### CAUSE NO. D-1-GV-11-000324

| CITY OF KERRVILLE, KERRVILLE | § | IN THE DISTRICT COURT              |
|------------------------------|---|------------------------------------|
| PUBLIC UTILITY BOARD, AND    | § |                                    |
| CITY OF JUNCTION,            | § |                                    |
| Plaintiffs,                  | § |                                    |
|                              | § |                                    |
| vs.                          | § | OF TRAVIS COUNTY, TEXAS            |
|                              | § |                                    |
| PUBLIC UTILITY COMMISSION    | § |                                    |
| OF TEXAS,                    | § |                                    |
| Defendant                    | § | 98 <sup>th</sup> JUDICIAL DISTRICT |

### RESPONSE BRIEF OF THE PUBLIC UTILITY COMMISSION OF TEXAS

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The Public Utility Commission of Texas ("PUC" or "Commission") responds to the brief filed by plaintiffs City of Kerrville, Kerrville Public Utility Board, and City of Junction ("Plaintiffs").

#### I. Statement of the Nature of the Case

This is an administrative appeal of the PUC's final order in Docket No. 38354.<sup>1</sup> The case involves the substantial-evidence rule review of a contested-case decision amending the certificate of convenience and necessity ("CCN") of LCRA Transmission Services Corporation ("LCRA") to include a new transmission line.<sup>2</sup>

### II. Statement of Facts

A. LCRA sought a CCN amendment to approve a Competitive Renewable Energy Zones ("CREZ") transmission line.

LCRA sought this CCN amendment to route a CREZ electric transmission line (McCamey D to Kendall) that LCRA had been selected to build in an earlier PUC docket. This line is a "priority" part of the plan for building transmission infrastructure to bring

<sup>&</sup>lt;sup>1</sup> Tex. Util. Code, Application of LCRA Transmission Services Corporation to Amend its Certification of convenience and Necessity for the Proposed McCamey D to Kendal to Gillespie 345-KV CREZ Transmission Line in Schleicher, Sutton, Menard, Kimble, Mason, Gillespie, Kerr, and Kendal Counties, Docket No. 38354 (Jan. 24, 2011) (Order).

<sup>&</sup>lt;sup>2</sup> The administrative record in this case was filed on May 17, 2011. By stipulation of the parties under Tex. Gov't Code § 2001.175(b), land owner and citizen comments letters and emails and responses to them, and motions to intervene and responses to them, were not included in the record filed with the court. The stipulation allows parties to request that the PUC supplement to add individual items that would otherwise have been included in the administrative record. The PUC is to file a supplement, if necessary, by August 1, 2011. Stipulation to Administrative Record filed May 5, 2011. Documents in the AR will be cited as "AR, Box \_\_\_ Binder \_\_, Item \_\_\_" for filings; "[Party name] Ex. \_\_\_" for exhibits; and "TR, Vol. " for transcripts.

power from the existing and planned wind farms in West Texas and the Panhandle to population centers in North and Central Texas and the Houston area.

1. Competitive renewable energy zones and the Legislative mandate to develop CREZ transmission infrastructure.

Previously, the Texas Legislature revised the Public Utility Regulatory Act (PURA), TEX. UTIL. CODE §§ 11.001-66.017, to ensure that the state's renewable energy goals would be met and alleviate transmission capacity problems. The areas most favorable to wind energy production are in West Texas, but the sparse population there cannot use all that energy; much of the wind energy produced there must be transmitted to other parts of state. Limited transmission capacity in West Texas and between West Texas and the metropolitan areas in Central and North Texas and the Houston area restricts the amount of wind energy that could be transported to other areas. The problem increased as more wind farms were developed. Transmission utilities sought assurances that new wind farms would be developed before building the additional transmission capacity, while the wind developers sought greater certainty that additional transmission facilities would be in operation by the time new wind farms were completed.

The Legislature enacted SB 20<sup>3</sup> to address this problem. It added PURA § 39.904(g) - (n). SB 20 required the PUC to designate competitive renewable energy zones where the conditions are most favorable for wind generation and to develop and implement the CREZ

 $<sup>^{\</sup>rm 3}$  Act of July 20, 2005, 79th Leg. 1st C.S. ch. 1, 2005 Tex. Gen. Laws 1, 2.

Transmission Plan to build the necessary transmission lines to bring energy from the CREZ to population centers. *See* PURA § 39.904(g)(2).

2. The PUC's designation of the CREZ, the CREZ transmission plan, and the selection of the transmission providers.

In response, the PUC undertook a massive effort to implement the CREZ transmission mandate.<sup>4</sup> The PUC analyzed the costs and benefits of wind generation and wind generators' financial commitment to Texas; designated the zones where the generation facilities would be concentrated; and ultimately adopted a plan for construction of \$4.93 billion in CREZ transmission infrastructure.<sup>5</sup>

Under the PUC's plan, certain projects were designated as "priority" lines that should be constructed first. One priority line is the McCamey D to Kendall transmission line at issue in this case. ERCOT identified the McCamey D to Kendall line as a line needed to alleviate current congestion in the electric grid, as well as meet the need for CREZ transmission capacity.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> The PUC adopted detailed rules governing the designation of the CREZ. 16 Tex. Admin. Code § 25.174; Tex. Public Util. Comm'n, *Rulemaking Relating to Renewable Energy Amendments*, Project No. 31852 (Dec. 15, 2006) (Order Adopting § 25.174 as Approved at the December 1 Open Meeting), and the selection of transmission service providers to build the needed CREZ transmission lines. 16 Tex. Admin. Code § 25.216; Tex. Pub. Util. Comm'n, *Rulemaking Proceeding to Amend PUC Substantive Rules Relating to the Selection of Transmission Service Providers Related to Competitive Renewable Energy Zones and Other Special Projects*, Project No. 34560, (June 19, 2008) (Order Adopting 16 Tex. Admin. Code § 25.216).

<sup>&</sup>lt;sup>5</sup> Tex. Pub. Util. Comm'n, Commission Staff's Petition for Designation of Competitive Renewable Energy Zones, Docket No. 33672 (Aug. 15, 2008) (Order).

<sup>&</sup>lt;sup>6</sup> Proposal for Decision, AR, Box 3, Binder 9, Item 412 at 9 ("PFD") (Attachment C).

After determining which new transmission lines were needed, the PUC selected the providers best able to build the CREZ lines. PURA § 39.904(g). These providers finance and build the lines and recover their investment and operating costs through transmission rates that the PUC sets. A major transmission utility in Central Texas, LCRA was selected to build several CREZ lines, including the McCamey D to Kendall line.<sup>7</sup>

# B. LCRA notified affected parties about the various proposed routes for the McCamey D to Kendall CREZ line.

In the next phase of the CREZ transmission plan, providers filed applications for a certificate of convenience and necessity ("CCN") that would determine the routes for the lines.

1. \_\_\_\_LCRA reached out to affected communities before the CCN application was filed.

Once selected to build the McCamey D to Kendall CREZ transmission line, LCRA studied potential routes.<sup>8</sup> LCRA hired an environmental consultant to develop a comprehensive environmental assessment of the line's potential impact. Owing to the length of the line,<sup>9</sup> and the sensitivity of the hill country through which it must pass, the study was

<sup>&</sup>lt;sup>7</sup> Originally, the project at issue in this case was to include an additional line from Kendall to Gillespie. But in December 2010 the PUC determined that the Kendall to Gillespie that LCRA had included as part of the same CCN application need not be built, as the need could be met with a more cost-effective alternative. Order at 3 (FOF 3).

<sup>&</sup>lt;sup>8</sup> Tex. Util. Code § 37.056(c)(4); Former 16 Tex. Admin. Code § 25.101(b)(3)(B). (16 Tex. Admin. Code § 25.101 (2006) (Tex. Pub. Util. Comm'n), *repealed* 36 Tex. Reg. 3182 (2011) (All cites to § 25.101 are to the prior version.).

<sup>&</sup>lt;sup>9</sup> The various alternative routes for the lines ranged from approximately 128 miles to 166 miles. *See* LCRA Application at 11, Admin R. Binder 16.

complex and exhaustive.<sup>10</sup> To obtain community input, LCRA held 20 open houses throughout the study area.<sup>11</sup> Thousands of landowners and local governments were notified of the open houses, and they were generally well attended.<sup>12</sup> These open houses provided landowners and local governments an opportunity to learn about the potential routes for the line and how they might be affected. The open houses also enabled LCRA to hear the landowners' and local governments' concerns.<sup>13</sup>

Many interested parties indicated that they preferred routing along I-10 as much as possible.<sup>14</sup> PUC rules require the consideration of routing lines along existing right-of-ways to avoid undisturbed land.<sup>15</sup> And I-10 is the largest right-of-way through the study area.

### 2. LCRA's CCN application.

When LCRA applied to the PUC to add the line to its certificate, LCRA provided notice to potentially affected parties as PUC rules require. Land owners, local

<sup>&</sup>lt;sup>10</sup> See AR, Box 4, Binder 16, Items 1 - 3 at 11-12 (LCRA Application).

<sup>&</sup>lt;sup>11</sup> See Order at 5 (FOF 20); See AR, Box 4, Binder 16, Items 1 - 3 at 23-28 (LCRA Application).

<sup>&</sup>lt;sup>12</sup> *Id*.

<sup>&</sup>lt;sup>13</sup> *Id*.

<sup>&</sup>lt;sup>14</sup> See AR, Box 4, Binder 16, Items 1 - 3 at 25-28 (LCRA Application).

<sup>&</sup>lt;sup>15</sup> § 25.101 (b)(3)(B)(i)-(ii); PURA § 37.056(c).

<sup>&</sup>lt;sup>16</sup> Order at 4-5 (FOF 10-15), Attachment B (PUC Order).

governments, and neighboring utilities who might be affected by the proposed routes and links were notified.<sup>17</sup> LCRA also published notice in local newspapers.<sup>18</sup>

LCRA's application proposed over 161 different links or segments that could be combined into different routes. As PUC rules required, LCRA designated a "preferred" route. Although the application listed 60 alternative routes, comprised of various combinations of the proposed links, those proposed links could be combined to form even more routes — over 20,000 different routes were possible. LCRA's "preferred" route was based on the utility's analysis and the information available when it filed the application, and best met the statutory and regulatory criteria. But LCRA stated that any of the proposed routes would meet those criteria. Page 161 different links or segments that could be

The potential routes fell geographically into several general categories:<sup>21</sup> (1) a general central corridor that ran through the central portion of the hill country and affected more undisturbed lands (this includes LCRA's preferred route); (2) a general northern corridor (referred to as the "P-lines") including longer lines and followed an existing transmission line to some extent; and (3) a general southern corridor that primarily followed I-10 and largely

<sup>&</sup>lt;sup>17</sup> Order at 4 -5 (FOF 10 - 14); *see* PURA §§ 37.056(c) & 37.054; 16 TEX. ADMIN. CODE §§ 25.101 (b)(3)(B), 25.101(a)(1)(B), 22.52.

<sup>&</sup>lt;sup>18</sup> Order at 5 (FOF 15).

<sup>&</sup>lt;sup>19</sup> Order at 4 (FOF 5).

<sup>&</sup>lt;sup>20</sup> See LCRA Application at 23, Admin R. Binder 16.

<sup>&</sup>lt;sup>21</sup> See AR, Box 4, Binder 16, Items 1 - 3 at 14 - 16 & Attachment 8 at 7, 54. (LCRA Application).

avoided the undisturbed portions of the hill country.<sup>22</sup> The application contained detailed maps of the links in the 60 alternative routes<sup>23</sup> and links to the PUC's interchange (for filings in the matter) and links to LCRA's website (for detailed maps from the CCN application).<sup>24</sup>

LCRA's application notice stated in bold-type that

any one of the proposed routes or a new combination of route segments filed in the application may be selected by the Commission . . . [and] the Commission may modify the proposed routes and segments into different configurations than those proposed, so long as they affect only noticed landowners. <sup>25</sup>

Thus, the notice explained that the PUC was not required to pick a route from those in LCRA's application. As the long as the selected route only impacts noticed landowners, the PUC could assemble the links in the application into different configurations, and also could modify or move specific links that are proposed. The ALJs acknowledged this in their Order No. 1:

[LCRA] has stated that any one of the routes proposed would meet the statutory and regulatory criteria. It is the duty of the ALJs and, ultimately, the Commission to choose the route that best meets those criteria. Any proposed route, or any combination of properly noticed proposed links, could be selected. <sup>26</sup>

<sup>&</sup>lt;sup>22</sup> See AR, Box 4, Binder 16, Items 1 - 3 at 21 (LCRA Application).

<sup>&</sup>lt;sup>23</sup> See AR, Box 4, Binder 16, Items 1 - 3 at 29 - 31 and Attachment 3; AR, Binders 16 - 24 (LCRA Application).

<sup>&</sup>lt;sup>24</sup> See AR, Box 4, Binder 16, Items 1 - 3 at Attachment 6 & 52 - 58 (LCRA Application).

<sup>&</sup>lt;sup>25</sup> See AR, Box 4, Binder 16, Items 1 - 3 at Attachment 6 at 2 (LCRA Application); AR, Binders 16 - 24.

<sup>&</sup>lt;sup>26</sup> AR, Box 2, Binder 1, Item 8 at 6 (SOAH Order No. 1) (Emphasis added).

All of the links in MK63, the route the PUC ultimately adopted, were proposed in the application. The assembly of those links into MK63 is one of many potential routes, or combinations of links, included in LCRA's Exhibit 26. Attachment D. As Plaintiffs note, the ALJs requested this exhibit during the SOAH proceeding. Some of the routes listed in Exhibit 26 were included in LCRA's application, and some were developed thereafter by individual intervenors, PUC staff, or even the ALJs themselves. The Exhibit 26 chart includes a variety of information regarding these potential routes, including (Line 2 on Page 1) the number of habitable structures within 500 feet of the right of way centerline for each line (including MK63). Attachment D.

Although the PUC altered some links in MK63, all of the links that are at issue in this suit were included in LCRA's CCN application. Link Y11, the link incorporated in MK63 that runs south of the Junction airport, was included in three of the specific routes set forth in the application.<sup>27</sup> The links that run along I-10 north of Kerrville were included in eight of the specific routes proposed in the application, including two routes that received significant discussion, MK 32 and 33.<sup>28</sup>

### C. More than 1,000 interested persons participated in the CCN proceeding.

Around 1,100 individuals and entities intervened in the PUC proceeding.<sup>29</sup> They included individuals, groups of individuals with aligned interests such as neighborhood

<sup>&</sup>lt;sup>27</sup> AR, Box 4, Binder 16, Attachment 8, pgs. 7-10 (LCRA Application).

<sup>&</sup>lt;sup>28</sup> *Id*.

<sup>&</sup>lt;sup>29</sup> PFD at 4.

associations, cities, counties, a public utility board, environmental groups, and state agencies.<sup>30</sup> Intervenor Clear View Alliance was a group of hundreds of individual landowners that advocated for a route running along I-10 and Hwy 277 that would entirely avoid cutting through the Texas Hill Country. Others intervenors included the Tierra Linda homeowners association (opposed to routing of the line through their subdivision, in the area north of Kerrville and I-10) and the P-Line Intervention group (opposed to the northern "P-line" routes near their properties). Plaintiffs City of Kerrville, the Kerrville Public Utility Board and City of Junction, and intervenor Kerr County also intervened in the PUC proceeding. The Texas Parks and Wildlife Department and the Texas Historical Commission intervened to represent their interests in the line routing.

## D. SOAH heard evidence on LCRA's application and proposed a route for the line.

After the PUC referred LCRA's application to the State Office of Administrative Hearings (SOAH), SOAH conducted an evidentiary hearing on the merits. Over thirty parties appeared and actively participated by questioning witnesses, presenting evidence, and raising objections.<sup>31</sup> At the hearing, LCRA presented eleven witnesses. Intervenors presented 176 witnesses (129 landowners and 47 experts). Cross-examination of witnesses took six and half days. Over 60 post-hearing briefs (initial and reply) were filed.

<sup>&</sup>lt;sup>30</sup> PFD at 4.

<sup>&</sup>lt;sup>31</sup> PFD at 4.

### 1. Considerations in routing the line.

In accordance with the standards set forth in PURA § 37.056 and 16 TEX. ADMIN.

CODE § 25.101, the SOAH ALJ heard evidence and argument on the routing of the line.

Evidence addressed relevant factors including:

- Environmental impacts, including habitat fragmentation and endangered species concerns;<sup>32</sup>
- Aesthetic values, "the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities."<sup>33</sup>
- Possible use of existing right of way, particularly along I-10, instead of other routes that would cut through the Hill Country;<sup>34</sup>
- Proximity to habitable structures and the PUC's "prudent avoidance" policy;<sup>35</sup>
- Landowner and community impacts;<sup>36</sup>
- Avoiding recreational and park areas,<sup>37</sup> including the Old Tunnel Wildlife Management Area<sup>38</sup> and Fort McKavett State Historical Site;<sup>39</sup> and

<sup>&</sup>lt;sup>32</sup> Order at 13-16, 20-21; PFD at 42-65.

<sup>&</sup>lt;sup>33</sup> Order at 8-10; PFD at 32-38. "The project area reflects overall a medium to high level of aesthetic value for the region. The eastern portion of the study area, located in the Hill County, is within an area of the state noted for its scenic beauty and characterized by impressive topographical relief, vegetation and wildflowers, abundant wildlife and plateaus." Order at 9 (FOF 40).

<sup>&</sup>lt;sup>34</sup> Order at 13 (FOF 77), 18-19; PFD at 71-76.

<sup>&</sup>lt;sup>35</sup> Order at 18-19; PFD at 71-76.

<sup>&</sup>lt;sup>36</sup> Order at 5-6; PFD at 17-25.

<sup>&</sup>lt;sup>37</sup> Order at 7-8; PFD at 26-31.

<sup>&</sup>lt;sup>38</sup> Texas Parks and Wildlife Department's Old Tunnel Wildlife Management Area (OTWMA) includes a bat colony of up to three million Brazillian free-tail bats and three thousand cave myotis. The OTWMA has nature trail and offers educational programs for

• Engineering constraints and the cost of the various options. 40

The PUC ultimately weighed the evidence and these factors to decide which of the many possible routes best met the criteria in light of the particular facts.

2. Routing the line around the Kimble County airport near the City of <u>Junction.</u>

Routing the line near the City of Junction posed certain difficulties because an airport sits just north of I-10 and there is a floodplain south of I-10. South of the floodplain is a more-populated area of Junction. Airports require structure height limitations for safety purposes and flooding can effect transmission reliability. LCRA studied this problem area, and proposed a link along I-10 near Junction that ran just south of I-10 and the airport (Link Y11) and an alternative link that swept north of I-10 and the airport (Link Y8). LCRA believed it would be difficult to route the line through the constraints south of the airport and stay along I-10, unless it were buried, which would add significantly (\$54 million) to its cost. Property owners north of the airport (including some members of the Clear View Alliance

visitors. Order at 7 (FOF 33-35). The PUC determined the line should avoid the OTWMA bat colony. Order at 7 (FOF 35).

<sup>&</sup>lt;sup>39</sup> Fort McKavett, in Menard County, owned and operated by the Texas Historical Commission, is one of the best preserved and most intact examples of a fort from the Texas Indian Wars. Order at 7-8 (FOF 36-37). The PUC determined that transmission towers of up to 180 feet in height would directly and negatively impact views from the fort, and would negatively impact its character, isolation, and the overall appeal of the site. Order at 8 (FOF 37).

<sup>&</sup>lt;sup>40</sup> Order at 17-18; PFD at 66-71.

<sup>&</sup>lt;sup>41</sup> See AR, LCRA Application at 35-37 and Attachments 6-7, Binders 16-24.

<sup>&</sup>lt;sup>42</sup> See LCRA Application Attachments 6 at 55, Admin R. Binders 16-24.

("CVA")) argued that the route could be built overhead south of the airport, thus avoiding undeveloped lands north of I-10.

At the SOAH hearing on the merits, LCRA argued that the link north of the airport would be a better choice because of the multiple engineering constraints immediately south of I-10 (i.e., aviation approach and flooding), and because placing the line underground would be very expensive. CVA disagreed and argued that the line could be safely routed overhead south of the airport on Link Y11. In particular, LCRA and CVA disagreed on the interpretation of FAA safety regulations regarding how aviation slopes limit the height of transmission structures. Both LCRA and CVA offered extensive testimony on the airport issue, focusing on the safety and reliability concerns involved with routing the line south of the airport. The safety and reliability concerns involved the particular height of the transmission towers at distances south of the end of the airport runway, and where and how the towers could be built in the floodplain of the North Llano River. The combination of these safety and reliability concerns posed significant challenges.

<sup>&</sup>lt;sup>43</sup> See, e.g., AR, Binder 14, LCRA Ex. 14 (rebuttal testimony of Symank).

