9 of the federally listed species.

VI. ADDITIONAL COMMISSION ROUTING CONSIDERATIONS

10 Q. DID THE POWER ANALYSIS CONSIDER SUCH FACTORS AS PARALLELING
11 OF EXISTING COMPATIBLE RIGHTS OF WAY AND PROPERTY
12 BOUNDARIES OR OTHER NATURAL OR CULTURAL FEATURES?

A. Yes. In consideration of and in compliance with 16 TAC § 25.101(b)(3)(B)(i), (ii), and (iii), POWER's route delineation and route evaluation process considered utilizing and paralleling existing compatible ROW, apparent property boundaries and other natural or cultural features where practical and reasonable. The length of compatible ROW that is parallel to these linear routing features for the primary alternative routes range from approximately 2.82 miles on Alternative Route 1, to approximately 8.86 miles on Alternative Route 18.

20

None of the primary alternative routes utilize existing transmission line ROW.

1		The total primary alternative route lengths parallel and adjacent to existing transmission
2		line ROW range from 0.39 mile each on Alternative Routes 14 and 17, to
3		approximately 3.12 miles on Alternative Route 4.
4		The primary alternative routes with ROW lengths that are parallel to "other" existing
5		compatible ROW (roadways, canals, etc.) range from approximately 0.49 mile on
6		Alternative Route 5, to approximately 5.96 miles on Alternative Route 14.
7		The primary alternative routes with ROW lengths that are parallel to apparent property
8		boundaries range from 0.10 mile each on Alternative Routes 1 and 2, to approximately
9		3.51 miles on Alternative Route 18.
10	Q.	DID THE POWER ANALYSIS CONSIDER EXISTING PIPELINES?
11	A.	Yes; however, AEP Texas and Sharyland did not consider being parallel to a pipeline
12		as a positive routing attribute. The PUC requires an electric utility to work with
13		pipelines to determine if impacts are created by the routing of a transmission line and
14		the PUC does not consider paralleling of pipelines as a compatible routing feature.
15		Therefore, for this Project, POWER avoided routing links adjacent to existing pipelines
16		where possible, and from instructions provided by AEP Texas and Sharyland,
17		attempted to cross pipelines close to perpendicular.

Q. DOES POWER BELIEVE THAT ADDITIONAL ALTERNATIVE ROUTE
 CONFIGURATIONS EXIST THAT WOULD HAVE LESS IMPACT ON
 LANDOWNERS?

A. No. The routing process involved the delineation of several primary alternative routes,
as depicted in Figures 3-4 and 5-1 (located in Appendix C) of the EA. Information 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 identified to minimize landowner impact in accordance with
the criteria specified in PURA and the PUC's Substantive Rules.

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 routing study in that manner. I believe that, on balance, the proposed alternative routes minimize adverse impacts on directly affected landowners. Additional alternative route configurations would not have less impact on landowners.

Q. DO YOU BELIEVE THE CONCEPT OF "COMMUNITY VALUES" HAS BEEN
ADEQUATELY ADDRESSED BY THE SELECTION OF THE PRIMARY
ALTERNATIVE ROUTES AND THE COMPILATION OF DATA BY POWER,
INCLUDING THE DATA THAT HAS BEEN RECEIVED FROM THE AGENCIES
AND THE PUBLIC INPUT?

A. Yes, I do. The term "community values" is included as a factor for the consideration
of transmission line certification under Section 37.056(c)(4) of PURA, although the
term has not been specifically defined for regulatory purposes by the PUC.

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For purposes of evaluating the effects of the Project, POWER has defined the term "community values" as a "shared appreciation of an area or other natural resource by a national, regional, or local community."

POWER's studies of the effect on "community values," which are described in Sections
2.2 through 2.5 and 4.1 through 4.3 of the EA, adequately address the requirements of
PURA and the PUC's Substantive Rules regarding consideration of the effects of the
Project on "community values."

8 Q. ARE YOU FAMILIAR WITH THE COMMISSION'S POLICY OF "PRUDENT 9 AVOIDANCE?"

10 A. Yes. Commission Substantive Rule 25.101 defines the term "prudent avoidance" as 11 "the limiting of exposures to electric and magnetic fields that can be avoided with 12 reasonable investments of money and effort." My understanding of the Commission's policy of prudent avoidance is that the process of routing a proposed transmission line 13 14 should include consideration of routing options that entail reasonably avoiding 15 population centers and other locations where people gather. This does not mean that a 16 proposed transmission line must avoid habitable structures at all costs, but that 17 reasonable alternatives must be considered.

1	Q.	DO YOU BELIEVE THE ROUTES CONSIDERED BY POWER, AEP TEXAS, AND
2		SHARYLAND CONFORM TO THE COMMISSION'S POLICY OF PRUDENT
3		AVOIDANCE?

- 4 A. Yes. All of the routes considered in the EA conform to the Commission's policy of
 5 prudent avoidance in that they reflect reasonable investments of money and effort in
 6 order to limit exposures to electric and magnetic fields.
- Q. HAS POWER REVIEWED AND CONSIDERED CERTAIN MITIGATION
 MEASURES FOR THIS PROJECT TO DECREASE POTENTIAL IMPACTS FROM
 THE PROJECT?
- A. Yes, it has. These mitigation measures are set forth in Sections 1.4.1, 1.4.2, 1.4.3, 4.4.3,
 and 4.6.2 through 4.6.4 of the EA.

12 Q. WHAT ARE POWER'S CONCLUSIONS REGARDING THESE MITIGATION13 MEASURES?

A. Where applicable and practical, the proposed mitigation measures should serve to
 reduce and mitigate the potential adverse effects of construction and operation of the
 Project to an appropriate extent.

VII. <u>SUMMARY AND CONCLUSION</u>

- 17 Q. PLEASE SUMMARIZE YOUR TESTIMONY.
- A. In my opinion, all of the proposed alternative routes have been routed in a prudent
 manner, and comply with PURA and the Commission's rules, policies, and procedures
 for transmission line routing. All of the primary alternative routes and links in the
 Application are viable, feasible, and acceptable from an environmental standpoint.

1 My testimony and the EA address the differing extent to which the proposed 2 alternative routes satisfy such requirements. In addition, I conclude that Alternative 3 Routes 4, 2, 5, 19, and 6 are the best routes from an environmental and land use 4 perspective for approval by the Commission in this docket.

- 5 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
- 6 A. Yes, it does.