<sup>&</sup>lt;sup>44</sup> See, e.g., AR, CVA direct testimony of McIllwain Admin R. Binder 12 (CVA Ex. 7); CVA direct testimony of McGavran, Admin R. Binder 12 (CVA Ex. 6).

<sup>&</sup>lt;sup>45</sup> E.g., AR, Binder 23, CVA Ex. 7 (direct testimony of McIllwain), AR, Binder 12, CVA Ex. 7 (direct testimony of McGavran), AR. Binder 12, (CVA Ex. 6) (rebuttal testimony of Symank Exhibits 5-9, AR, Binder 28, LCRA Ex. 14.

<sup>&</sup>lt;sup>46</sup> AR, Binder 28 at 36-38 and Exhibits 5-9; AR, Binder 28 LCRA Ex. 14 (rebuttal testimony of Symank); AR, Binder 12, CVA 7(direct testimony of McIllwain); AR, Binder 12, CVA Ex. 6 (direct testimony of McGavran).

Although routing around the Junction airport was a major focus of the SOAH hearing, the City of Junction — the only plaintiff whose substantial rights would be impacted by the airport-routing decision — did not participate at all in the hearing.<sup>47</sup> It presented no evidence, and did not file a brief discussing the evidence presented by others. Its sole participation in the SOAH proceeding was the submission of a short position statement that is not evidence.<sup>48</sup>

### 3. The ALJs recommended a route.

The ALJs recommended that the PUC adopt the PUC Staff's MK15 route.<sup>49</sup> Attachment C (Proposal for Decision). Staff's MK15 paralleled I-10 for much of its length, but used the northern link around the Junction Airport rather than a southern route paralleling I-10 that CVA favored. Staff's MK15 route also did not parallel I-10 near Kerrville, and instead used links that took the line from Kendall through the hill country several miles north of I-10 (and through the Tierra Linda subdivision). Attachment E is a map showing the ALJs' proposed route.

E. After considering the evidence, the ALJs' proposal, and the parties' arguments, the PUC decided what route to certificate.

<sup>&</sup>lt;sup>47</sup> Kerrville is located approximately 50 miles east of the City of Junction on I-10.

<sup>&</sup>lt;sup>48</sup> Statement of Position by City of Junction, Attachment H to Plaintiffs' Brief; *see* PFD at 4 (two cities that participated most actively were Kerrville and Fredricksburg).

<sup>&</sup>lt;sup>49</sup> PFD at 2.

The PUC considered the ALJ routing recommendation reflected in the PFD by reviewing the evidence presented at the hearing, and discussing LCRA's application in two open meetings in January 2011. At the open meetings, the PUC addressed the parties' arguments about the airport routing — including whether, and how, Link Y11 could safely and reliably be built overhead south of the airport. CVA continued to argue that the line could be routed overhead south of the airport. LCRA explained its concerns regarding safety and reliability, and continued to disagree with CVA on the interpretation of FAA safety regulations regarding how aviation slopes limit the height of transmission structures. At the second open meeting, responding to CVA's position and questions raised by the parties and the Commissioners at the initial open meeting, LCRA representatives explained that although Link Y11could not safely be built overhead where CVA proposed, Link Y11 could be built overhead, on noticed properties, if it were shifted a short distance (about 1,200 feet from Link Y11 in its application) to the south.<sup>50</sup> Immediately before the second meeting, LCRA filed a letter with the PUC demonstrating these concepts and explaining how it could build the line.

Chairman Smitherman noted that the PUC was not taking evidence at the meeting.

Only evidence that had been introduced at the SOAH hearing was considered, but the PUC did consider *argument* as to how to route the line around the airport.<sup>51</sup>

<sup>&</sup>lt;sup>50</sup> See Open Meeting Tr. (Jan. 20 2011) (Attachment F to Plaintiffs' Brief); LCRA letter to PUC Commissioners at Ex. B (January 19, 2011), Admin. R. Binder 10, Item 454.

<sup>&</sup>lt;sup>51</sup> See Open Meeting Tr. (Jan. 20 2011) at pgs. 62-64 (Attachment F to Plaintiffs' Brief).

Upon review of the PFD and re-weighing of the evidence in the record, the PUC selected a route (MK 63) that differed from the ALJ's recommended route in only two major areas. First, the PUC routed the line along the I-10 right-of-way north of Kerrville rather than taking it several miles further north through the hill country and the Tierra Linda subdivision. Second, in the area around the Junction airport, the PUC opted for a southern route near I-10 (Link Y11) rather than using the longer northern bypass around the airport (Link Y8). The PUC Order states that the line should be built overhead south of the airport using Link Y11, routed "as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners." States in the PUC order states that the line should be built overhead south of the airport using Link Y11, routed "as far south as safely and reliably possible using overhead

In light of its final routing determination, the Commissioners changed several of the ALJ's proposed findings of fact and conclusions of law in the PFD, and explained the reasons for the changes in the Order.<sup>54</sup>

<sup>&</sup>lt;sup>52</sup> Order at 2.

<sup>&</sup>lt;sup>53</sup> Order at 24 (Ordering paragraph No. 2).

<sup>&</sup>lt;sup>54</sup> Order at 2.

### III. Summary of the Argument

In routing transmission lines, the PUC considers a range of often-competing factors (environmental integrity, historical and aesthetic values, recreational and park areas, and community values) as well as the cost of the alternative routes and engineering constraints. With the McCamey D to Kendall CREZ line, the Commission weighed a substantial body of evidence on all these concerns that was developed in a contested-case hearing before SOAH. Plaintiffs had an opportunity to present evidence for or against potential routes at this hearing.

Upon review of the SOAH judges' proposed route, the Commission decided the best balancing of the competing concerns was to run the line along I-10 from Kendall to Junction. Here the PUC appropriately substituted its judgment for the ALJs' on two sections of the line's route — around the Junction Airport, and in the area north of Kerrville. TEX. GOV'T CODE § 2003.049(g) gave the PUC the authority to make changes to the ALJs' PFD to reflect this. Under this special statutory provision, the PUC (unlike many other state agencies) has broad power to change findings of fact and conclusions of law to reflect its own weighing of the evidence and the proper application of the law and Commission policy.

The decision to use Link Y11 to run the line south of the Junction airport, as that segment could safely and reliably be built overhead, was based on the record evidence from the SOAH hearing. The City of Junction — the only Plaintiff whose substantial rights could be impacted by the routing around this airport — did not participate at all in the hearing or offer evidence on the routing. It received all the process it was due. The PUC appropriately

considered argument regarding the evidence presented at SOAH in its later open meeting discussions.

Substantial evidence supports the PUC's routing decision. It did not disregard community values, or its "prudent avoidance" policy regarding impacts on habitable structures, in routing the line along I-10 north of Kerrville.

### IV. Argument and Authorities

### A. Standard of review

As in any case, Plaintiffs bear the burden of proof. For an administrative appeal of the PUC's order in a contested case, that means that plaintiffs must show reversible error in the order; the substantial-evidence rule described in Section 2001.174 of the APA controls. *See Anderson v. R.R. Comm'n*, 963 S.W.2d 217, 219 (Tex. App.—Austin 1998, pet. denied); Tex. Util. Code § 15.001; Tex. Gov't Code § 2001.174. That rule is very deferential to the agency, but the deference owed varies depending on the type of error alleged. Complaints in this case invoke the substantial-evidence standard, the arbitrary-and-capricious standard, and abuse of discretion.

### 1. Substantial evidence standard.

When reviewing an agency's fact finding, a court uses the deferential substantial-evidence standard. It prohibits a court from substituting its judgment for the agency's as to the weight of evidence. *Pub. Util. Comm'n v. Gulf States Utils. Co.*, 809 S.W.2d 201, 211 (Tex. 1991). ("A court that is reviewing purely factual administrative findings ... may determine only whether substantial evidence supports those findings.").

The Austin Court of Appeals has discussed the substantial-evidence standard in two cases involving the PUC's routing of transmission lines, *Dunn v. Public Util. Comm'n*<sup>55</sup> and *Hammack v. Public Utility Comm'n*. <sup>56</sup>

Substantial evidence means "evidence as a whole such that reasonable minds could have reached the conclusion that the agency must have reached in order to justify its action. *Dunn v. Pub. Util. Comm'n*, 246 S.W.3d 791 (*citing Texas State Bd of Dental Exam'rs v. Sizemore*, 759 S.W.2d 114, 116 (Tex. 1988)). To comply with the substantial evidence rule, there need only be "more than a mere scintilla" of evidence on the record supporting the agency's decision, and "evidence on the record . . ." can even "preponderate against the decision of the agency and nonetheless amount to substantial evidence." *Id.* (*quoting R.R. Comm'n v. Torch Operating Co.*, 912 S.W.2d 790, 792 (Tex. 1995); *See also, Sw.Pub. Serv. Co. v. Pub. Util. Comm'n*, 962 S.W.2d 207, 215 (Tex. App.—Austin 1998, pet. denied).

The Austin Court of Appeals has further explained that a court "may not substitute [its] judgment for that of the agency on the weight of the evidence . . . " and that the "test is not whether in [the court's] view the agency reached the correct conclusion but whether some reasonable basis exists in the record for the agency's decision." *Dunn*, 246 S.W.3d at 791 (citing ASAP Paging, Inc. v. Pub. Util. Comm'n, 213 S.W.3d 380, 392-393 (Tex. App.—Austin 2006, pet. denied). "The crux of a substantial evidence analysis is whether the agency's factual findings are reasonable 'in light of the evidence from which they were

<sup>&</sup>lt;sup>55</sup> 246 S.W.3d 788, 791 (Tex. App.–Austin 2008, no pet.).

<sup>&</sup>lt;sup>56</sup> 131 S.W.3d 713, 728 (Tex. App.-Austin 2004, pet. denied).

purportedly inferred.'.... It 'does not mean a large or considerable amount of evidence, but rather such relevant evidence as a reasonable mind might accept as adequate to support a conclusion' of fact." *Hammack*, 131 S.W.3d at 725 (citations omitted). *See also*, *Sw. Pub. Serv. Co.*, 962 S.W.2d at 215. Put succinctly, a "court may not determine the correctness of the agency's findings." *Sw.Pub. Serv. Co.*, 962 S.W.2d at 215.

Finally, this Court must "presume that the PUC's order is supported by substantial evidence, and the [Plaintiffs] have the burden to demonstrate otherwise." *Dunn*, 246 S.W.3d at 791 (citing ASAP Paging, Inc. v. Pub. Util. Comm'n, 213 S.W.3d 380, 392 (Tex. App.—Austin 2006, pet. denied)); See also Sw. Pub. Serv. Co., 962 S.W.2d at 215.

### 2. Arbitrary-and-capricious standard.

The arbitrary-and-capricious standard applies in this case to the allegations that the PUC disregarded its "prudent avoidance" policy and community values when routing the line. An agency acts arbitrarily and capriciously when the agency fails to consider a factor the Legislature required it to consider, or considers an irrelevant factor. City of El Paso v. Pub. Util. Comm'n, 883 S.W.2d 179, 184 (Tex. 1994). The Texas Supreme Court has recognized the narrowness of the arbitrary-and-capricious standard of review when applied to agency decisions: "[W]e do not think that the legislature intended it to be interpreted as a broad, all-encompassing standard for reviewing the rationale of agency actions." Tex. Health Facilities Comm'n v. Charter Medical-Dallas, Inc., 665 S.W.2d 446, 454 (Tex. 1984).

### 3. Abuse of discretion.

Plaintiffs also allege the prudent avoidance determination constitutes an abuse of discretion. Abuse of discretion occurs when the agency acts in an arbitrary or unreasonable manner without reference to any guiding rules or principles. *See Downer v. Aquamarine Operators, Inc.*, 701 S.W.2d 238, 241-42 (Tex. 1985) (describing abuse of discretion by a court).

B. In routing the transmission line, the PUC weighs the evidence relating to a range of relevant factors.

The statutory standard that the PUC applies in routing a transmission line is set forth in PURA § 37.056(c). Because the need for the line is not an issue with a CREZ line,<sup>57</sup> the standard is in PURA § 37.056(c)(4):

§ 37.056. Grant or Denial of Certificate

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- (c) The commission shall grant each certificate on a nondiscriminatory basis after considering: . . . .
  - (4) other factors, such as:
  - (A) community values;

<sup>&</sup>lt;sup>57</sup> The only issue in Docket No. 38354 was the routing of the McCamey D to Kendall line. Need for the transmission line, normally considered under PURA § 37.056(a) when the PUC reviews an application for a new transmission line, was not an issue. Under PURA and PUC rules the need for a CREZ transmission line is assumed in a CCN proceeding. PURA § 39.904 (h) ("In considering an application for a certificate of public convenience and necessity for a transmission project intended to serve a competitive renewable energy zone, the commission is not required to consider the factors provided by Sections 37.056(c)(1) and (2)."; 16 Tex. Admin. Code § 25.174(d)(2) ("A CCN application for a transmission project intended to serve a CREZ need not address the criteria in PURA §37.056(c)(1) and (2).").

- (B) recreational and park areas;
- (C) historical and aesthetic values;
- (D) environmental integrity; . . .

PURA § 37.056(c).

The PUC's Sub. Rule 25.101 describes more specifically some of the considerations the PUC may take into account when routing transmission lines.<sup>58</sup>

In Hammack v. Public Utility Comm'n,<sup>59</sup> the Austin Court of Appeals discussed how the PUC applies the statutory standards in routing transmission lines, and how courts review those decisions. In Hammack, landowners argued that PURA required the PUC to follow existing right-of-ways in routing the line, but the Austin Court of Appeals rejected that

- (i) whether the routes utilize existing compatible rights-of-way, including the use of vacant positions on existing multiple-circuit transmission lines;
- (ii) whether the routes parallel existing compatible rights-of-way;
- (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.

16 Tex. Admin. Code § 25.101. The PUC recently amended rule 25.101, effective May 25, 2010. The prior version of the rule applied to this proceeding. The above-quoted language did not change.

<sup>&</sup>lt;sup>58</sup> § 25.101(b)(3)(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 preferred and alternate 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):

<sup>&</sup>lt;sup>59</sup> 131 S.W.3d 713 (Tex. App.–Austin 2004).

argument. The court explained that PURA set out the factors the PUC could consider in deciding where to route a transmission line. And the PUC necessarily has broad discretion in applying the often-competing factors in routing: "This Court has recognized that some of the factors may compete, so that the Commission may, in some cases, be required to 'adjust or accommodate the competing policies and interests involved.' Thus, to implement these broad factors in any particular case, the Commission 'must necessarily decide what they mean in those circumstances.'" *Id.* 60

Hammack cited Public Utility Comm'n v. Texland Electric Co.,<sup>61</sup> where the Austin Court of Appeals explained (in a case involving the need for a new generation plant) the latitude necessarily afforded the PUC in applying the PURA § 37.056 factors. The court noted that, to implement such broad legislative objectives, the PUC "must necessarily decide what they mean in those circumstances; and because some of them obviously compete inter se, the agency may in some cases be required to adjust or accommodate the competing policies and interests involved. . . ." Texland, 701 S.W.2d at 266. No one factor controls over any other: "None of the statutory factors is intended to be absolute in the sense that any one shall prevail in all possible circumstances. In making these sometimes-delicate

In *Hammack*, the PUC considered routings along existing rights of way — although not statutorily required to do so — and rejected them. *Id.*, n.9 ("The Commission adopted the ALJ's proposal for decision discussing the routes paralleling existing rights of way and concluding that the routes exiting the north side of the Coleto Creek Power Plant were properly discounted. The northern routes contained a greater number of wetlands, stream crossings, vegetation clearing, and residences within 200 feet of the proposed centerline.").

<sup>&</sup>lt;sup>61</sup> 701 S.W.2d 261 (Tex. App.– Austin 1985, writ. ref'd n.r.e.).

accommodations, the agency is required to exercise its 'expertise' to further the overall public interest." *Id.* at 267. *See also Dunn v. Public Util. Comm'n*, 246 S.W.3d at 795 ("We will not substitute our judgment for that of the PUC on whether the mere potential of an environmental integrity issue should outweigh the PUC's findings of fact on such other statutory factors.") (citing *Texland*.).

Because the factors compete, no one route is the optimal choice for every factor. Such was the case with the McCamey D to Kendall line. Environmental integrity recommended against a non-I-10 routing that would cut through the Texas hill country, fragment habitat, and also could put line close to environmental and cultural resources such as the Old Tunnel Wildlife Area and Fort McKavett. Routing the line along the I-10 right-of-way avoided those concerns, but meant that the line would be closer to relatively more habitable structures.

The PUC's Order extensively discusses all the competing factors (including impacts on the environment, aesthetics, recreational areas and cultural resources, and habitable structures, as well as cost and engineering concerns) that were involved in this line routing decision. Attachment F sets forth some of the key findings. Substantial evidence supports these findings. Plaintiffs barely attempt to argue otherwise. The PUC weighs the evidence relating to these competing factors and makes the routing decision, and a reviewing court does not substitute its judgment for the PUC's on the weight of the evidence.

C. The PUC properly chose Link Y11 after considering the record evidence and providing all affected parties the opportunity to examine witnesses and present evidence. (Responds to Point of Error No. 1.)

### 1. <u>Substantial evidence supports the PUC's decision to chose Link Y11.</u>

The record, reviewed under the proper standard, reveals that substantial evidence supports the PUC's approval of the modified Link Y11 section of the route near Junction. Evidence regarding the safety and reliability issues involved with the use of Link Y11 was introduced at the SOAH hearing by CVA and LCRA.

CVA was the most vocal Intervenor opposed to routing the line north of the Junction airport and through undisturbed areas of the hill country. Two CVA witnesses, Frank McIllwain and Edward McGavran, testified that the line could be safely routed along Link Y11.62

Frank McIllwain testified in detail about FAA safety requirements if the line was routed overhead along Link Y11 south of the airport. Mr. McIllwain discussed FAA regulations, how he calculated the allowable height and width of structures near the airport, and that the lines could be built at an acceptable height on Link Y11.<sup>63</sup> Specifically, he stated that "it is possible to construct a transmission line on Link Y11 in the location proposed by LCRA if the height in a defined area of the construction does not exceed 61 feet." Mr.

<sup>&</sup>lt;sup>62</sup> Frank McIllwain is a professional engineer who has over 12 years of airport design experience and is currently a Senior Project Manager in the aviation practice group of an engineering consulting firm. AR, Box 4, Binder 12, CVA Ex. 7, Attachment FOM-1(Direct testimony of McIllwain) Edward McGavaran is a professional electrical engineer, who has over 26 years of professional engineering experience, including years of professional experience in the routing of transmission lines. AR, Box 4, Binder 12, CVA Ex. Ex. 6 at EGM-1(Direct testimony of McGavaran.

<sup>&</sup>lt;sup>63</sup> AR, Box 4, Binder 12, CVA Ex. 7 at 6 (lines 18 - 19), 8, (lines 27 - 30), and 10 (Lines 21 - 25).(direct testimony of McIllwain ).

<sup>&</sup>lt;sup>64</sup> AR, Box 4, Binder 12, CVA Ex. 7 at 6 (lines 18 - 19) (direct testimony of McIllwain).

McIllwain further testified that the safe height of the line increases as it is moved further south of the airport. At two nearby points further south of the airport a transmission structure could be 73 feet or as high as 86 feet above ground level. He also stated that "[t]he further south, and away from the runway, the proposed transmission line is located, the structures can be taller . . ." and that a "location 100 feet further south will allow for construction at an [aboveground level] that is 5 feet higher than the calculations . . ." and a "location that is 500 feet further south will allow for construction at an [aboveground level] that is 25 feet higher." Mr. McIllwain attached exhibits to his testimony, including maps and diagrams, that show the approach to the airport and that taller structures can be used as the line is moved further south. See Attachment G.

CVA's other witness, Edward McGavaran, also testified that the line could be safely routed overhead along Link Y11 and in compliance with FAA regulations.<sup>68</sup> He stated that while the FAA would object to the lines being routed exactly as LCRA proposed, the CVA "came up with two viable alternatives." Those two alternatives were: 1) to "build a short group of H-frame structures no more than 60 feet tall," or 2) "to locate the line on the south

<sup>&</sup>lt;sup>65</sup> AR, Box 4, Binder 12, CVA Ex. 7 at 7 (lines 16-19) (direct testimony of McIllwain).

<sup>&</sup>lt;sup>66</sup> AR, Box 4, Binder 12, CVA Ex. 7 at 8 (lines 27-31).(direct testimony of McIllwain).

<sup>&</sup>lt;sup>67</sup> AR, Box 4, Binder 12, CVA Ex. 7 at 8 ( lines 27-31) (direct testimony of McIllwain) & Attachments FOM-3 and FOM-6.

<sup>&</sup>lt;sup>68</sup> AR, Box 4, Binder 12, CVA Ex. 6 at 20 (lines 27 - 29) (direct testimony of McGavran).

<sup>&</sup>lt;sup>69</sup> AR, Box 4, Binder 12, CVA Ex. 6 at 21 (lines 9-10) (direct testimony of McGavran.)

side of the Llano River to gain more distance and get a lower profile for the line as it falls down into the Llano River area."<sup>70</sup>

Further evidence comes from LCRA's application, which was admitted into evidence at SOAH. It includes detailed maps showing the constraints of links and the property lines of noticed landowners. See Attachment G. Maps have redlines depicting the proposed routes, outer-lying blue lines showing the "notification corridor limit from centerline to identify directly affected parties," and yellow lines depicting parcel boundaries. Other detailed maps also showed the flood plain south of the airport and I-10, and other environmental constraints. These maps enabled the SOAH judges and the Commissioners to visualize the constraints of the airport, I-10 and the floodplain, and the extent of noticed landowners' properties.

LCRA also had two witnesses, Curtis Symank and William Griffin, who offered rebuttal testimony to the CVA testimony on the airport issue and whether and how the line could be routed overhead along Link Y11.<sup>74</sup> Their testimony includes maps of the approach

<sup>&</sup>lt;sup>70</sup> AR, Box 4, Binder 12, CVA Ex. 6 at 20-21(CVA Ex. (direct testimony of McGavran)

<sup>&</sup>lt;sup>71</sup> Application LCRA, Attachment 3, AR, Binders 16-24, LCRA Ex. 21 (SOAH hearing also shows corrections that were made to the original property maps after LCRA filed its application).

<sup>&</sup>lt;sup>72</sup> Application LCRA, Attachment 3, AR, Binders 16-24.

<sup>&</sup>lt;sup>73</sup> Application LCRA, Attachment 4, Figure 4-1f, Admin. R. Binders 16-24.

<sup>&</sup>lt;sup>74</sup> AR, Binder 28, LCRA Ex. 14, (rebuttal testimony of Curtis Symank); AR, Binder 28, LCRA Ex. 15 (rebuttal testimony of William Griffin, 28.

to the airport and floodplain maps of the Llano River south of the airport.<sup>75</sup> Mr. Griffin agreed that the line could be constructed further south from an aviation viewpoint.<sup>76</sup> Testimony from Mr. Symank and Mr. Griffin on the airport issue and the maps attached to their testimony, provided the Commissioners with evidence regarding the constraints around the airport and the feasibility of constructing the line south of the airport.<sup>77</sup>

### 2. The adjusted Link Y11 the PUC certificated is not a new link.

The PUC adjusted and did not adopt a new link south of the airport. The Austin Court of Appeals has recognized that flexibility is required when permitting transmission lines. That Court found that "due to the fluid nature of [CCN] proceedings, it is necessary to make accommodations as the proceedings progress," and that the PUC may make changes when routing lines, so long as the properties are still in the area that was a part of the applicant's study. Hammack, 131 SW.3d at 728. Also, notice is considered sufficient if the line is ordered to be located only on noticed properties. See Chocolate Bayou Water Co. & Sand Supply v. Texas Natural Res. Conservation Comm'n, 124 S.W.3d 844, 850 (Tex. App.—Austin 2003, pet. denied); See also Hammack, 131 SW.3d at 728. In the Chocolate Bayou case, the Court found that even if a "permit does vary from the notice and the application" . . . the court's task "is not to analyze these differences, but to determine whether appellants had

<sup>&</sup>lt;sup>75</sup>AR, Binder 28, LCRA, Ex. 5-9, LCRA Ex. 14. (rebuttal testimony of Curtis Symank).

<sup>&</sup>lt;sup>76</sup> AR, Binder 33, Vols. J-Q, (hearing transcript at pgs. 153-255, 280-334, 359-401,534-542, 1177-1467).

<sup>&</sup>lt;sup>77</sup> *Id*.

sufficient notice that their interests were at risk." *Chocolate Bayou Water Co.*, 124 S.W.3d at 850. Further, that court stated that "[i]f appellants had notice that their interests were at risk, the appropriate method for addressing those concerns would have been through the normal administrative process of a contested-case hearing." *Id.* Because the PUC certificated a route that is only around a thousand feet from Link Y11 as shown on LCRA's map and only on noticed properties, no new route was created. Instead, the PUC reasonably adjusted the proposed line on a noticed link.

The Order shows that all the PUC did was reasonably adjust proposed Link Y11 south of the airport. *See* Attachment H (Kimball County Airport findings from the Order). The Order requires that in the vicinity south of the airport, LCRA shall "move link Y11 as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners." Based on the evidence in the record, the extent of those noticed properties is only a couple of thousand feet from the exact point of proposed Link Y11 in the CCN application and does not extend near any habitable structures. This gives the LCRA a narrow band within which to move the line south of the Junction airport, understanding at the same time that LCRA cannot get too near the southern line of the landowners' properties or it will affect other non-noticed landowners. Although the LCRA has not determined the exact location of the line yet, testimony from CVA witnesses show that a placement only

<sup>&</sup>lt;sup>78</sup> Commission Order at 24, Ordering paragraph No. 2.

<sup>&</sup>lt;sup>79</sup> See AR, Binders 16-24, LCRA Ex. 5-9, Application LCRA, Attachments 3 and 4, (rebuttal testimony of Curtis Symank; AR Binder 28 (LCRA Ex. 14).

about 1,000 feet from the exact point in the CCN application would provide sufficient room to safely construct the line in an overhead configuration.<sup>80</sup>

The necessary flexibility in certificating the transmission lines was also built into LCRA's description of the proposed transmission line in its application and notice. LCRA's application notice contains the following statement in bold-type: "any one of the proposed routes or a new combination of route segments filed in the application may be selected by the Commission . . . and that the Commission may modify the proposed routes and segments into different configurations than those proposed, so long as they affect only noticed landowners."

Thus, contrary to Plaintiffs' argument, the PUC's adjustment of Link Y11 is the same route that was proposed by LCRA in its application.

Even with notice of the proceeding, including notice that "the [Commission] may modify the proposed routes and segments," the City of Junction filed a position statement and letter in the proceedings (neither of which is evidence), but otherwise failed to participate. <sup>82</sup> In contrast, other intervenors, mainly CVA, actively participated in the hearing and presented pointed testimony on the airport routing — and even testimony on the specific issue of moving the line further south of the airport in order to increase the height of the lines. The

<sup>&</sup>lt;sup>80</sup> See Application LCRA, Attachment 3, sheet 16, AR, Binder 16; LCRA, Ex. 14 Ex. 5 - 9. (rebuttal testimony of Curtis Symank), AR, Binder 28 (LCRA Ex. 14); AR, Binder 12, CVA Ex. 7 at Attachments FOM-3 and FOM-6 (direct testimony of McIllwain).

<sup>&</sup>lt;sup>81</sup> Application LCRA, Attachment 8, 2, AR Binder 16 (Emphasis added).

<sup>&</sup>lt;sup>82</sup> The City of Junction's position statement does not qualify as evidence and could not be used as a basis of the PUC's Order. Statement of Position by City of Junction (Attachment H to Plaintiffs' Brief).

appropriate forum for arguing that the line should not have been routed south of the airport was at the administrative hearing. None of the Plaintiffs participated in litigating the airport issue, and it is too late for the Plaintiffs to now make that argument in this court.

3. The PUC's Order was made through lawful procedure and was made <u>in</u> compliance with all laws and regulations.

Although the ALJ at SOAH drafts a proposal for decision, the PUC makes the final decision at an open meeting. The evidence the PUC considers is limited to that properly admitted, but PUC rules allow persons to file written materials relating to any proceeding before the Commission, and the PUC often provides "the public with a reasonable opportunity to appear before the commission and to speak on [issues] under the jurisdiction of the commission are before the commission and to speak at the open meetings. Nonetheless, just as trial counsel may argue to a jury what facts may be found from the evidence presented, parties before the PUC may argue what fact findings and policy determinations should be made based on evidence presented to the PUC. And "the thought processes or motivations of an administrator are irrelevant in the judicial determination" of whether an agency order was properly decided. *Pedernales Elec. Co-op., Inc. v. Pub. Util. Comm 'n*, 809 S.W.2d 332, 342 (Tex. App.–Austin 1991, no writ) (citing City of Frisco v. Tex. Water Rights Comm 'n, 579 S.W.2d 66, 72 (Tex. Civ. App.– Austin 1979, writ. ref'd n.re.)). The determination the

<sup>83 16</sup> Tex. Admin. Code § 22.71.

<sup>&</sup>lt;sup>84</sup> *See* Tex. Util. Code § 12.202.

court should make is "whether the agency order is reasonably sustained by appropriate findings and conclusions that have support in the evidence." *Id*.

Even if the thought processes of the Commissioners were relevant to this court's review, Plaintiffs draw the wrong conclusion from Chairman Smitherman's statements at the open meetings. Although the Chairman specifically stated that the evidentiary record was closed and that comments made at the open meetings are "not evidence," Plaintiffs presume that the PUC improperly treated comments as evidence. Commissioner Smitherman stated "The record is closed in this case . . . We're looking at the record. We've got maps and stacks of documents up here, which is what we will be relying upon. There is an opportunity for you to express your point of view, but it is technically not part of the record." Again at the second open meeting, Chairman Smitherman warned an Intervenor that "[w]e've got to be careful here, because, you know, that's not testimony." The Chairman's statements show that while the Commissioners allowed the parties to make comments, the only evidence considered was that in the record.

Even though Chairman Smitherman's comments reflect that the PUC limited evidence to that provided at the SOAH hearing, Plaintiffs try to characterize open meeting arguments as evidence. The PUC did listen to comments of an LCRA engineer at the open meeting and reviewed a letter filed by LCRA, but PUC rules allow parties to file letters so that parties can advocate their position through writings. 16 Tex. ADMIN. CODE § 22.71. In fact, the City of

<sup>85</sup> Open Meeting Tr. at 62 (Jan. 13, 2011) (Attachment C to Plaintiffs' Brief).

<sup>&</sup>lt;sup>86</sup> *Id*.

Junction filed a similar letter that advocated its position to the Commission prior to the open meetings and, as shown through the transcript of the open meetings, the Commissioners read Junction's filing, wanted to hear further from Junction further, but no representatives from Junction appeared at the open meetings.<sup>87</sup>

Contrary to Plaintiffs' claims, any "extra-evidentiary comments" are permissible argument, and those arguments and Commissioners' thought processes and motivations are irrelevant to this judicial review. The City of Junction, which failed to attend the open meetings, received all the process it was due.

# D. The PUC legally changed findings of facts and conclusions of law from the proposal for decision. (Responds to Point of Error No. 2)

Plaintiffs incorrectly describe the PUC's authority to change the ALJ's proposed finding of fact or conclusion of law because Plaintiffs cite the wrong statute. Plaintiffs cite to section 2001.058 in the Administrative Procedure Act, 88 but the applicable statute is TEX. GOV'T CODE § 2003.049. Curiously, however, Plaintiffs correctly cite to the Commission's rule 9 even though it adopts the correct statutory standard. Plaintiffs' reliance on *Flores v*. *Employees Retirement System* is also incorrect because that case applies Section 2001.058 of the APA, which does not apply to the PUC.

<sup>&</sup>lt;sup>87</sup> Open Meeting Tr. at pgs. 46, 57 (Jan. 20, 2011) (Attachment F to Plaintiffs' Brief).

<sup>88</sup> Tex. Gov't Code § 2001.058.

<sup>&</sup>lt;sup>89</sup> 16 Tex. Admin. Code § 22.262(a).

The applicable statute, TEX. GOV'T CODE § 2003.049, allows the PUC to change the ALJ's findings if the ALJ "did not properly apply or interpret applicable law, commission rules or policies, or prior administrative decisions; or . . . issued a finding of fact that is not supported by a preponderance of the evidence."90 If there was ever any doubt that Section 2001.058 has no application to the PUC, it was put to rest in Southwestern Public Service Co. v. Public Util. Comm'n. In that case, the Austin Court of Appeals held that Section § 2001.058 of the APA does not apply to the PUC, and explained the difference between that section and TEX. GOV'T CODE § 2003.049, which does apply. The court stated that "rather than imposing the general restrictive APA section 2001.058 on Commission proceedings heard by SOAH, the legislature created a specific provision for such proceedings . . . " and reasoned that "section 2003.049(g) allows the Commission to assume an original fact finding role." Sw. Pub. Serv. Co, 962 S.W.2d at 213. The Court also explained that in performing this original fact finding role, "the Commission may evaluate the evidence put before the ALJ at a SOAH hearing and determine whether the ALJ's findings are supported by a preponderance of the evidence." Id.

Because they apply the wrong statute, Plaintiffs incorrectly state that "ALJs are independent fact finders . . ." and that the "agency's role is more akin to an appellate court reviewing an agency decision under the substantial evidence rule–deference is to be given to the factfinder." Again, the *Southwestern Public Service Co.* case directly refutes Plaintiffs'

<sup>90</sup> Tex. Gov't Code § 2003.049 (g) (1) (A) & (B).

<sup>&</sup>lt;sup>91</sup> Plaintiffs' brief at 18.

argument. While a review under Section 2001.058 "strongly resembles an appellate scope of review, the preponderance of the evidence standard in section 2003.049(g)(1)(b) is not so deferential." *Sw. Pub. Serv. Co.* at 214. In explaining why the legislature has allowed a lesser standard of review for the Commission's decisions, the court reasoned that: "Public utility matters are typically complex. They often involve objective evidence that is more conducive to review on the record . . ." and, put quite simply, "section 2003.049(g) allows the Commission to substitute its judgment for the ALJ's on questions of fact." *Id*.

The PUC complied with the applicable statute in this case. It reviewed the evidence that was properly in the record and determined what weight to afford that evidence. In weighing the evidence in the record, the Commission was allowed to "accept part of the testimony of one witness and disregard the remainder." Southern Union Gas Co. v. R.R. Comm'n, 692 S.W.2d 137, 138 (Tex. App.—Austin 1985, writ ref'd n.r.e.). The Commission was also "free to weigh the conflicting evidence" of parties "as [it] deemed appropriate, and the Commission, as the final judge of the validity and credibility of expert testimony, [could] accept or reject all or part of a witness's conclusions." Citizens Against Landfill Location v. Tex. Comm'n on Envtl. Quality, 169 S.W.3d 258, 266-67 (Tex. App-Austin 2005, pet. denied). The PUC weighed and combined the evidence entered by LCRA, CVA, and other parties. That evidence provided the Commission with its reasons for changing several of the ALJs' findings in the PFD, and ordering that the line be routed along Link Y11 south of the airport. Although the law allows the Commission to review and weigh the record evidence, and "substitute its judgment for that of the ALJ's," this court, under the substantial evidence rule, is not allowed to change the Commission's findings if there is more than a scintilla of evidence to support them. 92

In addition to the authority to re-weigh evidence, the PUC may change an ALJ's finding if the ALJ "did not properly apply or interpret applicable law, commission rules or policies, or prior administrative decisions." TEX. GOV'T CODE § 2003.049(g)(1)(A); 16 TEX. ADMIN. CODE § 22.262(a). As discussed above, the PUC must weigh a number of factors when determining where a line is to be routed. See 16 TEX. ADMIN. CODE § 25.101(b)(3)(B)(i)-(ii); see also TEX. UTIL. CODE § 37.056(c). The PUC's judgment when weighing those factors cannot be substituted by a trial court's judgment. Dunn, 246 S.W.3d at 794 (citing, Pub. Util. Comm'n v. Texland Elec. Co., 701 S.W.2d 261, 267 (Tex. App.—Austin 1985, writ ref'd n.r.e.)). In routing the line north of the airport and through undisturbed lands, the Commission weighed the applicable legal factors, and determined that the ALJs had not correctly applied or interpreted the applicable law and policies of the Commission, and found that "it [was] more desirable to parallel or closely follow Interstate 10 (I-10) rather than cutting through less developed land."93 The Commission then corrected the ALJs' misapplication of law and policy, and ordered that the line be routed along I-10 and south of the airport.<sup>94</sup>

<sup>&</sup>lt;sup>9</sup>T EX. UTIL. CODE § 15.001.

<sup>&</sup>lt;sup>93</sup> Commission Order at 2.

<sup>&</sup>lt;sup>94</sup> See Commission Order at pg. 24, ordering provisions No. 2.

The PUC's Order explicitly stated its reasons for changing the findings from the PFD. At the top of page 2, the Commission stated that it "has chosen MK63, as modified by this Order, rather than the Staff's M15 Modified because the Commission finds in the area around Junction and Kerrville, it is more desirable to parallel or closely follow Interstate 10 (I-10) rather than cutting through less developed land . . ." and "that I-10 is a more compatible right-of-way for paralleling purposes than the alternative paralleling opportunities available." The Commission went on to state the findings of facts that had been added, modified or deleted based on that specific reasoning provided. The Commission's Order is clear — it changed the findings of fact because it found that the line should be routed along existing right-of-ways rather than through undeveloped land, and that I-10 was the most suitable right-of-way for the line within the study area. 96

E. The PUC did not disregard its "prudent avoidance" policy. (Responds to Point of Error No. 3).

One of the factors the PUC considers when routing a transmission line is its policy of "prudent avoidance" — that is, the impact of possible routes on habitable structures. Though PURA § 37.056 does not use the term "prudent avoidance," PUC Rule 25.101 lists whether the alternatives comply with the policy of "prudent avoidance" as one factor to be considered in routing transmission lines. The rule defines "prudent avoidance" as "[t]he limiting of

<sup>&</sup>lt;sup>95</sup> Commission Order at 2.

<sup>&</sup>lt;sup>96</sup> *Id*.

exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort." 16 TEX. ADMIN. CODE § 25.101(a)(4).<sup>97</sup>

1. The PUC's route selection was not arbitrary and capricious or an abuse of discretion.

Plaintiffs' prudent avoidance argument is fatally flawed in two fundamental respects: first, it mischaracterizes the PUC's prudent avoidance policy, and, second, it wrongly elevates that policy (as mischaracterized) to be the controlling factor in transmission line routing. Under the case law, PURA, and the applicable PUC rule, impacts on habitable structures is only one factor that the PUC weighs in the particular circumstances.

First, the PUC's "prudent avoidance" policy does not require it to select one of the routes that has the least impact on habitable structures. This is obvious from looking at the very language from the PUC rule that Plaintiffs quote in their brief: prudent avoidance is "the limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort." (Emphasis added). The highlighted language shows the PUC's policy is to weigh the cost of limiting exposures (that is, routing a line away from habitable structures) against the associated cost. This language gives the PUC broad discretion in determining whether a particular route represents a reasonable accommodation of the desire to avoid habitable structures and the cost of doing so. Just because a route

<sup>&</sup>lt;sup>97</sup> PUC rules define "Habitable structures" as "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." 16 Tex. Admin. Code § 25.101(a)(3).

impacts more habitable structures than some alternatives does not mean that route does not comply with the prudent avoidance policy. That any particular route would cost more to build that others impacting as many or fewer habitable structures does not mean that route does not comply.

And as for the cost of the MK63 route the PUC chose, Plaintiffs have their facts wrong: its estimated cost was not \$360 million, as this figure includes the \$54 million cost to build Link Y11 underground that was avoided by shifting that link slightly to the south. Deducting this amount produces a figure close to the average cost for LCRA's proposed routings (\$297 million) Plaintiffs cite in their brief.

Second, avoiding habitable structures when economically feasible is only one of many competing concerns listed in the PUC's CCN rule that the PUC must factor into the mix when routing a line. That rule spells out in greater detail the factors (such as cost and engineering constraints) that the PUC considers. Nothing in that rule even suggests, as Plaintiffs argue, that avoiding habitable structures must trump all other concerns. PURA § 37.056(c) and PUC Rule 25.101 set out other considerations. The PUC's Order includes an extensive explanation of all the competing factors. Attachment F.

Nor was the PUC's route selection an abuse of discretion. The PUC weighed the relevant factors in selecting MK63. That decision was not "completely unreasonable" just because the selected route impacted more habitable structures than some of the other routing options that Plaintiffs would have preferred.

# 2. <u>Substantial evidence supports the PUC's route selection.</u>

Contrary to Plaintiffs' contention, there is substantial evidence supporting the PUC's findings that the selected route MK 63 complied with the prudent avoidance policy (FOF 125). In this finding, the PUC determined that, given its cost, MK 63 represented a reasonable investment of money and effort to limit exposure to electric and magnetic fields. There is supporting record evidence of habitable structures in the vicinity of MK 63, and that route's cost. Likewise, substantial evidence supports the specific finding that the alternative routes also met the prudent avoidance policy (FOF 126). Attachment I (prudent avoidance findings from Order).