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GARY L. MCCLANAHAN, JR. ENVIRONMENTAL PROJECT MANAGER

YEARS OF EXPERIENCE 19

EDUCATION

> B.S., Wildlife & Fisheries Sciences, Wildlife Ecology & Management, Texas A&M University, 2003

AREAS OF EXPERTISE

- > Wildlife and Rangeland Ecology and Management
- > Threatened and Endangered Species
- > Wetland Delineation Section 404/10 Permitting
- > Oil and Gas Pipeline Permitting
- > Coal/Lignite Surface Mine Permitting
- > NEPA Compliance

LICENSING

> Certified Wildlife Biologist, 2009

SPECIAL TRAINING

- > Wetland Delineation Certificate of Training, 2005
- > Louisiana quillwort identification by US Forest Service at Desoto National Forest, 2003
- > Red-cockaded Woodpecker identification by Texas Forest Service at Jones Texas State Forest, 2003
- > Red-cockaded Woodpecker orientation by the Environmental Training and Support Center USACE at Fort Polk, LA, 1998

PREVIOUS AFFILIATIONS

- > The Wildlife Society, Southwest Section
- > The Wildlife Society, Texas Chapter

EXPERIENCE SUMMARY

Mr. McClanahan is a wildlife biologist with 19 years of experience as an environmental consultant. During this time, Mr. McClanahan has contributed to over 80 environmental reports-over 70 of which include transmission line environmental assessment and alternative routing studies throughout the southeast United States. Of the transmission line environmental assessment and alternative routing studies that Mr. McClanahan has been involved with, over 30 were successfully filed with and approved by state public utility commissions, including the Public Utility Commission of Texas and the Arkansas Public Service Commission. As a Project Manager with POWER's Environmental Division, his primary responsibility is managing transmission line environmental assessment and alternative routing studies from project kick off through licensing. He typically oversees the coordination and preparation of public open house meetings and assists utilities in preparing Certificate of Convenience and Necessity (CCN) permit applications and provides expert witness testimony in contested proceedings. Mr. McClanahan also manages pre-construction environmental surveys and permitting. Throughout his career, Mr. McClanahan's areas of expertise have included transmission line environmental assessment and alternative routing analysis: threatened and endangered species habitat assessment and monitoring; wetland delineation; Section 404/10 permitting; oil and gas pipeline permitting; coal/lignite surface mine permitting; and National Environmental Policy Act (NEPA) compliance.

SELECTED PROJECTS

Sam Houston Electric Cooperative, Inc. NSS to Deer 138 kV Transmission Line Project in Polk and Tyler Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative route analysis for a new 18 to 25-mile 138 kV transmission line in Polk and Tyler counties, Texas to support the CCN application filing in PUC Docket No. 504851. The CCN application was filed with the PUC on February 13, 2022.

Entergy Texas, Inc. Castle 230 kV Substation and Transmission Line Project in Montgomery County, Texas.

Project Manager responsible for managing the environmental assessment and alternative route analysis for a new 6 to 8-mile 138 kV transmission line in Montgomery County, Texas to support the CCN application filing in PUC Docket No. 52241. The CCN application was filed with the PUC on Februar 16, 2021.

Entergy Texas, Inc. Millbend 138 kV Substation and Transmission Line Project in Montgomery County, Texas. Project Manager responsible for managing the environmental assessment and alternative route analysis for a new 5 to 9-mile 138 kV transmission line in Montgomery County, Texas to support the CCN application filing in PUC Docket No. 52241. The CCN application was filed with the PUC on June 25, 2021.

Guadalupe Valley Electric Cooperative, Inc. Cibolo-McQueeney Tap to Santa Clara 138 kV Transmission Line Project in Guadalupe County, Texas.

Project Manager responsible for managing the environmental assessment and alternative route analysis for a new 3.6-mile 138 kV transmission line Caldwell and Gonzales counties, Texas to support the CCN application filing in PUC Docket No 51261. The project was approved by the PUC on January 22, 2021.

Guadalupe Valley Electric Cooperative, Inc. Delhi to Bluestem 138 kV Transmission Line Project in Caldwell and Gonzales Counties, Texas.

Project Manager responsible for managing the environmental assessment and route analysis for a new 11.5- mile 138 kV transmission line Caldwell and Gonzales counties, Texas to support the CCN application filing in PUC Docket No. 50830. Mr. McClanahan Provided expert witness testimony and participated in the Hearing on the Merits. The project was approved by the PUC on July 20, 2021.

Sam Houston Electric Cooperative, Inc. Fred 138 kV Transmission Line Project in Tyler County, Texas.

Project Manager responsible for managing the environmental assessment and route analysis for a new 16.6-mile138 kV transmission line Tyler County, Texas to support the CCN application filing in PUC Docket No. 50485. The contested project was successfully settled and approved by the PUC on July 8, 2021.

Entergy Texas, Inc Timberland 230 kV Transmission Line and Substation Project in Harris and Liberty Counties, Texas.

Project Manager responsible for managing the environmental assessment and route analysis for a new 8.9-mile 230 kV transmission line in Harris and Liberty Counties, Texas to support the CCN application filing in PUC Docket No. 49715. The contested project was successfully settled and approved by the PUC on July 6, 2020.

Upshur Rural Electric Cooperative Corporation Hallsville to Gum Springs 138 kV Transmission Line Project Harrison County, Texas.

Project Manager responsible for managing the environmental assessment and route analysis for a new 5-mile 230 kV transmission line in Harris and Liberty Counties, Texas to support the CCN application filing in PUC Docket No. 49603. Mr. McClanahan provided expert witness testimony in the contested proceeding and the procedural schedule was abated prior to the Hearing on the Merits and the parties are currently working towards settlement.

Sharyland Utilities, LP (now Oncor Electric Delivery Company LLC) and Lubbock Power and Light Integration into ERCOT Transmission Line Projects in Castro, Hale, Lubbock, Lynn and Swisher Counties.

Project Manager responsible for managing four environmental assessment and alternative route analysis for over 170 miles of 345 kV and approximately 20 miles of 115 kV transmission lines in Castro, Hale, Lubbock, Lynn and Swisher Counties, Texas to support CCN application filings in Docket Nos. 48625, 48668, 48909, and 49151. Mr. McClanahan provided expert witness testimony and participated in multiple Hearing on the Merits proceedings. Each of the dockets were approved respectively by the PUC in September 2019, December 2019, January 2020, and March 2020.

Entergy Texas, Inc. Western Region Economic Project: The Proposed Rocky Creek or Quarry to Lewis Creek 230 kV Transmission Line Project in Grimes, Montgomery, and Walker Counties, Texas

Project Manager responsible for managing the environmental assessment and route analysis for a new 38-mile 230 kV transmission line in Grimes, Montgomery, and Walker Counties Texas to support the CCN application filing in Docket No. 47462. Mr. McClanahan provided expert witness testimony and the parties reached settlement prior to the Hearing on the Merits and the application was approved by the PUC on August 31, 2018.