Though MK63 was not listed in LCRA's application, this route is a compilation of individual links, including Y11 south of the Junction Airport, that were included in that application. Just because the MK63 route that the PUC ultimately chose was not one of the 60 numbered routes submitted in LCRA's application package does not mean, as Plaintiffs contend, that there is no record evidence regarding the habitable structures near this route. There is—LCRA's Exhibit 26 (Attachment D) is one example of such evidence—it lists the number of habitable structures within 500 feet of the center of the right of way for route MK63 and numerous other possible routes. It also lists the cost of MK 63<sup>100</sup> and alternative

<sup>&</sup>lt;sup>98</sup> See, e.g., Tr. 402 (all routes using existing links comply with PUC's routing criteria).

<sup>&</sup>lt;sup>99</sup> Attachment D (LCRA Exhibit 26 listing the segments constituting MK63).

<sup>&</sup>lt;sup>100</sup> The figure reflected on Exhibit 26 includes the cost to build Link Y11 underground, which was not authorized under the PUC's order.

routes. Link Y11 incorporated in MK63, built as the PUC ordered, will be located in a floodplain. Maps in evidence show that there are no habitable structure in this vicinity. *E.g.*, Attachment E. Here again, Plaintiffs' real complaint is about the PUC's weighing of the evidence, and that the PUC did not adopt their preferred route.

The order plainly shows the PUC did not disregard impacts on habitable structures in making its decision, and substantial evidence supports its associated findings. The PUC's order should be affirmed on this point of error.

F. The PUC did not disregard the community values statutory factor. (Responds to Point of Error No. 4).

Plaintiffs' community values argument fails because it rests on the same incorrect assumption as its prudence avoidance argument. No one factor trumps all others when PUC considers a CCN application. *Texland*, 701 S.W.2d at 267. Community values is only one of the concerns that the PUC weighs in making a line-routing decision. The PUC appropriately decided, based on the evidence, that routing the line through the developed I-10 right-of-way, rather cutting a new path through the hill country, was the appropriate interpretation of community values. Plaintiffs' claim that avoiding developed areas was the most important community values consideration is based on a mischaracterization the LCRA's survey results. The chart (Attachment G to Plaintiffs' brief) that Plaintiffs rely upon to argue that avoiding habitable structures was the controlling concern does not support their argument. At many of the open houses for which survey results are listed, the largest number of attendees ranked *something other than routing the line away from residences* as the first

priority; the largest number at many open houses ranked distance from residences as second, third, or even less important.

But regardless of what these surveys may show, ultimately it is the PUC's job to weigh the evidence and select the best route. The surveys may provide useful information, but do not dictate the one criteria that controls the final selection. Transmission lines routing is not decided based on survey results. Nor does the testimony of some public officials and business against routing the line through developed areas mean that PUC could not, after weighing all the evidence on all the competing factors (including environmental concerns), route the line along I-10 through developed areas. The Legislature has charged with PUC with making these routing decisions, applying the factors set forth in PURA § 37.056.

Plaintiffs' "community values" argument is, by and large, a rehash of its baseless complaint that the PUC ignored its prudent avoidance policy in routing the line. The PUC may have placed a different weight on proximity to habitable structures as a community value than Plaintiffs would have liked. But the Court does not substitute its judgment on the weight of the evidence for PUC's. The PUC's order should be affirmed on this point.

#### V. Conclusion and Prayer

For the foregoing reasons, the PUC respectfully requests that its final Order in Docket No. 38354 be affirmed in all respects.

Respectfully submitted,

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#### **CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of this document was filed electronically in compliance with Travis County Local Rule 15.3.3. This document was served on all counsel who are deemed to have consented to electronic service. Local Rule 15.5.1. Parties who have not consented to electronic service were served by certified mail, return receipt requested, or hand delivery as indicated below.

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# **APPENDIX**

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|--|
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# TAB A

# Tex. Gov't Code

Sec. 2001.058. HEARING CONDUCTED BY STATE OFFICE OF ADMINISTRATIVE HEARINGS.

- (e) A state agency may change a finding of fact or conclusion of law made by the administrative law judge, or may vacate or modify an order issued by the administrative judge, only if the agency determines:
  - (1) that the administrative law judge did not properly apply or interpret applicable law, agency rules, written policies provided under Subsection (c), or prior administrative decisions;
  - (2) that a prior administrative decision on which the administrative law judge relied is incorrect or should be changed; or
  - (3) that a technical error in a finding of fact should be changed. The agency shall state in writing the specific reason and legal basis for a change made under this subsection.

Sec. 2003.049. UTILITY DIVISION.

- (g) Notwithstanding Section 2001.058, the commission may change a finding of fact or conclusion of law made by the administrative law judge or vacate or modify an order issued by the administrative law judge only if the commission:
  - (1) determines that the administrative law judge:
    - (A) did not properly apply or interpret applicable law, commission rules or policies, or prior administrative decisions; or
    - (B) issued a finding of fact that is not supported by a preponderance of the evidence; or
  - (2) determines that a commission policy or a prior administrative decision on which the administrative law judge relied is incorrect or should be changed.
- (h) The commission shall state in writing the specific reason and legal basis for its determination under Subsection (g).

Sec. 2001.174. REVIEW UNDER SUBSTANTIAL EVIDENCE RULE OR UNDEFINED SCOPE OF REVIEW.

If the law authorizes review of a decision in a contested case under the substantial evidence rule or if the law does not define the scope of judicial review, a court may not substitute its judgment for the judgment of the state agency on the weight of the evidence on questions committed to agency discretion but:

- (1) may affirm the agency decision in whole or in part; and
- (2) shall reverse or remand the case for further proceedings if substantial rights of the appellant have been prejudiced because the administrative findings, inferences, conclusions, or decisions are:
  - (A) in violation of a constitutional or statutory provision;
  - (B) in excess of the agency's statutory authority;
  - (C) made through unlawful procedure;
  - (D) affected by other error of law;
  - (E) not reasonably supported by substantial evidence considering the reliable and probative evidence in the record as a whole; or
  - (F) arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion.

# Tex. Util. Code

# Sec. 12.202. PUBLIC PARTICIPATION.

- (a) The commission shall develop and implement policies that provide the public with a reasonable opportunity to appear before the commission and to speak on any issue under the jurisdiction of the commission.
- (b) The commission shall comply with federal and state laws related to program and facility accessibility.
- (c) The commission shall prepare and maintain a written plan that describes how a person who does not speak English may be provided reasonable access to the commission's programs and services.

# Sec. 37.053. APPLICATION FOR CERTIFICATE.

- (a) An electric utility or other person that wants to obtain or amend a certificate must submit an application to the commission.
- (b) The applicant shall file with the commission evidence the commission requires to show the applicant has received the consent, franchise, or permit required by the proper municipal or other public authority.

#### Sec. 37.054 NOTICE AND HEARING ON APPLICATION.

- (a) When an application for a certificate is filed, the commission shall:
  - (1) give notice of the application to interested parties; and
  - (2) if requested:
    - (A) set a time and place for a hearing; and

- (B) give notice of the hearing.
- (b) A person or electric cooperative interested in the application may intervene at the hearing.

#### 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; 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.

## Sec. 39.904. GOAL FOR RENEWABLE ENERGY.

- (g) The commission, after consultation with each appropriate independent organization, electric reliability council, or regional transmission organization:
  - (1) shall designate competitive renewable energy zones throughout this state in areas in which renewable energy resources and suitable land areas are sufficient to develop generating capacity from renewable energy technologies;

- (2) shall develop a plan to construct transmission capacity necessary to deliver to electric customers, in a manner that is most beneficial and cost-effective to the customers, the electric output from renewable energy technologies in the competitive renewable energy zones; and
- (3) shall consider the level of financial commitment by generators for each competitive renewable energy zone in determining whether to designate an area as a competitive renewable energy zone and whether to grant a certificate of convenience and necessity.
- (h) In considering an application for a certificate of public convenience and necessity for a transmission project intended to serve a competitive renewable energy zone, the commission is not required to consider the factors provided by Sections 37.056(c)(1) and (2).

# 16 Tex. Admin. Code

Sec. 22.52

- (a) Notice in electric licensing proceedings. In all electric licensing proceedings except minor boundary changes, the applicant shall give notice in the following ways:
  - (1) Applicant shall publish notice once of the applicant's intent to secure a certificate of convenience and necessity in a newspaper having general circulation in the county or counties where a certificate of convenience and necessity is being requested, no later than the week after the application is filed with the commission. This notice shall identify the commission's docket number and the style assigned to the case by the Central Records Division. In electric transmission line cases, the applicant shall obtain the docket number and style no earlier than 25 days prior to making the application by filing a preliminary pleading requesting a docket assignment. The notice shall identify in general terms the type of facility if applicable, and the estimated expense associated with the project. The notice shall describe all routes without designating a preferred route or otherwise suggesting that a particular route is more or less likely to be selected than one of the other routes.

Sec. 22.71

- (j) Filing deadlines for documents addressed to the commissioners.
  - (1) Except as provided in paragraph (2) of this subsection, all documents from parties addressed to the commissioners relating to any proceeding that

has been placed on the agenda of an open meeting shall be filed with the commission filing clerk no later than seven days prior to the open meeting at which the proceeding will be considered provided that no party is prejudiced by the timing of the filing of the documents. Documents that are not filed before the deadline and do not meet one of the exceptions in paragraph (2) of this subsection, will be considered untimely filed, and may not be reviewed by the commissioners in their open meeting preparations. (2) The deadline established in paragraph (1) of this subsection does not apply if:

- (A) The documents have been specifically requested by one of the commissioners;
- (B) The parties are negotiating and such negotiation requires the late filing of documents; or
- (C) Good cause for the late filing exists. Good cause must clearly appear from specific facts shown by written pleading that compliance with the deadline was not reasonably possible and that failure to meet the deadline was not the result of the negligence of the party. The finding of good cause lies within the discretion of the commission.
- (3) Documents filed under paragraph (2) of this subsection shall be served on all parties by hand delivery, facsimile transmission, or by overnight courier delivery

Sec. 22.262

- (a) Commission Action. The commission may change a finding of fact or conclusion of law made by the administrative law judge or vacate or modify an order issued by the administrative law judge only if the commission:
  - (1) determines that the administrative law judge:
    - (A) did not properly apply or interpret applicable law, commission rules or policies, or prior administrative decisions; or
    - (B) issued a finding of fact that is not supported by a preponderance of the evidence; or
  - (2) determines that a commission policy or a prior administrative decision on which the administrative law judge relied is incorrect or should be changed.
- (b) Reasons to Be in Writing. The commission shall state in writing the specific reason and legal basis for its determination under subsection (a) of this section.

# Sec. 25.101 (b) (3)

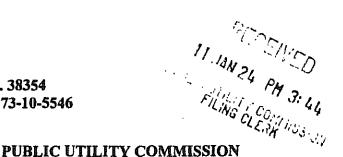
- (B) Routing: An application for a new transmission line shall address the criteria in PURA §37.056(c) and considering those criteria, engineering constraints, and costs, the line shall be routed to the extent reasonable to moderate the impact on the affected community and landowners unless grid reliability 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 utilize existing compatible rights-of-way, including the use of vacant positions on existing multiple-circuit transmission lines;
  - (ii) whether the routes parallel existing compatible rights-of-way; (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.
  - (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.

#### Sec. 25.174

- (d) Certificates of convenience and necessity.
  - (1) Not later than one year after a commission final order designating a CREZ, each TSP selected to build and own transmission facilities for that CREZ shall file all required CREZ Certificate of Convenience and Necessity (CCN) applications. The commission may grant an extension to this deadline for good cause. The commission may establish a filing schedule for the CCN applications.
  - (2) A CCN application for a transmission project intended to serve a CREZ need not address the criteria in PURA §37.056(c)(1) and (2).

# TAB B





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OF TEXAS

#### **ORDER**

This Order addresses the application of LCRA Transmission Services Company to amend its certificate of convenience and necessity (CCN) to include a new competitive-renewable-energy-zone (CREZ) double-circuit 345-kV transmission line from the new McCamey D station, to be located in Schleicher County, to the existing Kendall station, located in Kendall County.

On December 16, 2010, the State Office of Administrative Hearings (SOAH) administrative law judges (ALJs) issued a proposal for decision (PFD) recommending that LCRA's application be granted. The ALJs recommended that the Commission adopt Staff's MK15 Modified route. However, based upon a weighing of the applicable factors set out in PURA § 37.056 and P.U.C. SUBST. R. 25.101, the Commission determines that route MK63, as modified by this Order, better balances the factors of PURA<sup>1</sup> § 37.056 and P.U.C. SUBST. R. 25.101. Consequently, the Commission adopts the PFD, including findings of fact and conclusions of law, except to the extent the PFD is inconsistent with this Order.

 $<sup>^{\</sup>rm I}$  Public Utility Regulatory Act, Tex. UTIL. CODE ANN. §§ 11.001 - 66.016 (Vernon 2007 & Supp. 2009) (PURA).

#### I. Discussion

The Commission has chosen route MK63, as modified by this Order, rather than Staff's MK15 Modified because the Commission finds in the area around Junction and Kerrville, it is more desirable to parallel or closely follow Interstate 10 (I-10) rather than cutting through less developed land. Particularly, in this study area, the Commission finds that I-10 is a more compatible right-of-way for paralleling purposes than the alternative paralleling opportunities available. To reflect that the Commission has chosen a modified version of route MK63 rather than Staff's MK15 Modified, findings of fact 27, 28, 29, 31, 111, 112, 118, 130, and 139 have been deleted, findings of fact 24-26, 30, 33, 48, 49, 55, 83, 92, 93, 94, 100, 108, 113-117, 120, 122-125, and 144 have been modified, findings of fact 52a and 118a have been added, and conclusions of law 9 and 10 have been modified.

The Commission has modified MK63 in the vicinity immediately south of the Kimball County Airport by moving link Y11 as far south as safely and reliably possible using above ground construction while still affecting only noticed landowners. Additionally, the Commission has substituted links c14c and c18aa for links Y22 and Y22a in order to reduce the number of habitable structures affected as the line approaches the Kendall station. To address the modifications the Commission made to route MK63, findings of fact 159-161 were added.

In the PFD, the ALJs recommended that monopoles be used in areas with denser populations. The Commission therefore finds that it is reasonable for LCRA to use monopoles within the City of Kerrville and extending to the limits of its extraterritorial jurisdiction, and within the City of Junction and extending one mile beyond its municipal limits, as those cities' boundaries exist as of January 20, 2011. Because of concerns regarding the aesthetic impacts of the project within the cities of Junction and Kerrville, it is also reasonable for LCRA to work with both the cities of Junction and Kerrville and affected landowners within each of those cities to reach agreement on the material and type of structure used, as well as the spacing and height of the structures. To reflect the Commission's decision to use monopoles in and around Kerrville and Junction, as well as the Commission decision that LCRA shall work with the cities of Junction and Kerrville and affected landowners within each of those cities regarding the aesthetic impact of the project, finding of fact 31a has been added.

Finding of fact 157 has been deleted, as it was unnecessary, and finding of fact 158 was added to reflect the Commission's decisions regarding recommendations and comments made by the Texas Parks and Wildlife Department. Finally, finding of fact 134 was modified as it contained language which was unnecessary.

To reflect corrections the ALJs made after the issuance of the proposal for decision, findings of fact 58 and 59 have been deleted, and finding of fact 103 has been modified.<sup>2</sup>

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

# II. Findings of Fact

# Procedural History, Notice, Jurisdiction, and Project Background

- LCRA Transmission Services Corporation is a non-profit corporation providing service under Certificate of Convenience and Necessity (CCN) No. 30110.
- 2. On July 28, 2010, LCRA filed an application with the Public Utility Commission of Texas to amend its CCN to include the McCamey D-to-Kendall-to-Gillespie competitive-renewable-energy-zone (CREZ) 345-kV transmission line project. The two lines that comprised this project, McCamey D-to-Kendall, and Kendall-to-Gillespie, were identified by ERCOT in its CREZ transmission optimization study (CTO study), and originally assigned to LCRA to construct as a priority project in Commission Staff's Petition for the Selection of Entities Responsible for Transmission Improvements Necessary to Deliver Renewable Energy from Competitive Renewable Energy Zones, Docket No. 35665, Order on Rehearing (May 15, 2009).
- 3. On December 1, 2010, the Commission determined that the Kendall-to-Gillespie portion of the transmission line would be replaced with a cost-effective alternative that does not require the construction of a transmission line between the Kendall and Gillespie substations at this time.
- 4. LCRA's double-circuit McCamey D-to-Kendall preferred route and each of the other 59 proposed alternative McCamey D-to-Kendall routes extend from LCRA's approved

<sup>&</sup>lt;sup>2</sup> Letter from the Wendy K. L. Harvel, Administrative Law Judge, to Stephen Journeay, Director of Commission Advising and Docket Management (Jan. 5, 2011).

McCamey D station (to be renamed Big Hill station), located in northern Schleicher County, to the existing Kendall station in western Kendall County. The alternative McCamey D-to-Kendall routes proceed generally in a northwesterly to southeasterly direction, in multiple varied corridors. This line may be located in portions of Schleicher, Menard, Mason, Sutton, Kimble, Kerr, Gillespie, and Kendall counties, depending on the route selected.

- 5. LCRA filed 60 alternative routes. The links in the application can be combined to form over 20,000 different forward progressing routes.
- 6. Typical structure heights are expected to be approximately 105-185 feet above the ground surface, depending on the type of structures used.
- 7. LCRA will install two 345-kV circuits on the transmission line.
- 8. LCRA will build and own the new McCamey D (Big Hill) station for the project, which station will accommodate both the project proposed in this docket and another of its CREZ priority projects (Twin Buttes-to-McCamey D 345-kV line), as well as another CREZ project of South Texas Electric Cooperative, Inc. (McCamey C-to-McCamey D 345-kV line) and future wind generation interconnect facilities to be constructed and owned by Electric Transmission Texas at the collection stations associated with the McCamey D station.
- 9. LCRA owns the existing Kendall station, at which additional equipment will be installed to accommodate the termination of the new 345-kV transmission lines for this project.
- 10. Written direct notice of the application was mailed on July 28, 2010, to each owner of land whose property would be directly affected by the proposed transmission line.
- 11. Written direct notice was mailed to several directly-affected landowners whose names had not appeared on LCRA's original list.
- 12. On July 28, 2010, LCRA also mailed written direct notice of the application to additional area landowners who might be affected by various potential routing configurations described in the application and LCRA's direct testimony.

- 13. Written notice was mailed on July 28, 2010 to the municipalities of Boerne, Comfort, Eldorado, Sonora, Menard, Junction, Mason, Harper, Fredericksburg, Ingram, and Kerrville, and to county officials of Schleicher, Sutton, Menard, Kimble, Mason, Gillespie, Kerr, and Kendall counties.
- 14. Written notice was mailed on July 28, 2010, to nine neighboring utilities providing electric utility service, specifically Bandera Electric Cooperative, Central Texas Electric Cooperative, Pedernales Electric Cooperative, Southwest Texas Electric Cooperative, Inc., American Electric Power Texas North Company, Cap Rock Energy Corporation, City of Fredericksburg, Kerrville Public Utility Board, and City of Mason.
- 15. Notice of the application was published in the following newspapers: San Angelo Standard Times, Eldorado Success, Junction Eagle, Mason County News, Boerne Star and Record, Fredericksburg Standard, Comfort News, San Antonio Express-News, Austin American-Statesman, Devil's River News, Kerrville Daily Times, Menard News & Messenger, West Kerr Current, and Harper News.

#### Material Deficiencies

16. No material deficiencies exist in the application.

#### CREZ Priority Transmission Plan

- 17. The application is for a CREZ priority project.
- 18. The project will accomplish the intended results for the CREZ priority project between the McCamey D and Kendall stations.
- 19. In addition, the project will also provide increased transmission support to meet growing needs in Central Texas and the Hill Country.

#### Community Values

20. To address and consider community values, LCRA conducted 20 public meetings on May 4, 2009, May 5, 2009, May 7, 2009, May 11, 2009, May 12, 2009, and May 14, 2009. In addition, LCRA conducted public meetings on February 15 and February 16, 17, 18, 22, 23, and 24, 2010.

- 21. LCRA considered expressions of community values in a review of the questionnaires, letters, meetings, phone calls, and other public input it has received. LCRA received additional information about community values at the technical conference held on September 1, 2010, and at the settlement conferences it held on September 20, 21, and 22, 2010.
- 22. Based on input from the open houses and throughout the proceeding, strong community values included: avoiding the Texas Hill Country; reducing the effect of the line on habitable structures, particularly in developed areas; reducing the effect on rural residential subdivisions; and building the line with monopoles.
- 23. The community values of avoiding habitable structures in developed areas and avoiding the Hill Country are competing values.
- 24. MK63 parallels roadways for much of its distance, thereby avoiding much of the Hill Country.
- 25. Where MK63 parallels I-10, it does not cut a new path through the heart of the Hill Country. I-10 has already cut through the area and MK63 will not cut an entirely new corridor through the area.
- 26. MK63 parallels right-of-way (ROW) for over 59 percent of its length.
- 27. Deleted.
- 28. Deleted.
- 29. Deleted.
- 30. MK63 as modified by this Order provides the best balance between the community values of avoiding the Hill Country and avoiding habitable structures and cities.
- 31. Deleted.
- 31a. It is reasonable for LCRA to use monopoles within the City of Kerrville and extending to the limits of its extraterritorial jurisdiction, and within the City of Junction and extending one mile beyond its municipal limits, as those cities' boundaries exist as of January 20, 2011. It is also reasonable for LCRA to work with both the cities of Junction

and Kerrville and affected landowners within each of those cities to reach agreement on the material and type of structure used, as well as the spacing and height of the structures.

#### Recreational and Park Areas

- 32. Avoiding parks and recreational areas was a consideration in designing the routes proposed in the application. PBS&J reviewed U.S. Geological Survey topographic maps, Texas Department of Transportation (TxDOT) county highway maps and federal, state, and local maps, the Texas Parks and Wildlife Department's (TPWD) "Texas Outdoor Recreation Inventory," the Texas Outdoor Recreation Plan, recent aerial photography, and conducted a limited field reconnaissance.
- 33. MK13 and Staff MK15 Modified each have one park or recreation area located within 1,000 feet of the centerline. MK32 and MK33 run within 1,000 feet of six and seven parks or recreation areas, respectively. MK63 has 7 parks or recreation areas located within 1,000 feet of the centerline.
- 34. TPWD is the owner and operator of the 16.1 acre Old Tunnel Wildlife Management Area (Old Tunnel WMA), located in Kendall County. The Old Tunnel WMA is comprised of an abandoned railroad tunnel and includes a bat colony of up to three million Brazilian free-tailed bats and three thousand cave myotis. The Old Tunnel WMA includes nature trails for hiking and bird watching, educational programs, bat watching, and guided nature tours. TPWD estimates that 21,324 visitors visited the Old Tunnel WMA to watch bats emerge from the tunnel. TPWD estimates the annual economic benefit to the region of at least \$748,000.
- 35. The line should avoid the Old Tunnel WMA bat colony.
- 36. The Texas Historical Commission (THC) owns and operates the Fort McKavett State Historic Site in Menard County, Texas (Fort McKavett), one of the best preserved and most intact examples of a fort from the Texas Indian Wars. The fort is a State Historic Site, as well as a National Historic District listed on the National Register of Historic Places. Fort McKavett is part of TPWD's Great Texas Wildlife Trails, as well as the THC's Texas Forts Trail. The Fort McKavett State Historical Site is also designated a riparian conservation area.

- 37. For defensive reasons, Fort McKavett was built between 75 and 100 feet above the surrounding terrain. Transmission towers of up to 180 feet in height may be easily visible from the grounds of the fort. The towers would range from 1.18 miles (link b16b), 1.26 miles (links Z1 and Z2), and 1.55 miles (link b17b) from the fort. The fort remains isolated from modern development, with pristine views in all directions; the view from the fort is much as it was in the mid-nineteenth century. The fort hosts living history events, star parties, Boy Scout functions, and visitor tours throughout the year. Transmission towers of up to 180 feet in height would directly and negatively impact those view sheds from the fort, and would likewise negatively impact the fort's historic character, its isolation, and the overall appeal of the site.
- 38. Camp Sol Mayer is a 300-acre Boy Scout camp with 18 permanent buildings. Link b17b would cross the southwest corner of the camp, passing near several camping areas and near where the camp's horses are maintained. ROW clearing for the transmission line on the southwest portion of the camp would eliminate many trees that are along the western boundary line and the San Saba River. The camp would also be impacted by links Z1 and Z2, which are both in close proximity to the camp.

#### <u>Aesthetics</u>

- 39. "Aesthetics" refers to the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities. Aesthetic values considered from a public standpoint in the environmental assessment and alternative route analysis (EA) include topographical variation, prominence of water in the landscape, vegetation variety, diversity of scenic elements, degree of human development or alteration, and overall uniqueness of the scenic environment compared to the larger region.
- 40. The project area reflects overall a medium to high level of aesthetic value for the region. The eastern portion of the study area, located in the Hill Country, is within an area of the state noted for its scenic beauty and characterized by impressive topographical relief, vegetation and wildflowers, abundant wildlife, and plateaus. The presence of various large creeks and rivers present some viewscapes of high aesthetic value. There are also a number of designated routes or trails, and scenic overlooks and rest areas, within the study area that emphasize the Hill Country's natural beauty and other unique attractions.

- 41. The level of human impact to the study area is relatively high, due to the extensive agricultural and oil and gas operations, the development of numerous cities, and the development of rural subdivisions.
- 42. All of the 60 primary alternative routes for the project have some amount of ROW within the foreground visual zone of U.S. and state highways, in part a direct result of the deliberate inclusion of alternative routes paralleling U.S. and state highways.
- 43. A large number of parks and recreation areas are located within the study area. Only a small portion of the routes' ROW would be located within the foreground visual zone of parks and recreation areas.
- 44. The alternative routes that follow all or portions of I-10 will be much more visible to more people than any of the alternative routes away from I-10.
- 45. Construction of the project will likely have both temporary and permanent negative aesthetic impacts, including views of ongoing construction, the cleared ROW, and the transmission facilities.
- 46. Wherever monopole structures are approved, LCRA will have the flexibility in design to deploy both steel and spun concrete poles where appropriate for each to produce a costeffective result.
- 47. Both lattice towers and monopoles will fit within a 100-foot ROW, which is as narrow as the ROW for a double-circuit 345-kV transmission line can be made.
- 48. MK13 has a length of 8.46 miles visible from U.S. and State highways. Staff MK15 Modified would be visible for a length of 49.11 miles from U.S. and State highways. MK33 has a length of 157.87 miles that would be visible along U.S. and State highways. MK63 will be visible for a length of 86.24 miles from U.S. and State highways.
- 49. MK33 has the highest visibility from parks or recreation areas with a length of 10 miles visible from state parks and recreation areas. MK13 is visible for a length of 4.24 miles from state parks and recreation areas. Staff MK15 Modified is visible for a length of 4.43 miles from parks or recreation areas. MK63 is visible for a length of 8.12 miles from parks or recreation areas.

- 50. The aesthetic impact of the line is largely a function of who is viewing it from where.
- 51. The central project area contains large reacts of relatively unfragmented and undeveloped land. The natural beauty of this part of the project area includes scenic vistas, meadows, and oak-lined creeks and rivers.
- 52. I-10 is a means of transportation across the state, where aesthetically pleasing views are incidental. Travelers and anyone in the proximity of I-10 in the project area will see commercial development including gas stations, convenience stores, chain and fast-food restaurants, strip malls, traffic including heavy tractor-trailers, car lots, power lines, roadways including feeder roads, and all of the development associated with small towns, larger municipalities, and cities like San Antonio. It is far more likely that a 345-kV line will be lost in the visual foreground along I-10 than if it were run along a central or northern route through what is undoubtedly the aesthetically pleasing and relatively undeveloped Texas Hill Country.
- 52a. The Commission finds that in this study area, following I-10 along MK63 is a more compatible right-of-way for paralleling purposes than the alternative paralleling opportunities available.

### Archeological and Cultural Resources

- 53. Much of the study area has a high probability of containing previously unrecorded cultural resource sites. PBS&J's cultural resources evaluation was based on known data regarding sites in the area, the density of the sites, and the National Register of Historic Places (NRHP) and State Archaeological Landmark potential for the sites.
- 54. Of the 60 primary alternative routes evaluated for the project, 54 cross one or more recorded historic or prehistoric sites, with four routes crossing at least 15 or more sites. All 60 routes have additional recorded historic or prehistoric sites within 1,000 feet of the ROW centerline, with numbers ranging between six and 46 sites. Of the primary alternative routes, 22 cross one NRHP-listed or determined eligible site, and the other 38 cross no such sites. Exactly half of the primary alternative routes have ROW centerline within 1,000 feet of one or more additional NRHP-listed or determined eligible sites, ranging from one to six sites, and the other 30 have none. The number of recorded

- historical and archaeological sites within 1,000 feet of the centerline of the routes varies from eight to 70 sites.
- 55. There are 22 known or recorded historical or archeological sites either crossed or located within 1,000 feet of the centerline on MK63.
- 56. Mitigation and construction practices are available to reduce or eliminate impacts to cultural resources sites. LCRA planned appropriately for addressing any sites encountered during construction.
- 57. None of the route segments proposed in this case cross Fort McKavett.
- 58. Deleted.
- 59. Deleted.
- 60. Routes parallel to I-10 include commercial and residential development normally associated with proximity to an interstate highway system. Historical and cultural sites in these areas are more likely to have been disturbed than those in the central and northern project areas.

### General, Surveys, and Mitigation

- 61. LCRA's consultant, PBS&J, examined a wide range of environmental information in its EA, which was researched and analyzed through a variety of methods and by representatives of various environmental disciplines.
- 62. LCRA represents that all routes presented in the application (and all segments that form those routes) provide environmentally acceptable alternatives.
- 63. LCRA's preferred route (MK13) was ranked first from an ecological standpoint in the EA.
- 64. LCRA avoided specific known occupied habitat locations in the process of delineating preliminary route links and alternative routes.
- 65. LCRA has undertaken a permitting process under Section 10 of the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS) to consider impacts to federally listed species and their habitat.

- Animal species potentially occurring along the proposed transmission routes include, but are not limited to, the federally listed (endangered) black-capped vireo and golden-cheeked warbler, and the state-listed (threatened) zone-tailed hawk, bald eagle, Texas tortoise, and Texas horned lizard.
- 67. The EA lists all threatened or endangered species of potential occurrence in the study area based on information from USFWS, TPWD, and TPWD's Natural Diversity Database (TXNDD).
- 68. Once a route is selected, LCRA will account for the location of endangered or threatened species on individual landowners' property or additional known occupied habitat by routing adjustments, construction procedures and techniques, and mitigation. LCRA shall consult with the USFWS for known occupied or potential habitat for endangered species.
- 69. LCRA will use a habitat conservation plan (HCP) development and Endangered Species Act Section 10(a) permitting process that is ongoing with the USFWS.
- 70. Prior to construction, an assessment will be made to verify whether any habitat for endangered or threatened species is present along the route that is approved. LCRA will seek a permit from USFWS to take endangered species habitat.
- 71. Different techniques are available to accommodate all federally-listed endangered species identified in the study area. If a route passes through an area containing plant species composition and configuration favorable to a protected species, or if known individuals of the species are in the area, LCRA will adjust the route in minor ways to avoid higher quality blocks of habitat; transmission towers will be placed in existing openings to limit further clearing for ROW access; and permits will be sought for appropriate clearing permissions along with possible mitigation.
- 72. LCRA will undertake mitigation projects to protect the habitats of warbler, vireo and other species.

### Fragmentation and Oak Wilt

- 73. Wildlife habitat throughout the study area is fragmented by land use impacts such as roads, brush clearing associated with ranching and agricultural activities, pipelines, electric distribution lines, and other activities normally engaged in by landowners in the study area.
- 74. The project will not jeopardize the continued existence of the warbler or vireo.
- 75. Staff concluded that any route selected in this case will affect the environmental integrity of the study area.
- 76. Due to lack of access to private property, the absence of TXNDD records at a specific site within the project area does not mean that the species does not occur there. Most TXNDD records are gathered from publicly accessible lands, such as parks and wildlife management areas and highway ROW. Most of the impacted project area consists of privately owned ranch land. Endangered species and their habitat on private lands may not be reflected in TXNDD records due to the lack of access and state laws governing the collection and dissemination of biological information from private lands.
- 77. Major highway ROW comprises the largest corridors of habitat fragmentation in the project area, particularly the I-10 corridor. Avoiding additional fragmentation of wildlife habitat is one of the most important environmental considerations for the project. Land fragmentation, and its consequence, is one of the greatest statewide challenges to wildlife management and conservation in Texas.
- 78. The portion of the project area north of I-10 contains some of the largest blocks of unfragmented wildlife habitat on the Edwards Plateau.
- 79. The I-10 corridor is fragmented to a much greater extent than the central routes or northern routes.
- 80. MK13 and all of the links contributing to the central routes cut through the middle section of lands managed by the Doss-Harper Wildlife Management Association.

  Landowners who are members of the Doss-Harper Wildlife Management Association manage their wildlife resources in a cooperative that helps them overcome some of the

- inefficiencies common to land fragmentation. MK13 would run through the center of the Doss-Harper WMA for approximately 12 miles.
- 81. Additional fragmentation of wildlife habitat is expected to spread oak wilt disease. Oak wilt is caused by a fungus that clogs water-conducting vessels in infected oak trees, causing them to wilt and die. Oak wilt can be spread through the roots of oak trees. Oak wilt can also be spread much greater distances by sap-feeding beetles that carry spores from infected trees and deposit them on "wounds" in uninfected trees. Once a new tree is infected, the disease will spread through root contact to other nearby trees at a rate of approximately 75 feet per year.
- 82. The central portion of the Hill Country is currently impacted by very little oak wilt. Oak trees in the project are susceptible to oak wilt as a result of cutting and pruning necessary to clear and maintain the ROW. It is estimated that approximately 700 to 1,600 live oaks per mile will be removed and another 200-500 live oaks per mile will need to be pruned.
- 83. The selection of MK13 or a central or northern route is expected to spread oak wilt more than a route that uses the I-10 corridor such as MK32, MK33, MK63, or Staff MK15 Modified.

### Warbler and Vireo

- 84. Potential habitat for the vireo and warbler is likely to be encountered along most of the routes. Data provided by Loomis Partners, Inc. documents that all of the routes cross potential warbler habitat. There are known occurrences of the vireo and warbler along or near segments proposed as part of route alternatives for the project.
- 85. Without ground inspection of particular ecological areas, it is difficult to impossible to determine the presence of suitable habitat for vireo. Vireo habitat consists of patchy shrubs interspersed with open areas and cannot be identified by aerial photography.
- 86. Inhabited vireo habitat occurs throughout the area and along most, if not all, routes. It is unlikely that potential habitat and actual vireo can be avoided as part of the certification process.

- 87. Based on the Commission's past practices and the work of utilities with USFWS, accommodations for vireo can be made through structure placement, ROW clearance, and other forms of mitigation.
- 88. Due to species composition and configuration, it is possible to identify and map potential warbler habitat with some accuracy through certain types of aerial photography.

  Attempts can then be made to minimize and avoid potential habitat.
- 89. Warbler populations are not inconsistent with either existing or newly-constructed transmission line ROW.
- 90. Transmission line projects in Texas have been successfully constructed through known occupied habitat for warbler and vireo.
- 91. The project will have some acceptable impact on the vireo and warbler. LCRA can institute avoidance and mitigation efforts to minimize any impact on these species.

### Creeks, Streams and Rivers

- 92. Length parallel to streams and rivers is a highly significant environmental factor. MK13 has 1.34 miles parallel to rivers and streams. MK32 and MK33 parallel 1.93 and 1.82 miles, respectively. Staff MK15 Modified parallels streams and rivers for 2.46 miles. The P-line routes range between 3.49 and 3.73 miles. MK 63 parallels streams and rivers for 2.84 miles.
- 93. Staff MK15 Modified and MK32 have two river crossings. MK13 and MK33 have four river crossings. MK22, MK23, and MK24 have five river crossings each. MK63 has 4 river crossings.
- 94. MK13 and MK33 have 144 and 143 stream crossings, respectively. MK32 has 154 stream crossings. Staff MK15 Modified has 160 stream crossings. MK22, MK23, and MK24 cross between 186 and 190 streams each. MK63 has 142 stream crossings.
- 95. Creek and river crossings can be spanned by the line in a manner that is technically feasible and minimally disruptive of natural resources in the surrounding area. For construction near rivers and creeks, LCRA will implement appropriate erosion control measures as described in sections 1.5, 5.1.2, 5.1.3, and 5.1.4 of the EA. LCRA will also

- develop and implement a storm water pollution prevention plan (SWPPP) to prevent silting of bodies of water, including creeks, rivers, and springs. The SWPPP will be in effect during all phases of construction and until re-growth is achieved.
- 96. TPWD strongly recommends that the project avoid any adverse impacts to ecologically significant stream segments (ESSS).
- 97. All of the route options would cross at least one ESSS and many of the routes will cross more than one ESSS, some at more sensitive locations than others.
- 98. LCRA expects no adverse impact to ESSSs in light of LCRA's proposals for spanning creeks and other measures that are intended to be minimally disruptive of natural resources in the surrounding area.
- 99. All routes using links b21c or z4, b33 or z5, b34, or b35a, will cross the James River ESSS, and the majority of central routes use one of these links. All routes that use links b44, b50b, b52, or O3 would cross the Pedernales River ESSS (most of the routes use one of these links). MK13 crosses both the James River on link b33 and the Pedernales River on link b50b.
- 100. Staff MK15 Modified, MK63, MK32, and MK33 do not cross the James or Pedernales Rivers. These routes contain a single ESSS crossing—the Fessenden Branch crossing on link b29d, which is at a previously disturbed location, because the stream is already crossed by I-10.
- 101. Potential impacts to mussel species are expected to be minimal. LCRA's construction techniques are adequate to deal with potential impacts to mussel species.
- 102. Although LCRA can safely span creeks and streams, due to potential risks to mussel sanctuaries, karstic formations, and ESSS, the P-lines, MK13, and central routes are less attractive from an environmental perspective than routes that parallel I-10.

### Old Tunnel WMA and Bat Issues

103. The Eckert James River Bat Cave Preserve is located on MK13, with one of the largest known concentrations of breeding Mexican free-tailed bats located near links b34 and b36.

- 104. The Old Tunnel WMA also has a bat colony located near links A3 and O4. Based on observed flight patterns, the bats at Old Tunnel WMA are expected to fly into the area of the line.
- 105. For link A3 and O4 structure designs, all conductor-to-conductor and conductor-to-tower clearances are well above the recommended clearance of 60 inches, minimizing the risk of electrocution to bats.
- 106. Although there is no evidence regarding bat collisions with the existing 138-kV line near Old Tunnel WMA, there is some scientific evidence that suggests that power lines pose some risk to birds and bats due to subsonic, ultrasonic and ambient noise, and electromagnetic radiation.

### Goal for Renewable Energy

107. The project is necessary to deliver renewable energy generated in the CREZ.

### Engineering Constraints

- 108. MK63 will be constructed in new areas and parallel to existing ROW. New easements will vary from an estimated minimum easement width of 100 feet to an estimated maximum easement width of 160 feet, and these widths are sufficient for all LCRA structure types.
- 109. LCRA will design and construct the proposed transmission line to meet nationally recognized guidelines and specifications, including the applicable version of the National Electrical Safety Code, as well as established regional electric system planning criteria to address various categories of contingency conditions and applicable PUC rules, in order to operate the proposed transmission line in a safe and reliable manner.
- 110. The Kimble County Airport presents a significant engineering constraint when routing to the south.
- 111. Deleted.
- 112. Deleted.
- 113. Link Y11, as filed, is south of the airport, and is part of MK33. It would be located approximately 1,200 to 1,800 feet from the south end of the airport's runway.

- 114. Link Y11, as filed, would run through a flood plain north of the Llano River.
- 115. Link Y11 can be moved to the southern limit of noticed property owners.
- 116. LCRA cannot build a safe and reliable transmission line along link Y11 as filed using above-ground construction.
- 117. Because of the engineering constraints, link Y11 as filed would have to be built underground at the cost of \$54 million for one-half mile, and is prohibitively expensive.
- 118. Deleted.
- 118a. Link Y11, when moved to the southern limit of noticed property owners, can be built safely and reliably at a reasonable cost above-ground.

### Costs, Compatible ROW, and Prudent Avoidance

- 119. LCRA's estimated transmission line costs for all routes range from \$251.8 million to \$406.8 million.
- 120. LCRA's preferred route would cost approximately \$266.4 million. MK33 would cost approximately \$406.8 million. Staff MK15 Modified is estimated to cost \$302.3 million. MK63 is estimated to cost \$360.5 million. The cost of MK63, as modified in this Order, will not include the cost of undergrounding along link Y11, which costs were included in MK63 as filed.
- 121. The lower cost of MK13 does not outweigh the benefits associated with paralleling more ROW.
- 122. MK63 parallels compatible ROW for more than 59 percent of its length and avoids much ranch land located in the central part of the study area.
- 123. MK 63 uses links b84 and b86 along which one landowner has consented to the line.
- 124. MK63 affects 134 habitable structures.
- 125. MK63 complies with the Commission's policy on prudent avoidance.
- 126. LCRA's proposed alternative routes reflect reasonable investments of money and effort in order to limit exposure to electric and magnetic fields (EMF).