Tex-La Electric Cooperative of Texas, Inc. Martinsville to Chireno 138 kV Transmission Line Project Nacogdoches County, Texas

Project Manager responsible for managing the environmental assessment and route analysis for a new 10.8-mile 138 kV transmission line in Nacogdoches County, Texas to support the CCN application filing in Docket No. 46750. The contested project was successfully settled and approved by the PUC on April 27, 2018.

Entergy Texas, Inc. China to Stowell 230 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Chambers, Jefferson, and Liberty Counties, Texas

Project Manager responsible for managing the environmental assessment and route analysis for a new 25.78- mile 230 kV transmission line in Chambers, Jefferson, and Liberty Counties, Texas to support the CCN application filing in Docket No. 46248. The contested project was successfully settled and approved by the PUC on May 9, 2017.

Sharyland Utilities, L.P., Environmental Assessment and Route Analysis for the Second Circuit Upgrade 345 kV Transmission line Project in Briscoe, Carson, Castro, Deaf Smith, Oldham, Potter, and Swisher Counties, Texas

Project Manager responsible for managing the environmental assessment and route analysis for the addition of approximately 166 miles of a new second circuit to an existing single-circuit Competitive Renewable Energy Zone (CREZ) 345-kV transmission line spanning seven Panhandle and South

Plains counties to support the CCN application filing in Docket No. 45622. The contested project was successfully settled and approved by the PUC on August 25, 2016.

Houston County Electric Cooperative, Inc. (HCEC), Environmental Assessment and Alternative Route Analysis for the Mustang Prairie to Weldon 138 kV Transmission line Project in Houston County, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 13.62-mile 138 kV transmission line in Houston County, Texas to support the CCN application filing in Docket No. 45247. The contested project was successfully settled and approved by the PUC on July 20, 2016.

Entergy Texas, Inc., Environmental Assessment and Alternative Route Analysis for the Hartburg to Chisholm Road 230 kV Transmission line Project in Newton and Orange Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 14-mile 230 kV transmission line in Newton and Orange counties, Texas to support the CCN application filing in Docket No. 43939. The contested project was successfully settled and approved by the PUC on March 9, 2015.

Guadalupe Valley Electric Cooperative, Inc. (GVEC), Environmental Assessment and Alternative Route Analysis for the Gillett to Nopal 138 kV Transmission line Project in Gonzales, Karnes, and/or Wilson Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 10.28-mile single-circuit 138 kV transmission line in Gonzales, Karnes, and/or Wilson Counties, Texas to support the CCN application filing in Docket No. 42287. The contested project was successfully settled and approved by the PUC on November 24, 2015.

Sharyland Utilities, L.P., Environmental Assessment and Alternative Route Analysis for the GSEC Antelope-Elk Energy Center to White River 345 kV Transmission line Project, Hale and Floyd Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 51.57-miledouble-circuit capable 345 kV transmission line in Hale and Floyd Counties, Texas to support the CCN application filing in Docket No. 42063. The contested project was successfully settled and approved by the PUC on August 27, 2014.

Entergy Texas, Inc., Environmental Assessment and Alternative Route Analysis for the China to Amelia 230 kV Transmission line Project in Jefferson County, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 10.62-mile single circuit 230 kV

transmission line in Jefferson County, Texas to support the CCN application filing in Docket No. 41638. The contested was successfully settled and approved by the PUC on March 10, 2014.

Guadalupe Valley Electric Cooperative, Inc. (GVEC), Environmental Assessment and Alternative Route Analysis for the CMC Tap to CMC Substation 138 kV Transmission line Project in Guadalupe County, Texas

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 1.5-mile single-circuit 138 kV transmission line in Guadalupe County, Texas to support the CCN application filing in Docket No. 41967. The project was successfully approved by the PUC on February 6, 2014.

Entergy Arkansas, Inc., Environmental Impact Statement and Alternative Route Analysis for the Proposed Monticello East to Reed 230 kV Project in Drew and Desha Counties, Arkansas

Project Manager responsible for environmental impact statement and alternative routing analysis for a new 24.5-mile single circuit 230 kV transmission line in Drew and Desha Counties, Arkansas to support the Certificate of Environmental Compatibility and Public Need (CECPN) application filing before the Arkansas Public Service Commission (APSC) in Docket No. 14-062-U. The contested project was successfully approved by the APSC on February 10, 2015.

Entergy Mississippi, Inc., Environmental Assessment and Alternative Route Analysis for the Proposed Getwell to Byhalia to Senatobia Industrial 230 kV Project in Desoto and Tate Counties, Mississippi

Project Manager responsible for managing the environmental assessment and alternative routing analysis for a new 29-mile single circuit 230 kV transmission line in Desoto and Tate Counties, Mississippi.

Sharyland Utilities LP, Environmental Assessment and Alternative Routing Analysis for the Proposed Colorado City to Barber Lake 138 kV Transmission Line Project in Mitchell County, Texas

Project Manager responsible for managing the environmental assessment and alternative route analysis for a new 3.09-mile 138 kV transmission line in Mitchell County, Texas to support the CCN application filing in Docket No. 40484. The contested project was successfully settled and approved by the PUC on September 9, 2012.

Sharyland Utilities LP, Environmental Assessment and Alternative Routing Analysis for the Proposed Gardendale to Grady 138 kV Transmission Line Project in Martin and Midland Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative route analysis to support the CCN application filing in Docket No. 40537 for a new 10.2-mile 138 kV transmission line project in Martin and

Midland counties, Texas. The contested project was successfully settled and approved by the PUC on December 17, 2012.

Sharyland Utilities LP, Environmental Assessment and Alternative Routing Analysis for the Proposed 1956-Midkiff to Driver 138 kV Transmission Line Project in Midland and Glasscock Counties, Texas

Project Manager responsible for managing the environmental assessment and alternative route analysis to support the CCN application for a new 80.8-mile 138 kV transmission line project in Midland and Glasscock counties, Texas. The contested project was successfully settled and approved by the PUC on November 14, 2012.

Competitive Renewable Energy Zone (CREZ) Transmission Line Environmental Assessment and Alternative Routing Analyses 2010-2011

Assistant Project Manager and Project Manager for five Sharyland Utilities, LP Panhandle CREZ transmission line projects (PUC Docket Nos. 38829, 38750, 38560, and 38290) and the Electric Transmission Texas (ETT) Clear Crossing to Dermott CREZ transmission line project (PUC Docket No. 37951). Responsibilities included alternative route selection, coordination and preparation of public open house meetings, preparation of environmental assessments, and management of day-to-day tasks and project budget. Participated in preparing Certificate of Convenience and Necessity (CCN) permit applications, as well as assisted in preparing expert witness direct and rebuttal testimonies.

American Electric Power Southwestern Electric Power Company (AEP-SWEPCO) NW Texarkana 345 kV Transmission Line Bowie County, Texas and Arkansas 2010-2011

Assistant Project Manager for a proposed transmission line between the new clean coal Turk generation station in Hempstead County Arkansas, and the existing Northwest Texarkana Station in Bowie County, Texas. Responsibilities included alternative route selection, coordination and preparation of public open house meetings, preparation of two separate environmental assessments, and management of day-to-day tasks and project budget. The project was approved in Texas by the PUC in Docket No. 38838 and in Arkansas by the Arkansas Public Service Commission in Docket No. 08-098-U.

American Electric Power Texas Central Company (AEP-TCC), Ajo to Zorillo to Sarita 345 kV Transmission Line Project, Texas, 2007-2009

Consulting Wildlife Biologist for this high-profile wind energy driven transmission line project on the Kenedy Ranch along the southern Texas coast filed in PUC Docket No. 34928. Provided solutions to issues concerning ecological resources in a sensitive and high-profile environment, while assuring AEP-TCC and their contractors remained compliant with state and federal regulations. Throughout the term of the project, coordinated and conducted surveys for the presence of wetlands and state and federally listed threatened and endangered species and/or potential habitats (i.e. jaguarundi, ocelot, white-tailed hawk), as well as migratory bird nesting surveys. Also monitored construction efforts in sensitive areas.

South Texas Electric Cooperative (STEC), Environmental Assessment and Alternate Routing Analysis for the Proposed Verdi Tap 69 kV Transmission Line Project, Texas, 2009

Staff Ecologist on a multi-disciplinary project team for a new transmission line project routing study. Responsibilities included the managing the task of assessing potential impacts to existing ecological resources and land uses. Based upon the results of the assessment, contributed to the recommendation of a preferred alternative route. Addressed questions and comments from public landowners potentially affected by the proposed project.

American Electric Power Texas Central Company (AEP-TCC), Wetland Study for the Proposed San Miguel to Lobo 345 kV Transmission Line Project, Texas, 2008

Consulting Wildlife Biologist for a new transmission line in Atascosa, McMullen, La Salle, and Webb counties, Texas filed and approved in PUC Docket No 33033. Responsible for conducting wetland delineations, threatened and endangered species habitat assessments, and assessing permit obligations under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act as a result of proposed construction efforts.

Entergy Gulf States, Inc. and Entergy Texas, Inc., Wetland Delineation and Permitting Overview Reports for Entergy Gulf States, Louisiana, LLC., Texas and Louisiana, 2007-2008

Consulting Wildlife Biologist for several new transmission lines and transmission line rebuilds in Texas and Louisiana. Coordinated and supervised efforts in assessing permit obligations under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act as a result of proposed construction efforts. Responsibilities also included assessing the potential habitats for threatened and endangered species.

United States Army Corps of Engineers (USACE), Port Freeport Environmental Impact Statement (EIS), Texas, 2008-2012

Consulting Wildlife Biologist for the widening of the Freeport entrance and jetty channels by the USACE. Duties included addressing issues concerning potential impacts to threatened and endangered species.

Luminant Power Mining Permit Applications, Multiple Locations, 2008-2010

Consulting Wildlife Biologist responsible for the research and preparation of documents addressing pre-mine terrestrial wildlife resources information. Also prepared Fish and Wildlife Plans as part of lignite mine permit applications and permit renewal applications in Rusk, Panola, Robertson, Freestone, Hopkins, Bastrop, and Lee counties on behalf of Luminant to the Railroad Commission of Texas.

Guadalupe Valley Electric Cooperative, Inc. (GVEC), Environmental Assessment and Alternative Routing Analysis for

the Proposed Wilson to Sutherland Springs 138 kV Transmission Line Project, Texas, 2007

Staff Ecologist on a multi-disciplinary project team for new transmission line routing study. Responsibilities included managing the task of assessing potential impacts to existing ecological resources and land uses and recommending, based upon the results of the assessment, a preferred alternative route. Also addressed questions and comments from public landowners potentially affected by the proposed project.

Southwestern Electric Power Company (SWEPCO) and USDA Forest Service, Ozark National Forest Boston Mountain Ranger District; Environmental Assessment and Biological Evaluation for the Proposed Chambers Spring to Tontitown 345 kV Transmission Line Project, Arkansas, 2006

Consulting Wildlife Biologist for a new transmission line project. Prepared an Environmental Assessment and Biological Evaluation (through coordination with the U.S. Forest Service) of potential impacts to threatened, endangered, and sensitive species of potential occurrence within the Wellington Wildlife Management Unit of the Ozark National Forest.

Texas Veterans Land Board (TVLB), Environmental Assessment Texas State Veterans Cemetery, Texas, 2006

Environmental Planner responsible for preparing an Environmental Assessment on behalf of the Texas Veterans Land Board, and addressing agency and public comments for the planning of the Texas State Veterans Cemetery in Abilene, Texas.

Enbridge Pipelines L.P., Enbridge Double D East Texas Expansion Project, Anderson, Cherokee, Rusk, and Panola Counties, Texas ~2005

Staff Environmental Scientist for a 105 mile, 36-inch natural gas pipeline from Bethel to Carthage, Texas. Responsibilities included conducting wetland delineations, threatened and endangered species habitat assessments, Nationwide Permit 12 pre-construction notification and wetland mitigation plan figure and report preparation, hydrostatic test water discharge permit application preparation, and GLO Miscellaneous Easement application figure and report preparation.

Port Arthur LNG Project, Jefferson County, Texas ~2005

Staff Environmental Scientist for the construction of a ship berth, liquefied natural gas (LNG) terminal facilities, relocation of State Highway 87, the relocation of multiple oil and gas pipelines, and the construction of a 3-mile natural gas pipeline. Responsibilities included conducting wetland delineations, threatened and endangered species habitat assessments, for approximately 2,900 acres. Other responsibilities included conducting wetland habitat assessment and wetland rapid assessment protocol in order to assess wetland function and value impacts for purposes of submitting a mitigation proposal for the purposes of a Section 404/10 permit.

Gulf South Pipelines, pipeline facility abandonments,

replacements, and removals (multiple projects) Texas, Louisiana, and Mississippi, 2003-2005

Staff Environmental Scientist for the removal and or abandonment, replacement, and removal of aging pipeline facilities and appurtenances for Gulf South Pipelines. Responsibilities included conducting wetland delineations, threatened and endangered species habitat assessments, regulatory analysis and permit obligation review and requesting agency clearances in accordance with the Federal Energy Regulatory Commission. Other responsibilities included submitting post construction documentation in accordance with special conditions outlined in Coastal Use Permit conditions as applicable.