- 127. The project design incorporates, where technically feasible, optimal phasing arrangements and ground clearance heights that result in lower EMF levels, which is consistent with prudent avoidance from an engineering perspective.
- 128. The EMF levels from this project are within the range of the fields that people can experience every day in normal living and working environments and are substantially below the EMF exposure limits adopted by recognized international organizations.
- 129. Based on the current scientific research, there is no reliable scientific basis to conclude that exposure to power frequency EMF from the line will cause or contribute to adverse health effects in people or animals.

### Alternative Routes with Less Impact

- 130. Deleted.
- 131. LCRA identified landowner-proposed route modifications.
- 132. LCRA made some modifications before filing the application.
- 133. As part of LCRA's analysis of landowner-proposed segment modifications not incorporated into LCRA's proposed routes, whether proposed by the landowner before or after the CCN application filing, LCRA has provided estimates of the modified route length and cost associated with each of these modifications. This information facilitates the Commission's consideration of these landowner proposals.
- 134. These landowner-requested routing adjustments mapped and reviewed in LCRA's attachment 13 (as supplemented) are generally longer and generally require more angle structures than LCRA's filed routes in those respective locations. These requested adjustments are generally in the same land use/habitat types as the filed routes in those locations and they are feasible adjustments from an environmental standpoint.
- 135. These routing adjustments affect only noticed landowners in a potentially different manner than shown in LCRA's proposed routes and may add length and cost.
- 136. No landowner has offered financial contribution relating to alternative routes or route modifications.

- 137. The Bannwolf modification would reroute link O4 from a northern property boundary through the middle of the property belong to Mr. and Mrs. Nance.
- 138. The Bannwolf modification is not adopted.
- 139. Deleted.

### **Proposed Modifications to CREZ Order**

- 140. LCRA proposes to use bundled Cumberland conductor (2 x 1926.9 aluminum conductor steel-supported/trapezoidal wire (ACSS/TW)) instead of the bundled Merrimack conductor (2x1433 ACSS/TW) that ERCOT assumed in its CTO study.
- 141. Staff and ERCOT recommend the use of the bundled Cumberland conductor.
- 142. LCRA's proposed modification to use the bundled Cumberland conductor is approved.

### Cost Discrepancies

- 143. ERCOT estimated the overnight cost for the project at \$257.56 million and 137 miles in length.
- 144. LCRA's estimated cost for MK63 is \$360.5 million.
- 145. LCRA's estimates include costs not contemplated by ERCOT, including endangered species habitat mitigation, longer routes, complex terrain, constrained paths, and capitalized interest.
- 146. LCRA's estimated construction costs are higher due to maneuvering equipment in rugged terrain and drilling foundations in harder geologic substrates typical in the Hill Country area.
- 147. LCRA's estimated costs are reasonable even though they vary from ERCOT's estimate.

### TPWD Comments and Recommendations

- 148. TPWD provided comments and recommendations regarding the project in a letter dated September 24, 2010 (TPWD letter) and through the testimony of four TPWD witnesses.
- 149. The TPWD letter and evidence addressed issues related to ecology and the environment.

  TPWD did not consider other factors that the Commission and utilities must consider and

- balance in CCN applications, including the numerous routing criteria that involve direct effects on people.
- 150. TPWD concluded that construction of any of the proposed routes would require almost entirely new ROW and take significant amounts of existing wildlife habitat.
- 151. TPWD concluded that routes MK32 and MK33 would have the least adverse impact on fish and wildlife resources.
- 152. TPWD owns and operates the 16.1 acre Old Tunnel WMA in Kendall County, Texas, located within 500 feet of links A3 and O4, the latter of which is part of proposed route MK 22. TPWD opposes all routes that use links A3 or O4 because of the expected negative impact to the public benefits of Old Tunnel WMA, and the Old Tunnel bat colony.
- 153. Once the Commission approves a route, LCRA can access private property and perform a survey of the area, and if permits are necessary, apply for and comply with all permit conditions.
- 154. LCRA does not have access to private property prior to the selection of a route.
- 155. No requirement exists for a particular methodology for assessment of endangered species for the examination by the Commission of the environmental-integrity factor. The Commission's acceptance of the known-habitat analysis is not prohibited by any regulatory requirements.
- 156. LCRA must comply with all applicable environmental laws and regulations governing erosion control, endangered species, storm water prevention, and all other environmental concerns.
- 157. Deleted.
- 158. This order addresses only those TPWD recommendations and comments for which there is record evidence.

### **Modifications to MK63**

159. It is appropriate for LCRA to build the project using route MK63, as modified by this Order.

- 160. In the vicinity immediately south of the Kimball County Airport, it is appropriate for LCRA to move link Y11 as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners. It is not appropriate for this modification to Y11 to affect LCRA's ability to safely and reliably operate the line or the safe use of the Kimball County Airport.
- 161. In the area approaching the Kendall station, it is appropriate that links c14c and c18aa shall be used rather than links Y22 and Y22a.

### III. Conclusions of Law

- 1. LCRA is an electric utility as defined in Public Utility Regulatory Act (PURA) §§11.004 and 31.002(6).
- 2. The Commission has jurisdiction over this matter pursuant to PURA §§14.001, 32.001, 37.051, 37.053, 37.054, 37.056, and 39.203(e).
- 3. LCRA filed its CREZ CCN application in this docket on July 28, 2010, in conformance with the Commission's standard CREZ CCN application form and the Commission's orders in P.U.C. Docket Nos. 33672 and 35665. LCRA's application has met the filing requirements set forth in P.U.C. SUBST. R. § 25.216(g)(2) and (3).
- 4. LCRA provided proper notice of the application in compliance with PURA §37.054 and P.U.C. PROC. R. 22.52(a).
- 5. LCRA's application is sufficient under P.U.C. SUBST. R. 25.216(g)(2) and (3).
- 6. LCRA's notice of its application was adequate.
- 7. SOAH exercised jurisdiction over this docket pursuant to PURA §14.053 and Tex. Gov't Code Ann. §2003.049.
- 8. This docket was processed in accordance with the requirements of PURA and the Administrative Procedure Act, Tex. Gov't Code Ann. Chapter 2001.
- 9. LCRA is entitled to approval of the application, as described in the findings of fact, using MK63 as modified by this Order, taking into consideration the factors set out in PURA § 37.056 and P.U.C. SUBST. R. 25.101.

- 10. MK63, as modified by this Order, complies with all aspects of PURA § 37.056 and P.U.C. SUBST. R. 25.101, including the Commission's policy of prudent avoidance.
- 11. The project, as a CREZ transmission project identified in Docket No. 35665, is exempt under PURA §§ 39.203(e) and 39.904(h) and P.U.C. SUBST. R. 25.174(d)(2) from the requirement of proving that the construction ordered is necessary for the service, accommodation, convenience, or safety of the public and need not address the adequacy of existing service, the need for additional service, the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area, and the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted.
- 12. The proposed project is consistent with the Commission's goals for the CREZ program and P.U.C. SUBST. R. 25.174 in that it provides (1) long-term cost effective solutions consistent with the Final Order in Docket No. 37928, and (2) transmission facilities consistent with ERCOT's recommendations to be constructed as soon as possible to relieve existing and growing constraints in delivering wind generation and placed in service.
- 13. The project is consistent with and in furtherance of the goals and mandates of PURA § 39.904.
- 14. Pursuant to P.U.C. SUBST. R. 25.174(d)(10), the level of financial commitment by generators is sufficient under PURA § 39.904(g)(3) to grant LCRA's application for a CCN in this docket.

### IV. Ordering Paragraphs

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

 LCRA's CCN is amended and LCRA's application to build a new 345-kV double-circuit transmission lines that extend from the McCamey D switching station to the Kendall switching station is approved.

- 2. LCRA shall build the project using route MK63, as modified by this Order. LCRA shall, in the vicinity immediately south of the Kimball County Airport, move lint Y11 as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners. This modification to Y11 shall not affect LCRA's ability to safely and reliably operate the line, nor shall it affect the safe use of the Kimball County Airport. Additionally, as the route approaches the Kendall station, LCRA shall use links c14c and c18aa rather than links y22 and y22a.
- 3. LCRA shall be permitted to monopole if it is more cost effective. In addition, LCRA shall endeavor to use the monopole structures in situations where the right-of-way is extremely constrained, the right-of-way could disproportionately affect a particular landowner, or the cost of the right-of-way acquisition is extremely high.
- 4. LCRA shall use monopoles within the City of Kerrville and extending to the limits of its extraterritorial jurisdiction, and within the City of Junction and extending one mile beyond its municipal limits, as those cities' boundaries exist as of January 20, 2011. LCRA shall work with both the cities of Junction and Kerrville and affected landowners within each of those cities to reach agreement on the material and type of structure used, as well as the spacing and height of the structures. Where the municipality and a landowner disagree as to these issues, the landowner's views shall prevail over the municipality.
- 5. LCRA shall cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the project. Any minor deviations in the approved route shall only directly affect landowners who were sent notice of the transmission line in accordance with P.U.C. PROC. R. 22.52(a)(3) and shall directly affect only those landowners that have agreed to the minor deviation, excluding public rights-of-ways. Any agreed minor deviations shall not delay the project beyond its Commission-required completion date, nor shall any minor deviation add any significant cost to the project.
- 6. LCRA TSC shall be permitted to deviate from the approved route in any instance in which the deviation would be more than a minor deviation, but only if the following two

conditions are met. First, LCRA TSC shall receive consent from all landowners who would be affected by the deviation regardless of whether the affected landowner received notice of or participated in this proceeding. Second, the deviation shall result in a reasonably direct path towards the terminus of the line and not cause an unreasonable increase in cost or delay the project. Unless these two conditions are met, this paragraph does not authorize LCRA TSC to deviate from the approved route except as allowed by the other ordering paragraphs in this Order.

- 7. LCRA shall implement erosion control measures as appropriate. LCRA shall return each affected landowner's property to its original contours and grades unless otherwise agreed to by the landowner or landowners' representatives. LCRA shall not be required to restore original contours and grades where necessary to ensure the safety or stability of the project's structures or the safe operation and maintenance of the line.
- 8. In the event LCRA or its contractors encounter any archaeological artifacts or other cultural resources during construction of the project, LCRA shall cease work immediately in the vicinity of the resource and report the discovery to the THC and take action as directed by the THC.
- 9. LCRA shall follow the procedures outlined in the following publications for protecting raptors: Suggested Practices for Avian Protection on Power Lines, The State of the Art in 2006, Avian Power Line Interaction Committee (APLIC), 2006 and the Avian Protection Plan Guidelines published by APLIC in April 2005.
- 10. LCRA shall install bird diverters at all river crossings.
- 11. LCRA shall use best management practices to minimize the potential impact to migratory birds and threatened or endangered species.
- 12. LCRA shall comply with the requirements of the Migratory Bird Treaty Act in connection with construction and maintenance of the project.
- 13. Once a route is selected, LCRA shall perform a survey of the area, and if permits are necessary, apply for and comply with all permit conditions. LCRA shall account for the location of endangered or threatened species on individual landowners' property or additional known occupied habitat by routing adjustments, construction procedures and

- techniques, and mitigation. LCRA shall consult with the USFWS for known occupied or potential habitat for endangered species.
- 14. LCRA shall use a habitat conservation plan development process and Endangered Species Act Section 10(a) permitting process that is ongoing with the USFWS.
- 15. LCRA shall undertake mitigation projects to protect the habitats of warbler, vireo and other species, and shall institute avoidance and mitigation efforts to minimize impact on these species.
- 16. LCRA shall minimize the amount of flora and fauna disturbed during construction of the project, except to the extent necessary to establish appropriate ROW clearance for the transmission line. LCRA shall re-vegetate using native species considering landowner preferences and avoid adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and USFWS.
- 17. LCRA shall exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides for controlling vegetation within the ROW and that such herbicide use comply with rules and guidelines established in the Federal Insecticide, Fungicide and Rodenticide Act and with the Texas Department of Agriculture regulations.
- 18. For construction near rivers and creeks, LCRA shall implement appropriate erosion control measures as described in sections 1.5, 5.1.2, 5.1.3, and 5.1.4 of the EA. LCRA shall also develop and implement a storm water pollution prevention plan (SWPPP) to prevent silting of bodies of water, including creeks, rivers, and springs. The SWPPP will be in effect during all phases of construction and until re-growth is achieved.
- 19. LCRA shall comply with all applicable environmental laws and regulations governing erosion control, endangered species, storm water prevention, and all other environmental concerns.
- 20. LCRA shall update the reporting of this project on their monthly construction progress report prior to the start of construction to reflect final estimated cost and schedule in accordance with P.U.C. SUBST. R. 25.83(b). In addition, LCRA shall provide final construction costs, with any necessary explanation for cost variance, after completion of

construction and when all charges have been identified. LCRA shall file in Project No. 37858 information pursuant to P.U.C. SUBST. R. 25.216(f) and the order in Docket No. 37928.

- 21. LCRA shall engage in discussions with the Texas Department of Transportation and use its best efforts to reach agreement with the Department to use state right-of-way along the proposed project where it parallels I-10. These discussions shall not unreasonably delay the completion of this project and, in any event, if agreement has not been reached on or before September 1, 2011, then LCRA shall proceed with construction on the proposed project.
- 22. All other motions, requests for entry of specific findings of fact and conclusions of law, and any other requests for general or specific relief, if not expressly granted, are denied.

SIGNED AT AUSTIN, TEXAS the 24th day of Jonuary 2011

PUBLIC UTILITY COMMISSION OF TEXAS

BARRY T. SMITHERMAN, CHAIRMAN

DONNA L. NELSON, COMMISSIONER

KENNETH W. ANDERSON, JR., COMMISSIONER

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# TAB C

### State Office of Administrative Hearings



## Cathleen Parsley Chief Administrative Law Judge

December 16, 2010

TO: Stephen Journeay, Director
Commission Advising and Docket Management
William B. Travis State Office Building
1701 N. Congress, 7th Floor
Austin, Texas 78701

RE: SOAH Docket No. 473-10-5546 PUC Docket No. 38354

Application of LCRA Transmission Services Corporation to Amend its Certificate of Convenience and Necessity for the Proposed Mccamey D to Kendall to Gillespie 345-kV CREZ Transmission Line in Schleicher, Sutton, Menard, Kimble, Mason, Gillespie, Kerr, and Kendall Counties

Enclosed is a copy of the Proposal for Decision (PFD) in the above-referenced case. Please file-stamp and return a copy to the State Office of Administrative Hearings for our records.

Please place this case on an open meeting agenda for the Commissioners' consideration. The jurisdictional deadline in this case is January 24, 2011. It is my understanding that you will be notifying me and the parties of the open meeting date, as well as the deadlines for filing exceptions to the PFD, replies to the exceptions, and requests for oral argument.

Sincerely,

Wendy K.L. Harvel Administrative Law Judge

Enclosure

xc: All Parties of Record

300 West 15th Street Suite 502 Austin, Texas 78701 / P.O. Box 13025 Austin, Texas 78711-3025 512.475.4993 (Main) 512.475.3445 (Docketing) 512.475.4994 (Fax) www.soah.state.tx.us

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### SOAH DOCKET NO. 473-10-5546 PUC DOCKET NO. 38354

| APPL        | ICAT | ON OF LCRA                    | §         | BEFORE THE STATE OFFICE                |
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|             |      | FOR THE PROPOSED              | §         | OF                                     |
|             |      | D TO KENDALL TO               | §         | Or                                     |
|             |      | 345-KV CREZ<br>SION LINE IN   | §         |  |
|             |      | ER, SUTTON, MENARD,           | §         |  |
|             |      | IASON, GILLESPIE, KERR,       | §<br>8    |  |
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Attachment A

### SOAH DOCKET NO. 473-10-5546 PUC DOCKET NO. 38354

| APPLICATION OF LCRA             | § | BEFORE THE STATE OFFICE |
|---------------------------------|---|-------------------------|
| TRANSMISSION SERVICES           | § |                         |
| CORPORATION TO AMEND ITS        | § |                         |
| CERTIFICATE OF CONVENIENCE AND  | § |                         |
| NECESSITY FOR THE PROPOSED      | § |                         |
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| SCHLEICHER, SUTTON, MENARD,     | § |                         |
| KIMBLE, MASON, GILLESPIE, KERR, | § |                         |
| AND KENDALL COUNTIES            | 8 | ADMINISTRATIVE HEARINGS |

### PROPOSAL FOR DECISION

### I. SUMMARY OF CASE AND RECOMMENDATIONS

LCRA Transmission Services Corporation's (LCRA TSC or Company) proposed routes for this Project can be divided into four groups: routes that parallel US Highway 277 and I-10 for all or a significant portion of their length (MK32, MK33); routes that parallel I-10 for a portion of their length but do not parallel Highway 277 (Staff's MK15, MK15, MK61, MK62); routes that run more in the center of the study area (MK13 (LCRA TSC's preferred route) and numerous others); and the northern routes, called "P-Lines" that parallel a portion of a 138-kV transmission line (MK22, MK23, MK24).

The routes that parallel Highway 277 and I-10 are superior environmentally but affect more habitable structures than the central routes. They are also more expensive. The central routes affect fewer habitable structures and are some of the least costly routes proposed, but they cut through undeveloped land in the Texas Hill Country, parallel little existing right-of-way (ROW), and are much poorer environmentally. The P-Line routes are disfavored by LCRA, Staff, and the Texas Parks and Wildlife Department (TPWD). They are longer than many of the routes, perform poor environmentally, and are expensive. Although they parallel an existing 138-kV transmission line, that line is on wooden pole, H frame structures. Much of the easement under that line has significant

shrubbery and growth, and is not a ROW that is as compatible with a 345-kV line as I-10. For those reasons, the P-Lines are not recommended.

The ALJs recommend the selection Staff's MK15. It parallels highways for much of its length, performs better environmentally than routes such as the preferred route MK13 that runs through the center of the study area, is more cost-effective than the routes that parallel Highway 277 before turning east at I-10, and affects fewer habitable structures than the I-10 routes that run through Kerrville. Staff's MK15 also runs north of the Kimble County Airport. Construction along I-10 to the south of the airport would require underground construction, costing \$54 million for a one-half mile portion of the line to be buried, which makes routes paralleling I-10 through the City of Junction cost-prohibitive.

Clear View Alliance's (CVA) proposed route, MK33, is the best route environmentally. It parallels existing highway ROW for almost its entire length. It is, however, the most expensive route at \$406.8 million because it is long, using Highway 277 to move south from the McCamey D substation all the way to I-10 before turning east. It also includes a \$54 million cost to bury the line south of the Kimble County Airport. Were the cost of MK33 not so great, it would be the best routing option proposed, and the ALJs would recommend it. MK32, which deviates from MK33 at Junction to run north of the airport, is more cost-effective at \$349.3 million, but it is still on the upper-end of all routes in terms of cost. MK32 is also an attractive option. With the understanding that cost is a significant factor in the Commission's route selection process, the ALJs recommend Staff's MK15, which parallels I-10 for much of its length but diverts around Junction, with an estimated cost of \$302.3 million. While Staff's route is still more expensive than the preferred route, which is estimated to cost \$266.4 million, it is well within the range of all filed routes. Staff's route parallels I-10 for much of its length, while avoiding the cities of Junction and Kerrville and avoids more habitable structures due to the deviation around Kerrville.

Staff's MK15 does, however, affect the Tierra Linda Ranch subdivision. Tierra Linda is a rural subdivision that has a pipeline easement running through it. Staff's MK15 parallels the pipeline easement roughly through the middle of the subdivision. The affected property owners in

the subdivision participated in the hearing, as did the homeowners' association and property owners who are not directly affected by the line but live in the subdivision. Tierra Linda is opposed to the line running through its subdivision. The alternative to running the line through Tierra Linda is to use either the preferred route, which is poor environmentally, and opposed by numerous intervenors, use a P-Line route, which is disfavored by Staff, LCRA TSC, and TPWD, or continue to parallel I-10 through Kerrville, affecting more habitable structures, including 17 that appear to be in the ROW. None of these choices near the termination point are good, and this Proposal for Decision (PFD) lays out the options to permit the Commission to decide. The ALJs recommend Staff's MK15 because it affects fewer habitable structures and does not have any habitable structures within the ROW. One promising alternative to Staff's MK15, however, is MK62. This route is the same as Staff's MK15 except that it continues along I-10 though Kerrville rather than turning north from I-10, through Tierra Linda. If the Commission determines MK62 to be the better option, it carries the environmental and aesthetic advantages of paralleling I-10 for a greater length.

### II. PROCEDURAL HISTORY, NOTICE, AND JURISDICTION

The Commission has jurisdiction to adjudicate this case pursuant to Public Utility Regulatory Act (PURA) §§ 14.001, 32.001, 37.001, 37.051, 37.053, 37.054, 37.056, 37.057, 39.203, 39.904, and P.U.C. SUBST. R. 25.101, 25.174, and 25.216. SOAH has jurisdiction to conduct a hearing on the merits and to prepare a proposal for decision pursuant to PURA § 14.053 and certain portions of the Administrative Procedure Act, Tex. Gov't Code Ann. §§ 2003.021(b)(2) and 2003.049. The Commission's jurisdiction over this docket and the issues raised and addressed herein were not challenged by any party. Jurisdiction is fully addressed in the Findings of Fact and Conclusions of Law.