LIST OF PUBLICATIONS AND REPORTS

"Sam Houston Electric Cooperative, Inc. New Switching Station to Deer 138 kV Transmission Line Project in Polk and Tyler Counties, Texas Environmental Assessment and Alternative Routing Analysis." POWER Project No. 168772. April 2022. **PUC Docket No. 53602.**

"Entergy Texas, Inc. Castle 230 kV Transmission Line and Substation Project Environmental Assessment and Alternative Route Analysis in Grimes and Montgomery Counties, Texas." POWER Project No. 164456. June 2021. **PUC Docket No. 52304.**

"Entergy Texas, Inc. Millbend 138 kV Transmission Line and Substation Project Environmental Assessment and Alternative Route Analysis Montgomery County, Texas." POWER Project No. 163549. June 2021. **PUC Docket No. 52241**

"Guadalupe Valley Electric Cooperative, Inc. Cibolo-McQueeney Tap to Santa Clara 138 kV Transmission Line Project in Guadalupe County Texas Environmental Assessment and Alternative Route Analysis". POWER Project No. 162338. September 2020. **PUC Docket No. 51261.**

"Guadalupe Valley Electric Cooperative, Inc. Delhi to Bluestem 138 kV Transmission Line Project in Caldwell and Gonzales Counties, Texas Environmental Assessment and Alternative Route Anlaysis". POWER Project No. 160021. May 2020. **PUC Docket No. 50830.**

"Sam Houston Electric Cooperative, Inc. Fred 138 kV Transmission Line Project in Tyler County, Texas Environmental Assessment and Alternative Route Analysis". POWER Project No. 151832. January 2020. **PUC Docket No. 50485.**

"Entergy Texas, Inc. Timberland 230 kV Transmission Line and Substation Project. Environmental Assessment and Alternative Route Analysis in Harris and Liberty Counties, Texas". POWER Project No. 153242. July 2019. **PUC Docket No. 49715.**

"Upshur Rural Electric Cooperative Corporation Hallsville to Gum Springs 138 kV Transmission Line Project Harrison County Texas Environmental Assessment and Alternative Route Analysis". POWER Project No. 146818. June 2019. **PUCT Docket No. 49603.**

"Entergy Louisiana, LLC Mud Lake to Big Lake 230 kV Transmission Line

Project in Calcasieu and Cameron Parishes, Louisiana Environmental Assessment and Alternative Route Analysis". POWER Project No. 155477. May 2019.

"Entergy Louisiana, LLC Nelson to Menena 230 kV Transmission Line Project in Calcasieu Parish, Louisiana Environmental Assessment and Alternative Route Analysis". POWER Project No. 153117. May 2019.

"Sharyland Utilities, Inc. Abernathy to North to North Loop 345/115 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Lubbock and Hale Counties, Texas". POWER Project No. 150406. February 2019. **PUC Docket No. 49151**.

"Sharyland Utilities, Inc. Wadsworth to New Oliver to Farmland 345 kV and Southeast to New Oliver to Oliver 115 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Lubbock and Lynn Counties, Texas." POWER Project No. 150408. December 2018. **PUC Docket No. 48909.**

"Sharyland Utilities, Inc. Abernathy to Wadsworth 345 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Hale and Lubbock Counties, Texas." POWER Project No. 150405. August 2018. **PUC Docket No. 48668**.

"Sharyland Utilities, Inc. Ogallala to Abernathy 345 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Castro, Hale, and Swisher Counties, Texas." POWER Project No. 150403. August 2018. **PUC Docket No. 48625**

"Entergy Texas, Inc. Western Region Economic Project: The Proposed Rocky Creek or Quarry to Lewis Creek 230 kV Transmission Line Environmental Assessment and Alternative Route Analysis in Grimes, Montgomery, and Walker Counties, Texas". POWER Project No. 141830. August 2017. **PUC Docket No. 47462.**

"Entergy Louisiana, LLC Dunn to Winnsboro 230 kV Transmission Line Project in Richland and Franklin Parishes, Louisiana Environmental Assessment and Alternative Routing Analysis". POWER Project No. 146204. January 2018.

"Entergy Louisiana, LLC Lake Providence 115 kV Transmission Line Project in West Carroll and East Carroll Parishes, Louisiana Environmental Assessment and Alternative Routing Analysis". POWER Project No. 147544. December 2017.

"Entergy Louisiana, LLC Cane River to Montgomery 230 kV Transmission Line Project in Winn and Natchitoches Parishes, Louisiana Environmental Assessment and Alternative Routing Analysis". POWER Project No. 146202. July 2017.

"Tex-La Electric Cooperative, Inc. Martinsville to Chireno 138 kV Transmission Line Project Nacogdoches County, Texas Environmental Assessment and Alternative Route Analysis". POWER Project No. 143460. January 2017. **PUCT Docket No. 46750.**

"Entergy Texas, Inc. China to Stowell 230 kV Transmission Line Project

Environmental Assessment and Alternative Route Analysis Chambers, Jefferson, and Liberty Counties, Texas". POWER Project No. 140206. August 2016. **PUC Docket No. 46248.**

"Entergy Louisiana, LLC Driftwood LNG Project Environmental Assessment and Alternative Route Analysis". POWER Project No. 143688. December 2016.

"Entergy Louisiana, LLC Robert Distribution 230 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis". POWER Project No. 142548. September 2016.

"Entergy Louisiana, LLC Jefferson Davis to Carter 69 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Jefferson Davis Parish, Louisiana". POWER Project No. 141973. July 2016.

"Entergy Louisiana, LLC Jefferson Davis to L-13 Tap 69 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Jefferson Davis Parish, Louisiana". POWER Project No. 141973. July 2016.

"Entergy Louisiana, LLC Jefferson Davis to L-254 Tap 138 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis Jefferson Davis Parish, Louisiana". POWER Project No. 141973. July 2016.

"Sharyland Utilities, L.P. Second Circuit Upgrade Project Environmental Assessment and Route Analysis". POWER Project No. 140334-140337. February 2016. **PUC Docket No. 45622**

"Richardson to Iberville 230 kV Transmission Line Project Environmental Assessment and Alternative Routing Analysis West Baton Rouge and Iberville Parishes, Louisiana", Prepared for Entergy Louisiana, LLC., POWER Project No. 137686, Revised February 2016.

"Entergy Louisiana LLC, Terrebonne to Bayou Vista 230 kV Transmission Line Project Environmental Assessment and Alternative Route Analysis". Assumption and Terrebonne Parishes, Louisiana. POWER Project No. 139673. January 2016.

"Entergy Louisiana LLC, Louisiana LNG 115 kV Transmission Line Project Environmental Assessment and Desktop Route Analysis". Plaquemines Parish, Louisiana. POWER Project No. 139730. December 2015.

"Houston County Electric Cooperative, Inc. Mustang Prairie to Weldon 138 kV Transmission line Project Environmental Assessment and Alternative Route Analysis Houston County, Texas". POWER Project Number 135144, October 2015. **PUC Docket No. 45247.**

"Entergy Gulf States Louisiana, LLC Lake Charles Transmission Line Project Carlyss to Solac 230 kV Environmental Assessment and Alternative Route Analysis Calcasieu Parish, Louisiana". Power Project No. 137341. November 2015.

"Entergy Gulf States Louisiana, LLC Lake Charles Bulk-Bayou Cove 138 kV Line Connection to Trunkline Substation Project Environmental Assessment and Alternative Route Analysis Calcasieu and Jefferson Davis Parishes, Louisiana". Power Project No. 137605. June 2015. "Entergy Gulf States Louisiana, LLC Lake Charles Transmission Line Project Bulk to Carlyss 230 kV Environmental Assessment and Alternative Route Analysis Calcasieu Parish, Louisiana". Power Project No. 137341. May 2015.

"Entergy Gulf States Louisiana, LLC Lake Charles Transmission Line Project Tap Station to Bulk 500 kV Environmental Assessment and Alternative Route Analysis Calcasieu Parish, Louisiana". Power Project No. 137341. May 2015.

"Environmental Assessment and Alternative Route Analysis for the Proposed Hartburg to Chisholm Road 230 kV Transmission Line Project in Newton and Orange Counties, Texas", Prepared for Entergy Texas, Inc., POWER Project No. 134297, December 2014. **PUC Docket No. 43939**

"Environmental Assessment and Alternative Route Analysis for the Proposed Graywood to Magnolia LNG 230 kV Transmission Line Project in Calcasieu Parish, Louisiana", Prepared for Entergy Gulf States Louisiana, LLC, POWER Project No. 134499, August 2014.

"Environmental Impact Statement and Alternative Route Analysis for the Proposed Monticello East to Reed 230 kV Transmission Line Project Drew and Desha Counties, Arkansas", Prepared for Entergy Arkansas, Inc., POWER Project No. 127929, July 2014. **APSC Docket No.14-062-U**.

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Sec. 37.056. GRANT OR DENIAL OF CERTIFICATE.

(a) The commission may approve an application and grant a certificate only if the commission finds that the certificate is necessary for the service, accommodation, convenience, or safety of the public.

(b) The commission may:

(1) grant the certificate as requested;

(2) grant the certificate for the construction of a portion of the requested system, facility, or extension or the partial exercise of the requested right or privilege; or

(3) refuse to grant the certificate.

(c) The commission shall grant each certificate on a nondiscriminatory basis after considering:

(1) the adequacy of existing service;

(2) the need for additional service;

(3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area; and

(4) other factors, such as:

(A) community values;

(B) recreational and park areas;

(C) historical and aesthetic values;

(D) environmental integrity;

(E) the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted, including any potential economic or reliability benefits associated with dual fuel and fuel storage capabilities in areas outside the ERCOT power region; and

(F) to the extent applicable, the effect of granting the certificate on the ability of this state to meet the goal established by Section 39.904(a) of this title.

(c-1) In considering the need for additional service under Subsection (c)(2) for a reliability transmission project that serves the ERCOT power region, the commission must consider the historical load, forecasted load growth, and additional load currently seeking interconnection.

(d) The commission by rule shall establish criteria, in addition to the criteria described by Subsection (c), for granting a certificate for a transmission project that serves the ERCOT power region, that is not necessary to meet state or federal reliability standards, and that is not included in a plan developed under Section 39.904(g). The criteria must include a comparison of the estimated cost of the transmission project for consumers and the estimated congestion cost savings for consumers that may result from the transmission project, considering both current and future expected congestion levels and the transmission project's ability to reduce those congestion levels. The commission shall include with its decision on an application for a certificate to which this subsection applies findings on the criteria.

(e) A certificate to build, own, or operate a new transmission facility that directly interconnects with an existing electric utility facility or municipally owned utility facility may be granted only to the owner of that existing facility. If a new transmission facility will directly interconnect with facilities owned by different electric utilities or municipally owned utilities, each entity shall be certificated to build, own, or operate the new facility in separate and discrete equal parts unless they agree otherwise.

(f) Notwithstanding Subsection (e), if a new transmission line, whether single or double circuit, will create the first interconnection between a load-serving station and an existing transmission facility, the entity with a load-serving responsibility or an electric cooperative that has a member with a load-serving responsibility at the load-serving station shall be certificated to build, own, or operate the new transmission line and the load-serving station. The owner of the existing transmission facility shall be certificated to build, own, or operate the station or tap at the existing transmission facility to provide the interconnection, unless after a reasonable period of time the owner of the existing transmission facility or an electric cooperative that has a member with a load-serving responsibility at he load-serving responsibility at the load-serving responsibility at the existing transmission facility to provide the interconnection, unless after a reasonable period of time the owner of the existing transmission facility is unwilling to build, and then the entity with the load-serving responsibility or an electric cooperative that has a member with a load-serving responsibility may be certificated to build the interconnection facility.

(g) Notwithstanding any other provision of this section, an electric utility or municipally owned utility that is authorized to build, own, or operate a new transmission facility under Subsection (e) or (f) may designate another electric utility that is currently certificated by the commission within the same electric power region, coordinating council, independent system operator, or power pool or a municipally owned utility to build, own, or operate a portion or all of such new transmission facility, subject to any requirements adopted by the commission by rule.

(h) The division of any required certification of facilities described in this section shall apply unless each entity agrees otherwise. Nothing in this section is intended to require a certificate for facilities that the commission has determined by rule do not require certification to build, own, or operate.

(i) Notwithstanding any other provision of this section, an electric cooperative may be certificated to build, own, or operate a new facility in place of any other electric cooperative if both cooperatives agree.

(V.A.C.S. art. 1446c-0, secs. 2.255(b), (c).) (Amended by Acts 2003, 78th Leg., R.S., ch. 295 (HB 2548), § 2(added subd. (c)(4)(F)); Acts 2011, 82nd Leg., R.S., ch. 949 (HB 971), § 2(a) (added subsec. (d)); Acts 2019, 86th Leg. R.S., ch. 44 (SB 1938), § 4 (added subsecs. (e), (f), (g), (h), and (i)) Acts 2021, 87th Leg., R.S., ch. 198 123(HB 1510), § 3 (amended subd. (c)(4)); Acts 2021, 87th Leg., R.S., ch. 876 (SB 1281), § 2 (added subsec. (c-1) & amended subsec. (d)).)

Subchapter E. CERTIFICATION, LICENSING AND REGISTRATION.

§25.101. Certification Criteria.