### III. THE PARTICIPANTS

Over 1,100 persons and entities intervened in this proceeding. The intervenors included individuals, aligned groups, cities, counties, a public utility board, environmental groups, and state agencies. At the final prehearing conference, over 40 parties appeared and participated. At the hearing on the merits, over 30 parties actively participated by questioning witnesses, presenting evidence, and raising objections. The large groups of intervenors included CVA, Tierra Linda, and P-Line, although many of the individual intervenors from Tierra Linda are not considered to be directly affected landowners because their properties are more than 500 feet from the centerline, they intervened individually and as part of the homeowners' association. The two cities that participated most actively in the hearing were the City of Kerrville and the City of Fredericksburg, working with Kerr County, the Kerrville Public Utility Board (KPUB), and Gillespie County, respectively. State agency participation included TPWD, which intervened as well as providing a comment letter. The Texas Historical Commission (THC) also intervened and participated in the hearing. CVA was a group formed of hundreds of intervenors who all advocate for the line to be routed along Highway 277 and I-10, away from the central routes and parallel to existing paved highway. CVA included intervenors along almost every proposed link, and included individuals who live along I-10 who, as part of the group, advocate for the line to be built parallel to the highway, through or close to their properties, rather than through land in the central part of the study area.

Parties affected by the lines that would have run between Kendall and Gillespie and the P-Lines south of the Gillespie substation also participated. They included the Fredericksburg River Road intervenors, the Sharpes, the Fosters, and the A3O4 intervenors. Those intervenors advocated for a route other than the P-Lines.

Staff participated actively as well, supporting a modified MK15 (Staff MK15), which Staff asserts best balances the factors to be considered in routing a new transmission line. Staff opposed the use of the P-Lines and agreed that the line should be routed parallel to existing highway as much as possible while still considering cost and choosing a route that was more cost-effective than paralleling Highway 277 and I-10 for the maximum length at the maximum cost.

In addition to the groups listed above, numerous individuals participated in the hearing either pro se or through counsel. Some people had testimony admitted into the record but did not participate thereafter. Others filed statements of position and did not question witnesses but observed the entire hearing and filed briefing. The level of participation in the case and the professionalism of all involved enabled the hearing to proceed efficiently.

The chart below illustrates the routes opposed, supported, and any alternate preferences stated by the majority of the participating parties.<sup>1</sup>

Route Preferences by Party<sup>2</sup>

| Party                        | MK 13 (LCRA Pref) | MK 15 (Wazl Pref) | MK 15A (Wazi 2) | Staff MK15   | MK 22  | MK 23 | MK 24 | MK 32 | MK 33 | MK 61 (MK 15<br>Mod. Wnzl Pref) | MK 62 (Mod MK 15<br>Modified PUC Staff) |
|------------------------------|-------------------|-------------------|-----------------|--|--------|-------|-------|-------|-------|---------------------------------|---|
| A3/04                        |                   |                   |                 |  |        |       |       |       |       |                                 |   |
| AC RANCHES                   |                   |                   | 32/31/13/19     | e de la companya de l | llen g |       | H im  | 排機    | 樹獅    |                                 |   |
| AHMAD FAKHR                  | į                 |                   |                 |  |        | ]     |       |       |       |                                 |   |
| ALLIANCE FOR A33             |                   | 隔點                | 3. 10 mg/s      |  |        |       |       |       |       |                                 | r                                       |
| B-47 GROUP                   |                   |                   |                 |  |        |       |       | į.    |       |                                 |   |
| B21 GROUP AND HARVEY BOERNER |                   |                   |                 |  |        |       |       |       |       |                                 |   |
| BRZEZINSKI, ET. AL           |                   | }                 |                 |  |        |       |       |       |       |                                 |   |
| CEW VENTURES                 |                   |                   |                 |  |        |       |       |       |       |                                 |   |
| CHESTER & KATHERINE FOSTER   |                   |                   |                 |  |        |       |       |       |       |                                 |   |
| CHIROSS                      | h                 |                   | 4.5             |  |        |       |       |       |       |                                 | rabata:                                 |

<sup>&</sup>lt;sup>1</sup> These tables are taken from the Alliance for A3 Updated Attachment 1. For convenience, LCRA TSC Ex. 26 is attached to the PFD as Attachment A.

<sup>&</sup>lt;sup>2</sup> Routes are derived from LCRA TSC Ex. 26, which is attached to the PFD as Attachment A. This chart does not include the Segrest routes because the Segrest parties no longer support them. It also does not include Staff's alternate route that was proposed only if the Kendall to Gillespie project was built.

<sup>&</sup>lt;sup>3</sup> The Alliance for A3 has changed "Staff MK15" from "Opposes" to "Alternate Preference" since the writing of their reply brief.

### Route Preferences by Party<sup>2</sup>

| Party                                 | MK 13 (LCRA Pref) | MK 15 (Wazi Pref) | MK 15A (Wnzl 2)   | Staff MK15   | MK 22            | MK 23          | MK 24        | MK 32            | MK 33          | MK 61 (MK 15<br>Mod. Wnzl Pref) | MK 62 (Mod MK 15<br>Modified PUC Staff)  |
|---------------------------------------|-------------------|-------------------|-------------------|--------------|------------------|----------------|--------------|------------------|----------------|---------------------------------|--|
| CLEAR VIEW ALLIANCE                   |                   |                   |                   |              | 370              |                |              |                  |                |                                 |  |
| CYH RANCH                             |                   | 7,54              |                   |              | Luien Teile      | August Swall   | 20012        |                  |                |                                 | 22.000-22.62                             |
| DAVID SEGREST                         | -                 |                   |                   |              |                  |                |              | 17018            |                | 15 (15) (15)                    |  |
| FREDERICKSBURG RIVER ROAD INTERVENORS |                   | 40:0434           | icz gried in .    |              |                  |                |              |                  |                | ent interess                    | 3 13 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| GILLESPIE CO/CTY FREDERICKSBURG       |                   |                   |                   |              |                  |                |              |                  |                |                                 | 5.6                                      |
| HARVEY M. BOERNER                     | 1                 |                   |                   |              |                  |                | Ç.           |                  |                |                                 |  |
| INTERVENOR AHMAD FAKHR                |                   |                   |                   |              |                  |                |              |                  |                |                                 |  |
| JOHN KINNEY KANE AND TYRA COX         |                   |                   |                   |              |                  |                |              |                  |                |                                 |  |
| KANE                                  |                   |                   |                   |              |                  | <b>!</b>       |              |                  |                |                                 |  |
| JUNCTION 1090                         |                   | L                 |                   | 1            | rozwasta         |                |              |                  |                |                                 |  |
| KEITH SHARPE                          | - Maria Carre     | <u> </u>          |                   |              |                  | Ļ              |              | processing (VII) | and the second | com/consultagemen               | are was since sow.                       |
| KERRVILLE PARTIES                     |                   | <u> </u>          | <u> </u>          | Ļ            | <u> </u>         | <u> </u>       |              |                  |                |                                 |  |
| LCRA                                  | ESTITUTE IN A T   | Sunamea           | Lesissimos ruseon |              | <b>.</b>         | <u> </u>       |              |                  |                | nagyasawakana.                  | AAssilassinensi                          |
| MCGINLEY L- RANCH & ARMSTRONG         |                   |                   |                   |              | ing and a second |                |              |                  |                |                                 |  |
| NANCY LIND                            |                   | <b>.</b>          |                   | resolvensus: |                  |                |              |                  | <u> </u>       |                                 |  |
| P-LINE INTERVENTION ASSOCIATION       |                   | <b> </b>          | ļ                 |              |                  |                |              | ļ                | <u> </u>       |                                 |  |
| PAUL MEEK                             |                   | <b>-</b>          | <b></b>           |              |                  |                |              | ļ                | <u> </u>       | A.                              |  |
| RAFTER AKA SABA                       |                   |                   | <u> </u>          |              |                  | ļ              | <u> </u>     | ļ                |                | <u> </u>                        |  |
| SCHAEFFER RANCH <sup>4</sup>          | -                 |                   | 9                 |              | <u> </u>         | <u> </u>       | <u> </u>     | <u> </u>         | ř              |                                 |  |
| SCYTHIAN                              | -                 |                   |                   | <u> </u>     |                  |                |              | <b>.</b>         | <b> </b>       |                                 |  |
| SETTLER RIDGE GROUP                   |                   |                   |                   | 63/14/2016   |                  |                |              |                  |                | M&909998888                     |  |
| SIX MILE RANCH                        |                   |                   | · · · · ·         |              |                  |                |              |                  |                |                                 |  |
| STAFF                                 |                   |                   |                   | 1            | <b>.</b>         | <del>  -</del> | Treatment of | <u></u>          | <del> </del>   | ***********                     |  |
| STONEHENGE <sup>5</sup>               |                   |                   |                   |              | <b> </b>         | <del> </del>   |              | <b>[</b>         | <del> </del>   | ?                               | (  |
| TEXAS HISTORICAL COMMISSION           | New Service       |                   |                   |              | <u> </u>         | ļ              | <del> </del> | <del> </del>     | <u> </u>       | ********                        |  |
| TIERRA LINDA                          | y and a           |                   |                   |              |                  | 1              |              |                  | 1              |                                 |  |

<sup>&</sup>lt;sup>4</sup> Schaeffer Ranch supports "MK33 (the '277/I-10 Route') if it can be constructed without any underground portions in the vicinity of the Kimble County Airport." Schaeffer Ranch supports Staff MK15 "in the event that the Commission determines that the 277/I-10 Route is too expensive to adopt."

<sup>&</sup>lt;sup>5</sup> Stonehenge "opposes any route which includes Link c13b and supports MK61 or MK62." Initial Brief of Stonehenge Properties, LP, at 1.

Route Preferences by Party<sup>2</sup>

| Party                      | MK 13 (LCRA Pref) | MK 15 (Wnzl Pref) | MK 15A (Wazl 2) | Staff MK15 | MK 22 | MK 23 | MK 24 | MK 32 | MK 33 | MK 61 (MK 15<br>Mod. Wazl Pref) | MK 62 (Mod MK 15<br>Modified PUC Staff) |
|----------------------------|-------------------|-------------------|-----------------|------------|-------|-------|-------|-------|-------|---------------------------------|---|
| TIMOTHY H. BANNWOLF, ET AL |                   |                   |                 | )<br>}     |       |       |       |       |       |                                 |   |
| TRIPLE OAKS                |                   |                   |                 | P.         |       |       |       |       |       |                                 |   |
| TPWD                       |                   |                   | ]               |            |       |       |       |       |       |                                 |   |
| VICTORIA ANDERSON          | i                 |                   |                 |            |       |       |       |       |       |                                 |   |
| WALTER SCOTT MCGREGOR      |                   |                   |                 |            |       |       |       |       |       |                                 |   |
| WEINZIERL                  |                   |                   |                 | į.         |       |       |       |       |       |                                 |   |

| Key                   |   |
|-----------------------|---|
| OPPOSES               |   |
| SUPPORTS              |   |
| ALTERNATE PREFERENCE  | 4 |
| NEUTRAL/NOT MENTIONED |   |

### IV. PROJECT BACKGROUND

The overall Commission Competitive Renewable Energy Zone (CREZ) process that led to the Proposed Project in the Application consisted of the (1) Commission's selection of the CREZ areas (PUC Docket No. 33672), (2) the selection of the transmission plan to support the movement of wind energy from those areas (PUC Docket No. 33672), and (3) the Commission's selection of

transmission service providers to implement the transmission plan (PUC Docket Nos. 36146, 35665, and 37928).<sup>6</sup>

The need for the CREZ Transmission Plan (CTP) projects, including the endpoints for the new transmission lines, was established in Docket No. 33672. In Docket No. 35665, Order on Rehearing (issued May 15, 2009, Conclusion of Law No. 10), the Commission found that the CREZ transmission projects are exempt from addressing the need criteria in PURA § 37.056(c)(1) and (2). More recently, in Docket No. 37928, Order on Rehearing (issued February 25, 2010, Conclusion of Law No. 12), the Commission re-stated that the CREZ transmission projects are exempt from addressing the need criteria in PURA § 37.056(c)(1) and (2).

In Docket No. 33672, the Commission analyzed and considered three critical ERCOT studies of transmission plans for various wind generation levels and analyzed wind generation impact on ERCOT ancillary service requirements. As a result, the Commission identified five specific geographic areas as "Competitive Renewable Energy Zones." The Commission also examined four scenarios of wind generation that could be installed in these CREZ areas and considered a set of transmission plans for each of the scenarios to be implemented. After the Commission selected the so-called "Scenario 2" and its associated transmission plan as the most appropriate level of wind generation and transmission capacity to implement the CREZ goals, this resulted in the identification of over 100 transmission projects to be constructed. Based on its CREZ Transmission Optimization (CTO) study results, ERCOT determined that this set of projects will maintain curtailment of wind generation below 2.3 percent.<sup>8</sup>

<sup>&</sup>lt;sup>6</sup> Commission Staff's Petition for Designation of Competitive Renewable Energy Zones, Docket No. 33672, Order on Rehearing (October 7, 2008); Issues Related to Default Projects Severed from No. 35665, Docket No. 36146, Order (November 6, 2008); Commission Staff's Petition for the Selection of Entities Responsible for Transmission Improvements Necessary to Deliver Renewable Energy from Competitive Renewable Energy Zones, Docket No. 35665, Order on Rehearing (May 15, 2009); Priority Projects Severed from Docket No. 37902, Docket No. 37928, Order on Remand (February 25, 2010); LCRA TSC Ex. 6, at 11.

<sup>&</sup>lt;sup>7</sup> LCRA TSC Ex. 1 at 20; LCRA TSC Ex. 6 at 9.

<sup>&</sup>lt;sup>8</sup> LCRA TSC Ex. 6 at 12-13.

Included in the Commission-approved transmission plan were 13 system improvements that the Commission determined to be of high priority (Priority Projects). These projects were designated as Priority Projects because, in addition to facilitating the CREZ goals, these projects are critical in relieving current congestion that is hampering the delivery of existing generation to the ERCOT grid. One of these Priority Projects, the McCamey D to Kendall 345-kV double-circuit transmission line, has been identified by ERCOT on several occasions (most recently on September 24, 2010) as a critical element to the performance of the overall CTP.

The Commission's goal throughout the CREZ process was to ensure delivery to customers of the energy generated by renewable resources in the CREZ in a manner that is most beneficial and cost-effective to the customers.

The electric customers include all electric consumers within the ERCOT region including those located in the Hill Country as well as the broader Central Texas area.<sup>10</sup>

Staff initiated Docket No. 35665 to select the TSPs to construct the non-default CREZ projects. The Proposed Project includes two of the system improvements listed in the CTP selected in Docket No. 33672. LCRA TSC was ordered to build these two projects by the Commission in Docket No. 35665. Specifically, in the Order on Rehearing in Docket No. 35665 (May 15, 2009), the Commission lists the Proposed Project (composed of two CREZ Priority Projects) which is the subject of this CCN Application. The Commission later affirmed this assignment to LCRA TSC when it severed the 13 CREZ priority projects into Docket No. 37928, for the purpose of specifically assigning the 13 CREZ priority projects (February 25, 2010). In so doing, the Commission emphasized that the severance is "necessary to facilitate the processing of the [priority project CCN applications] most expeditiously." LCRA TSC's Proposed Project is included in Ordering Paragraph No. 1 and associated Attachment B of Docket No. 37928.

<sup>&</sup>lt;sup>9</sup> LCRA TSC Ex. 6 at 13; LCRA TSC Ex. 13, Ex. SG-1R.

<sup>10</sup> LCRA TSC Ex. 6 at 14.

<sup>11</sup> LCRA TSC Ex. 6 at 14-15.

ERCOT's CTO Study assumed 137 miles of transmission line for the project. This is reasonably consistent with the range of overall route length indicated in LCRA TSC's proposed alternative routes. Due to the critical nature of the McCamey D to Kendall 345-kV double-circuit transmission line to the overall CTP performance, route length was an important factor affecting the routing options recommended by LCRA TSC in this CCN Application for the transmission line section connecting the McCamey D and Kendall endpoints. For this project, excessive length will detrimentally affect the ability of the transmission line to perform the function assigned it by ERCOT in its CTO Study. 12

The endpoints for project were identified by ERCOT, specified in the CTO Study report as are required to meet the cost-effectiveness of the overall CTP, and approved by the Commission in its Final Order in Docket No. 33672.<sup>13</sup>

The McCamey D Station is an appropriate endpoint because it is a necessary switching station to connect transmission lines in the immediate area from and to other locations. Also, the McCamey D Station is located in an area near a CREZ and provides effective and efficient service as a CREZ hub to interconnect wind generation facilities. The McCamey D Station is also part of an approved Certificate of Convenience and Necessity (CCN) (*i.e.*, the Twin Buttes to McCamey D single-circuit double-circuit-capable 345-kV transmission line approved in Docket No. 37778). <sup>14</sup>

The existing Kendall station provides excellent CREZ transmission line endpoints for integrating the bulk power delivery transmission lines into the load-serving network. As ERCOT explained in the CTO Study, "each of the plans developed as part of this study has been evaluated on how cost-effectively it is able to collect wind from the five CREZ areas and move that generation to load centers." There are no other stations in the immediate area of each of these stations that provide this level of existing infrastructure. 15

<sup>12</sup> LCRA TSC Ex. 6 at 16.

<sup>13</sup> LCRA TSC Ex. 6 at 10.

<sup>14</sup> LCRA TSC Ex. 6 at 10-11.

<sup>15</sup> LCRA TSC Ex. 6 at 11.

LCRA TSC's Proposed Project does not include the 50 percent series compensation project identified in the CTP for the McCamey D to Kendall 345-kV transmission line. Per the Final Order in Docket No. 37928, that project will be constructed by Electric Transmission Texas (ETT). Because the length and location of the McCamey D to Kendall 345-kV transmission line is also an important factor related to the series compensation, LCRA TSC will timely communicate the routing results of the Proposed Project to both ERCOT and ETT. <sup>16</sup>

With the exception of certain combinations of transmission line routes addressed below, both portions of the Proposed Project in LCRA TSC's CCN Application (*i.e.*, McCamey D to Kendall, and Kendall to Gillespie) meet the requirements of the ERCOT CTO Study and comply with the Order on Rehearing in PUC Docket Nos. 35665 and 37928 for constructing CREZ-related facilities. Consistent with the Commission's goals for the CREZ program and P.U.C. SUBST. R. 25.174, LCRA TSC's Proposed Project provides: long-term, cost-effective solutions that are consistent with the Final Order in Docket No. 37928; transmission facilities that are consistent with specifically-associated ERCOT recommendations in the Commission-approved CTP; and transmission facilities that are constructed and placed in service as soon as possible to alleviate existing and growing constraints in delivering wind generation from West Texas to loads in ERCOT.<sup>17</sup>

LCRA TSC's proposed station designs at McCamey D and Kendall will be of the high reliability configurations required for terminations of CREZ transmission lines, such as a ring bus or breaker-and-a-half arrangement designated in the CTO Study.<sup>18</sup>

On December 1, 2010, the Commission determined that the Kendall to Gillespie portion of the transmission line would be replaced with a cost-effective alternative that does not require the construction of a transmission line between the Kendall and Gillespie substations at this time.<sup>19</sup>

<sup>16</sup> LCRA TSC Ex. 6 at 16-17; see also LCRA TSC Ex. 5 at 6.

<sup>&</sup>lt;sup>17</sup> LCRA TSC Ex. 6 at 17; see also LCRA TSC Ex. 1 at 7; LCRA TSC Ex. 2 at 10, 28-29, 31.

<sup>&</sup>lt;sup>18</sup> LCRA TSC Ex. 5 at 14-15.

<sup>19</sup> Proceeding to Determine Whether to Modify the CREZ Transmission Plan, Docket No. 38577, Final Order

Therefore, this PFD does not address the routing issues between those substations. However, most of the links originally filed between those two substations could also be used if the Commission determined to route the transmission line along any of the P-Lines. Because the ALJs recommend against all the P-Lines, none of the links from Kendall to Gillespie are recommended.

### V. PRELIMINARY ORDER ISSUES

### A. Preliminary Order Issue No. 1

Is LCRA TSC's Application to amend its CCN adequate? Does the Application contain an adequate number of reasonably differentiated alternative routes to conduct a proper evaluation?