- (a) **Definitions.** The following words and terms, when used in this section, shall have the following meanings unless the context clearly indicates otherwise:
 - (1) **Construction and/or extension --** Shall not include the purchase or condemnation of real property for use as facility sites or right-of-way. Acquisition of right-of-way shall not be deemed to entitle an electric utility to the grant of a certificate of convenience and necessity without showing that the construction and/or extension is necessary for the service, accommodation, convenience, or safety of the public.
 - (2) **Generating unit** -- Any electric generating facility. This section does not apply to any generating unit that is less than ten megawatts and is built for experimental purposes only.
 - (3) **Habitable structures** -- Structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Habitable structures include, but are not limited to: single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools.
 - (4) **Municipal Power Agency (MPA)** -- Agency or group created under Texas Utilities Code, Chapter 163 – Joint Powers Agencies.
 - (5) **Municipal Public Entity (MPE)** -- A municipally owned utility (MOU) or a municipal power agency.
 - (6) **Prudent avoidance --** The limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort.
 - (7) **Tie line** -- A facility to be interconnected to the Electric Reliability Council of Texas (ERCOT) transmission grid by a person, including an electric utility or MPE, that would enable additional power to be imported into or exported out of the ERCOT power grid.
- (b) **Certificates of convenience and necessity for new service areas and facilities.** Except for certificates granted under subsection (e) of this section, the commission may grant an application and issue a certificate only if it finds that the certificate is necessary for the service, accommodation, convenience, or safety of the public, and complies with the statutory requirements in the Public Utility Regulatory Act (PURA) §37.056. The commission may issue a certificate as applied for, or refuse to issue it, or issue it for the construction of a portion of the contemplated system or facility or extension thereof, or for the partial exercise only of the right or privilege. The commission shall render a decision approving or denying an application for a certificate within one year of the date of filing of a complete application for such a certificate, unless good cause is shown for exceeding that period. A certificate, or certificate amendment, is required for the following:
 - (1) **Change in service area**. Any certificate granted under this section shall not be construed to vest exclusive service or property rights in and to the area certificated.
 - (A) Uncontested applications: An application for a certificate under this paragraph shall be approved administratively within 80 days from the date of filing a complete application if:
 - (i) no motion to intervene has been filed or the application is uncontested;
 - (ii) all owners of land that is affected by the change in service area and all customers in the service area being changed have been given direct mail notice of the application; and
 - (iii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.
 - (B) Minor boundary changes or service area exceptions: Applications for minor boundary changes or service area exceptions shall be approved administratively within 45 days of the filing of the application provided that:

Subchapter E. CERTIFICATION, LICENSING AND REGISTRATION.

- (i) every utility whose certificated service area is affected agrees to the change;
- (ii) all customers within the affected area have given prior consent; and
- (iii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.

(2) **Generation facility.**

- (A) In a proceeding involving the purchase of an existing electric generating facility by an electric utility that operates solely outside of ERCOT, the commission shall issue a final order on a certificate for the facility not later than the 181st day after the date a request for the certificate is filed with the commission under PURA §37.058(b).
- (B) In a proceeding involving a newly constructed generating facility by an electric utility that operates solely outside of ERCOT, the commission shall issue a final order on a certificate for the facility not later than the 366th day after the date a request for the certificate is filed with the commission under PURA §37.058(b).
- (3) **Electric transmission line.** All new electric transmission lines shall be reported to the commission in accordance with §25.83 of this title (relating to Transmission Construction Reports). This reporting requirement is also applicable to new electric transmission lines to be constructed by an MPE seeking to directly or indirectly construct, install, or extend a transmission facility outside of its applicable boundaries. For an MOU, the applicable boundaries are the municipal boundaries of the municipality that owns the MOU. For an MPA, the applicable boundaries are the municipal boundaries of the public entities participating in the MPA.
 - (A) Need:
 - Except as stated below, the following must be met for a transmission line in (i) the ERCOT power region. The applicant must present an economic costbenefit study that includes an analysis that shows that the levelized ERCOTwide annual production cost savings attributable to the proposed project are equal to or greater than the first-year annual revenue requirement of the proposed project of which the transmission line is a part. Indirect costs and benefits to the transmission system may be included in the cost-benefit study. The commission shall give great weight to such a study if it is conducted by the ERCOT independent system operator. This requirement also does not apply to an application for a transmission line that is necessary to meet state or federal reliability standards, including: a transmission line needed to interconnect a transmission service customer or end-use customer; or needed due to the requirements of any federal, state, county, or municipal government body or agency for purposes including, but not limited to, highway transportation, airport construction, public safety, or air or water quality.
 - (ii) For a transmission line not addressed by clause (i) of this subparagraph, the commission shall consider among other factors, the needs of the interconnected transmission systems to support a reliable and adequate network and to facilitate robust wholesale competition. The commission shall give great weight to:
 - (I) the recommendation of an organization that meets the requirement of PURA §39.151; and/or
 - (II) written documentation that the transmission line is needed to interconnect a transmission service customer or an end-use customer.

- (B) Routing: An application for a new transmission line shall address the criteria in PURA §37.056(c) and considering those criteria, engineering constraints, and costs, the line shall be routed to the extent reasonable to moderate the impact on the affected community and landowners unless grid reliability and security dictate otherwise. The following factors shall be considered in the selection of the utility's alternative routes unless a route is agreed to by the utility, the landowners whose property is crossed by the proposed line, and owners of land that contains a habitable structure within 300 feet of the centerline of a transmission project of 230 kV or less, or within 500 feet of the centerline of a transmission project greater than 230 kV, and otherwise conforms to the criteria in PURA §37.056(c):
 - (i) whether the routes parallel or utilize existing compatible rights-of-way for electric facilities, including the use of vacant positions on existing multiplecircuit transmission lines;
 - (ii) whether the routes parallel or utilize other existing compatible rights-ofway, including roads, highways, railroads, or telephone utility rights-ofway;
 - (iii) whether the routes parallel property lines or other natural or cultural features; and
 - (iv) whether the routes conform with the policy of prudent avoidance.
- (C) Uncontested transmission lines: An application for a certificate for a transmission line shall be approved administratively within 80 days from the date of filing a complete application if:
 - (i) no motion to intervene has been filed or the application is uncontested; and
 - (ii) commission staff has determined that the application is complete and meets all applicable statutory criteria and filing requirements, including, but not limited to, the provision of proper notice of the application.
- (D) Projects deemed critical to reliability. Applications for transmission lines which have been formally designated by a PURA §39.151 organization as critical to the reliability of the system shall be considered by the commission on an expedited basis. The commission shall render a decision approving or denying an application for a certificate under this subparagraph within 180 days of the date of filing a complete application for such a certificate unless good cause is shown for extending that period.
- (4) Tie line. An application for a tie line must include a study of the tie line by the ERCOT independent system operator. The study shall include, at a minimum, an ERCOT-approved reliability assessment of the proposed tie line. If an independent system operator intends to conduct a study to evaluate a proposed tie line or intends to provide confidential information to another entity to permit the study of a proposed tie line, the independent system operator shall file notice with the commission at least 45 days prior to the commencement of such a study or the provision of such information. This paragraph does not apply to a facility that is in service on December 31, 2014.
- (c) **Projects or activities not requiring a certificate.** A certificate, or certificate amendment, is not required for the following:
 - (1) A contiguous extension of those facilities described in PURA §37.052;
 - (2) A new electric high voltage switching station, or substation;
 - (3) The repair or reconstruction of a transmission facility due to emergencies. The repair or reconstruction of a transmission facility due to emergencies shall proceed without delay or prior approval of the commission and shall be reported to the commission in accordance with §25.83 of this title;
 - (4) The construction or upgrading of distribution facilities within the electric utility's service area;

- (5) Routine activities associated with transmission facilities that are conducted by transmission service providers. Nothing contained in the following subparagraphs should be construed as a limitation of the commission's authority as set forth in PURA. Any activity described in the following subparagraphs shall be reported to the commission in accordance with §25.83 of this title. The commission may require additional facts or call a public hearing thereon to determine whether a certificate of convenience and necessity is required. Routine activities are defined as follows:
 - (A) The modification or extension of an existing transmission line solely to provide service to a substation or metering point provided that:
 - (i) an extension to a substation or metering point does not exceed one mile; and
 - (ii) all landowners whose property is crossed by the transmission facilities have given prior written consent.
 - (B) The rebuilding, replacement, or respacing of structures along an existing route of the transmission line; upgrading to a higher voltage not greater than 230 kV; bundling of conductors or reconductoring of an existing transmission facility, provided that:
 - (i) no additional right-of-way is required; or
 - (ii) if additional right-of-way is required, all landowners of property crossed by the electric facilities have given prior written consent.
 - (C) The installation, on an existing transmission line, of an additional circuit not previously certificated, provided that:
 - (i) the additional circuit is not greater than 230 kV; and
 - (ii) all landowners whose property is crossed by the transmission facilities have given prior written consent.
 - (D) The relocation of all or part of an existing transmission facility due to a request for relocation, provided that:
 - (i) the relocation is to be done at the expense of the requesting party; and
 - (ii) the relocation is solely on a right-of-way provided by the requesting party.
 - (E) The relocation or alteration of all or part of an existing transmission facility to avoid or eliminate existing or impending encroachments, provided that all landowners of property crossed by the electric facilities have given prior written consent.
 - (F) The relocation, alteration, or reconstruction of a transmission facility due to the requirements of any federal, state, county, or municipal governmental body or agency for purposes including, but not limited to, highway transportation, airport construction, public safety, or air and water quality, provided that:
 - (i) all landowners of property crossed by the electric facilities have given prior written consent; and
 - (ii) the relocation, alteration, or reconstruction is responsive to the governmental request.
- (6) Upgrades to an existing transmission line by an MPE that do not require any additional land, right-of-way, easement, or other property not owned by the MOU;
- (7) The construction, installation, or extension of a transmission facility by an MPE that is entirely located not more than 10 miles outside of an MOU's certificated service area that occurs before September 1, 2021; or
- (8) A transmission facility by an MOU placed in service after September 1, 2015, that is developed to interconnect a new natural gas generation facility to the ERCOT transmission grid and for which, on or before January 1, 2015, an MOU was contractually obligated to purchase at least 190 megawatts of capacity.

- (d) Standards of construction and operation. In determining standard practice, the commission shall be guided by the provisions of the American National Standards Institute, Incorporated, the National Electrical Safety Code, and such other codes and standards that are generally accepted by the industry, except as modified by this commission or by municipal regulations within their jurisdiction. Each electric utility shall construct, install, operate, and maintain its plant, structures, equipment, and lines in accordance with these standards, and in such manner to best accommodate the public, and to prevent interference with service furnished by other public utilities insofar as practical.
 - (1) The standards of construction shall apply to, but are not limited to, the construction of any new electric transmission facilities, rebuilding, upgrading, or relocation of existing electric transmission facilities.
 - (2) For electric transmission line construction requiring the acquisition of new rights-of-way, electric utilities must include in the easement agreement, at a minimum, a provision prohibiting the new construction of any above-ground structures within the right-of-way. New construction of structures shall not include necessary repairs to existing structures, farm or livestock facilities, storage barns, hunting structures, small personal storage sheds, or similar structures. Utilities may negotiate appropriate exceptions in instances where the electric utility is subject to a restrictive agreement being granted by a governmental agency or within the constraints of an industrial site. Any exception to this paragraph must meet all applicable requirements of the National Electrical Safety Code.
 - (3) Measures shall be applied when appropriate to mitigate the adverse impacts of the construction of any new electric transmission facilities, and the rebuilding, upgrading, or relocation of existing electric transmission facilities. Mitigation measures shall be adapted to the specifics of each project and may include such requirements as:
 - (A) selective clearing of the right-of-way to minimize the amount of flora and fauna disturbed;
 - (B) implementation of erosion control measures;
 - (C) reclamation of construction sites with native species of grasses, forbs, and shrubs; and
 - (D) returning site to its original contours and grades.
- (e) Certificates of convenience and necessity for existing service areas and facilities. For purposes of granting these certificates for those facilities and areas in which an electric utility was providing service on September 1, 1975, or was actively engaged in the construction, installation, extension, improvement of, or addition to any facility actually used or to be used in providing electric utility service on September 1, 1975, unless found by the commission to be otherwise, the following provisions shall prevail for certification purposes:
 - (1) The electrical generation facilities and service area boundary of an electric utility having such facilities in place or being actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be limited, unless otherwise provided, to the facilities and real property on which the facilities were actually located, used, or dedicated as of September 1, 1975.
 - (2) The transmission facilities and service area boundary of an electric utility having such facilities in place or being actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be, unless otherwise provided, the facilities and a corridor extending 100 feet on either side of said transmission facilities in place, used or dedicated as of September 1, 1975.
 - (3) The facilities and service area boundary for the following types of electric utilities providing distribution or collection service to any area, or actively engaged in the construction, installation, extension, improvement of, or addition to such facilities or the electric utility's system as of September 1, 1975, shall be limited, unless otherwise found by the commission, to the facilities and the area which lie within 200 feet of any point along a distribution line, which is specifically deemed to include service drop lines, for electrical utilities.

- (f) **Transferability of certificates.** Any certificate granted under this section is not transferable without approval of the commission and shall continue in force until further order of the commission.
- (g) **Certification forms.** All applications for certificates of convenience and necessity shall be filed on commission-prescribed forms so that the granting of certificates, both contested and uncontested, may be expedited. Forms may be obtained from Central Records.
- (h) **Commission authority**. Nothing in this section is intended to limit the commission's authority to recommend or direct the construction of transmission under PURA §§35.005, 36.008, or 39.203(e).