In Order No. 5, the ALJs concluded that the Application was materially sufficient. As part of the evidence concerning material sufficiency, Staff concurred that the Application contains an adequate number of reasonably differentiated routes for the Commission's evaluation.<sup>20</sup> LCRA TSC provided 60 primary alternative routes for the MK Project.<sup>21</sup>

LCRA TSC's Application provided an adequate number of routes and otherwise complies with all applicable statutory and regulatory requirements. Several parties (Settler's Ridge, Fredericksburg River Road Intervenors, and the Fosters) filed motions challenging the adequacy of the routes proposed in the Application.<sup>22</sup> These motions were denied by the ALJs in Order Nos. 5, 7, and 10, respectively.

### B. Preliminary Order Issue No. 2

Did the notice provided by LCRA TSC comply with P.U.C. PROC. R. 22.52(a)?

<sup>(</sup>December 1, 2010).

<sup>&</sup>lt;sup>20</sup> PUC Staff Ex. 2 at 19; PUC Staff Ex. 1 at 18-19. There are at least 100 possible routes (using noticed links) for the KG Project and at least 20,000 possible routes (using noticed links) for the MK Project. LCRA TSC Ex. 2 at 27.

<sup>&</sup>lt;sup>21</sup> LCRA TSC Ex. 9 at 32. LCRA TSC designated the Kendall to Gillespie lines as the KG Project and the McCamey D to Kendall lines as the MK Project.

<sup>&</sup>lt;sup>22</sup> See Docket No. 38354, Settler's Ridge Motion on Route Adequacy (Aug. 11, 2010), Interchange Item No. 684; Fredericksburg River Road Intervenors' Motion on Route Adequacy (Aug. 23, 2010), Interchange Item No. 880; Motion for Review of the Adequacy of Routes Proposed Herein (Sept 3, 2010), Interchange Item No. 1743.

In accordance with P.U.C. PROC. R. 22.52, LCRA TSC provided notice to directly affected landowners, utilities, city governments, and county governments on July 28, 2010;<sup>23</sup> re-mailed notice to certain landowners for whom the original notice was returned to LCRA TSC on or before August 17, 2010, or for whom LCRA TSC subsequently learned of different ownership of a directly affected property;<sup>24</sup> provided notice by publication in newspapers having general circulation in the counties where the CCN is being requested on August 5 and 13, 2010;<sup>25</sup> provided copies of the Application and the Environmental Assessment and Alternative Route Analysis (EA) compiled for this project to representatives of TPWD,<sup>26</sup> and held public open houses on May 4, 5, 7, 11, 12, and 14, 2009 and February 16, 17, 18, 22, 23, and 24, 2010.<sup>27</sup>

On August 20, 2010, Staff filed Comments in Response to Order No. 1. In the Comments, Staff reviewed LCRA TSC's Affidavit of Notice and Supplemental Affidavit of Notice as well as its Publishers Affidavits and found them sufficient and compliant with the notice provisions set out in P.U.C. PROC. R. 22.52(a) and Order No. 1.<sup>28</sup> On August 23, 2010, the ALJs issued Order No. 5, which found the Application sufficient and free of any material deficiencies. LCRA TSC has complied with the requirements of P.U.C. PROC. R. 22.52(a)(1)-(4).

ChiRoss Intervenors argued that notice was improperly served upon them because they are not traditional directly affected landowners under P.U.C. PROC. R. 22.52(a)(3). LCRA TSC argued, however, that the Commission's rules present the minimum notice required; nothing in the rules preclude the noticing of additional property owners in order to provide the Commission with flexibility in its selection of a final route.<sup>29</sup> Recognizing this fact, the ALJs issued Order No. 16 finding that either the ALJs or the Commission could approve a route on noticed property that is not

<sup>23</sup> LCRA TSC Ex. 4

<sup>&</sup>lt;sup>24</sup> *Id*.

<sup>25</sup> Id.

<sup>&</sup>lt;sup>26</sup> Id.

<sup>&</sup>lt;sup>27</sup> LCRA TSC Ex. 2 at 13-14.

<sup>&</sup>lt;sup>28</sup> Comments in Response to Order No. 1 On Compliance With Notice Requirements (Aug. 20, 2010), Interchange Item No. 822.

<sup>&</sup>lt;sup>29</sup> LCRA TSC Ex. 12 at 7.

directly affected by a proposed route, and that absent a stipulation, the ALJs would not grant a motion to dismiss on grounds that the project would not directly affect an intervenor's property.

## C. Preliminary Order Issue No. 3

Does the Application meet the filing requirements set forth in P.U.C. SUBST. R. 25.216(g)(2) and (3)?

In Order No. 5, the ALJs found that the Application is sufficient and contains no material deficiencies. No party has challenged the sufficiency of this ruling. LCRA TSC's Application has met the filing requirements set forth in P.U.C. SUBST. R. 25.216(g)(2) and (3).

# D. Preliminary Order Issue No. 4

Did LCRA TSC submit the CCN application in compliance with the Orders in Docket Nos. 37928 and 36802 designating it as a CREZ Priority Transmission Plan facility? If not, should the Commission revoke the designation awarded to LCRA TSC and select another entity for the CREZ Priority Transmission Plan facility at issue in this docket pursuant to P.U.C. SUSST. R. 25.216(f)(1)?

The Application was submitted in compliance with Docket No. 35665 designating it as a CREZ Priority Transmission Line Project that was filed in accordance with the sequence of filing ordered in Docket Nos. 36801 and 36802.<sup>30</sup>

LCRA TSC's proposed double-circuit or double-circuit-capable 345-kV transmission lines between the McCamey D and Kendall stations are a part of the ERCOT CREZ Transmission Plan ordered by the PUC in Docket No. 33672.<sup>31</sup> The lines are "priority projects" designated as such by the PUC because they help to relieve congestion restricting existing wind generation in addition to

<sup>10</sup> Staff Ex. 2 at 13.

Ordering Paragraph 2). Double-circuit-capable structures will be constructed for the McCamey D to Kendall and Kendall to Gillespie CREZ projects. As required by the CREZ Transmission Plan (CTP) the McCamey D to Kendall CREZ Project will be built as a double-circuit line while the CTP calls for the Kendall to Gillespie CREZ Project to be constructed initially as a single-circuit project with a second circuit to follow sometime in the future.

performing the CREZ function of supporting the development of new wind generation.<sup>32</sup> In Docket No. 35665, the PUC ordered LCRA TSC to build the McCamey D to Kendall and Kendall to Gillespie lines.<sup>33</sup> As stated by the PUC in its Order in Docket No. 35665<sup>34</sup> and its Order of Referral and Preliminary Order in this docket,<sup>35</sup> PURA Sections 39.203(e) and 39.904(h) exempt CREZ facilities from CCN requirements addressing need, adequacy of existing service, effects on the applicant or other utilities, and probable improvement of service or lowering of cost to customers.<sup>36</sup>

In addition to CREZ-related benefits, the line is intended to benefit the general area of their location by providing increased transmission support to meet growing needs in the Central Texas and Hill Country areas.<sup>37</sup> Meeting increasing transmission needs in the Hill Country region was a benefit cited by ERCOT in its CTO Study.<sup>38</sup>

<sup>&</sup>lt;sup>32</sup> Id, at 42 (FOF 136).

<sup>33</sup> Docket No. 35665, Order on Rehearing (May 15, 2009) at p. 50 (FOF 120).

<sup>&</sup>lt;sup>34</sup> Id. at p. 60 (COL 10).

<sup>&</sup>lt;sup>15</sup> Order of Referral and Preliminary Order at 7-9.

<sup>&</sup>lt;sup>16</sup> TEX. UTILITIES CODE §§ 39.203(e) and 39.904(h).

<sup>&</sup>lt;sup>17</sup> LCRA TSC Ex. 6 at 26.

<sup>&</sup>lt;sup>18</sup> Id. at 29-30.

# E. Preliminary Order Issue No. 5

Will completion of the project proposed by LCRA TSC in this docket accomplish the intended result for the CREZ project designated as "McCamey D to Kendall to Gillespie 345-kV Transmission Line Project" in the CREZ Transmission Plan and ordered by the Commission in Docket Nos. 37928 and 36802?

The Application will accomplish the intended results for the CREZ priority project designated in the CREZ CTO and ordered by the Commission in Docket Nos. 35665, 37928, and 36802.<sup>39</sup> In Docket Nos. 33672, the Commission found that certain lines are critical to relieve the congestion that is hampering the delivery of existing wind-powered energy to the grid and designated them as priority projects.<sup>40</sup> In an effort to relieve this congestion, the Commission specifically required LCRA TSC to build new, double-circuit 345-kV line running from the McCamey D Station to the Kendall Station and then a double-circuit-capable, single-circuit 345-kV line from the Kendall Station to the Gillespie Station.<sup>41</sup>

A number of intervenors asserted that the need for the project is not demonstrated and that a transmission line owned by NextEra, the Horse Hollow Generation Tie, LLC (HHGT) could provide a substitute for the Project. On September 24, 2010, ERCOT submitted a letter summarizing the study that it had conducted at request of the Commission regarding the need for the MK to KG lines. ERCOT's study concluded that (a) the MK portion of the project has no viable alternative and must remain part of the CREZ transmission plan; (b) the HHGT is not a viable alternative to the MK CREZ priority transmission line, and (c) the KG project could potentially be avoided with a less expensive alternative of installing certain infrastructure improvements. In Order No. 12, the ALJs held that, unless directed otherwise by the Commission, they would not consider the issue of whether the HHGT line could be used in the place of the MK Project because (1) that is an issue of

<sup>&</sup>lt;sup>39</sup> PUC Staff Ex. 2 at 13; Staff Ex. 1 at 11.

<sup>&</sup>lt;sup>40</sup> Docket No. 33672, Commission Staff's Petition for Designation of Competitive Renewable Energy Zones, Order on Rehearing (Oct. 7, 2008) at 12.

<sup>41</sup> LCRA TSC Ex. 1, Attachment 1 (EA) at 1-5.

<sup>&</sup>lt;sup>42</sup> LCRA TSC Ex. 13 (Ex. SG-1R).

<sup>&</sup>lt;sup>43</sup> Id.

need, which is not to be considered in this proceeding, and (2) ERCOT's study found that there is no viable alternative to this line.<sup>44</sup> In Order No, 14, the ALJs ordered the direct testimony of HHGT witnesses to be struck in accordance with LCRA TSC's objections.<sup>45</sup>

# F. Preliminary Order Issue No. 6

Which proposed transmission line route is the best alternative, weighing the factors set forth in PURA § 37.056(c)(4), excluding (4)(E), and P.U.C. SUBST. R. 25.101(b)(3)(B)?

After weighing the factors, Staff MK15 is the best alternative because it best balances all of the relevant criteria. While MK32 and 33 are better choices environmentally, they sacrifice cost and habitable structures to parallel existing highway.

# 1. The Effect of Granting the Certificate on LCRA TSC and Any Electric Utility Serving the Proximate Area

Although included in CCN proceedings, this issue is specifically excluded from CREZ CCN proceedings.  $^{46}$ 

## 2. Community Values

Although "community values" is not formally defined in Commission rules or in PURA, the term has been described as a "shared appreciation of an area or other natural or human resource by a national, regional, or local community." The study area in this case and the length of the transmission line from McCamey D to Kendall are so large that there is no consensus on community values.

To address and consider community values, LCRA TSC conducted 20 public meetings on

<sup>44</sup> Order No. 12 (Oct. 1, 2010), Interchange Item No. 2657, at 2-3.

<sup>&</sup>lt;sup>45</sup> Order No. 14 (Oct. 12, 2010), Interchange Item No. 2772, at 4.

<sup>46</sup> PURA §§ 39.203(e) and 39.904(h) and P.U.C. SUBST, R. 25.174(d)(2).

<sup>&</sup>lt;sup>47</sup> LCRA TSC Ex. 1, EA at 2-55.

May 4, 2009, May 5, 2009, May 7, 2009, May 11, 2009, May 12, 2009, and May 14, 2009. In addition, LCRA TSC conducted public meetings on February 15 and February 16, 17, 18, 22, 23, and 24, 2010. These meetings provided information to LCRA TSC regarding community values by participants who provided a ranking of a series of routing criteria. LCRA TSC further took into account expressions of community values in a review of the questionnaires, letters, meetings, phone calls, and other public input it has received. LCRA TSC received additional information about community values at the Technical Conference held on September 1, 2010, and at the Settlement Conferences it held on September 20, 21, and 22, 2010.

Four strong indications of community values arose during the pendency of this case: the effect of the line on the Texas Hill Country; the effect of the line on habitable structures, particularly in developed areas, such as cities; the effect on rural residential subdivisions; and the use of monopoles. Almost all intervenors testified that they did not want the line on their property and it was better to place the line on someone else's property (or in another county). The ALJs do not consider those arguments to be representative of community values. It is understood that most people would prefer not to have the line routed across their land or through their town, but that is not helpful for determining whether the community as a whole or larger portions of the community share certain values.

#### a. Texas Hill Country

Avoiding "central" routes that would cut through undisturbed areas of the Texas Hill Country is one shared community value relevant to this proceeding. It was one reason for the delay of this proceeding for several months so that the study area could be expanded to include the existing AEP 138-kV line to the north (now paralleled by the P-Lines) and the US 277/I-10 corridor to the south. So As Chairman Smitherman explained at the September 24, 2009 Open Meeting:

<sup>48</sup> LCRA TSC Ex. 2 at 12-13.

<sup>49</sup> LCRA TSC Ex. 2 at 11.

<sup>&</sup>lt;sup>50</sup> WR Ex. 8 at 4; LCRA TSC Ex. 2 at 21.

I do think that some of the letters raised some legitimate concerns about making sure that we follow the statute and follow our rules which say, hey, take a look at existing corridors, take a look at existing rights-of-way, take a look at existing infrastructure. Can you run along these rather than going straight across virgin ranch territory....<sup>51</sup>

Thus, the Commission has already acknowledged public support in favor of using existing compatible corridors, rather than impacting areas of the Hill County, as MK13 does.

The questionnaires received by LCRA from the members of the community in the McCamey D to Kendall study area consistently ranked paralleling existing compatible ROW among the highest factors in importance, if not *the* highest factor. LCRA witness Sarah Morgenroth, who was responsible for overseeing the public involvement program for this project, including coordinating open houses and meetings with governmental officials, confirmed that there has been a great deal of public interest in developing a route along the I-10 corridor. As Ms. Morgenroth testified, "[t]here was a lot of comment about preserving the Hill Country."

Further, one of the parties in this case, CVA, which represents approximately 240 landowners in this proceeding, has promoted a route that avoids traversing the "heart of the Hill Country" in favor of a path that follows existing compatible corridors, such as the US 277/I-10 corridor. 55 CVA's lead landowner witness, Bill Neiman, testified that one goal in forming CVA was to form a large group of concerned landowners to speak with a common voice. 66 He also testified that he realized the line may cross or come close to his land, but decided he would have to be "at peace" with that possibility because his goal was to do his best to keep the line from running through the Hill Country. 57 There is much evidence in this proceeding that many parties hold

<sup>&</sup>lt;sup>51</sup> WR Ex. 8 at 4 (emphasis added).

<sup>52</sup> See generally LCRA TSC Ex. 1, Attachment 1 at Section 6.

<sup>53</sup> Tr. at 346; LCRA TSC Ex. 2 at 4, 20-21.

<sup>54</sup> Tr. at 164.

<sup>55</sup> CVA Ex. 9 at 2-3.

<sup>&</sup>lt;sup>56</sup> Tr. at 629-630; CVA Ex. 9 at 5.

<sup>57</sup> Tr. at 679; see also CVA Ex. 9.

community values that support using existing compatible corridors such as I-10, and minimizing the impact to the Texas Hill Country.

Yet MK13, the preferred route, would cut a new ROW through the Hill Country and would parallel few property lines. A large number of intervenors who want to preserve the nature of the Hill Country vehemently oppose the preferred route and all other central routes. Because it is a central community value, the ALJs recommend against the preferred route and against the other central routes. Routing the line parallel to existing highways that have already scarred the landscape and are not natural or scenic is a better choice to address the values expressed by many, if not most of the intervenors. Staff MK15 parallels I-10 for much of its length, coming off of the central routes at Ranch Road 1674, travelling south to hit I-10 west of Junction before moving east. The ALJs recommend the Commission approve Staff MK15.

#### b. Habitable structures

In contrast to the community values held by those intervenors advocating routes that do not run through the Hill Country, many intervenors expressed concern about the line running in close proximity to a large number of habitable structures and also running through Kerrville and other cities, and running close to Fredericksburg.

The parties concerned with habitable structures and city development oppose all routes that travel through Kerrville, citing limiting impacts to residences as a strongly held community value. Maximizing the distance of the proposed line from residences/habitable structures was also one of the most highly ranked values in the questionnaires received by LCRA.<sup>58</sup> While routes MK32 and 33 best satisfy the community value of paralleling existing compatible corridors, they also have some of the highest numbers of habitable structures within 500 feet of the centerline. Routes MK32 and 33, with 151 and 153 impacted habitable structures respectively, would each affect more than

<sup>58</sup> See LCRA TSC Ex. 1, EA at 6-5 to 6-58.

eight times as many habitable structures as Route MK13.59

The ALJs conclude that, neither Route MK13 nor routes MK32 or 33 are the best overall routes in terms of community values. Rather, the evidence shows that Staff MK15 best satisfies the expressed community values because it parallels a substantial length of existing compatible corridors, while impacting relatively few habitable structures. Although the various MK15 route options do not parallel as great a length of existing corridors as routes MK32 and 33, they impact vastly fewer habitable structures and cost significantly less. I Likewise, while Staff MK15 impacts more habitable structures (55) than Route MK13 (18), it parallels significantly more existing compatible ROW and is only 10 miles longer. If Staff's route is used with a variation that continues the line along I-10 through Kerrville, it would impact 128 habitable structures. This variation is MK62.

The communities of Mason, Fredericksburg, and Kerrville provided testimony that their communities did not want the transmission line through their towns.<sup>63</sup> Staff MK15 avoids the communities of Eldorado, Sonora, Mason, Menard, and Fredericksburg.<sup>64</sup> Staff MK15 also circumvents the community of Kerrville and avoids 99 habitable structures (including 17 within the ROW).<sup>65</sup> Although avoiding Kerrville, Staff MK15 parallels a gas pipeline through Tierra Linda and affects 12-14 habitable structures as opposed to the 99 in that subdivision, which would not be affected by MK32 or 33.<sup>66</sup>

#### c. Cities

<sup>59</sup> LCRA TSC Ex. 26.

<sup>60</sup> See id.; LCRA TSC Ex. 1, EA at 6-85 to 6-92.

<sup>61</sup> Id.

<sup>62</sup> Id.; LCRA TSC Ex. 1, EA at 6-85 to 6-92.

<sup>63</sup> Kerrville Ex. 1 at, 4; P-Line Ex. 1 at 2; P-Line Ex. 12 at 2; Tr. at 715; 718-719.

<sup>64</sup> Tr. at 719.

<sup>65</sup> LCRA TSC Ex. 20 at 6-85 to 6-93.

<sup>66</sup> Staff Ex. 1 at 25; Tr. at 563-564, 1059, 1167.

Kerrville, Kerr County, and Gillespie County intervened in this proceeding on behalf of their citizens. The elected officials of Kerrville and Kerr County appeared for cross-examination at the hearing presented testimony on behalf of their citizens and expressed the community values of their constituents. Kerrville Mayor Wampler and Kerr County Judge Tinley expressed the will of their constituencies in Kerrville and Kerr County for the proposed transmission line to avoid the growing population centers of Kerrville and northern Kerr County.

The Kerrville community is currently expanding along I-10.<sup>69</sup> The City has made significant expenditures in order to ready the I-10 corridor for further development.<sup>70</sup> The Kerrville Public Utility Board (KPUB) also has spent over \$1 million to extend utility infrastructure to the areas along I-10, in the vicinity of Links Y16, Y17b, Y18, Y19b and Y20, which are links in routes MK32, 33, 61, and 62.<sup>71</sup>

Kerr County is also experiencing growth just north of I-10.<sup>72</sup> Kerr County Judge Tinley identified the Whiskey Canyon subdivision and other communities that would be affected by Links c1a, b57a, c3, c9, c6, and c8, some of which are in routes MK15 and Staff MK15.<sup>73</sup> Property owners from the Whiskey Ridge subdivision also intervened individually to express their concerns. Jerry Ahrens, Kenneth and Carol Swanson, and Michael and Margie Schwartz all testified that construction of the proposed transmission line along Link c1a would negatively impact their properties, would not comport with the community values of Whiskey Ridge, and would negatively

<sup>&</sup>lt;sup>67</sup> Tr. at 241, 718. The parties were able to waive cross-examination on many witnesses who pre-filed testimony. Therefore, many witnesses whose testimony is part of the record of this proceeding did not testify live at the hearing.

<sup>&</sup>lt;sup>68</sup> Kerrville Ex. 1 at 4; Kerr County Ex. 1 at 5-8.

<sup>&</sup>lt;sup>69</sup> Atkisson Ex. 1 at 7; Kerrville Ex. 1 at 5.

<sup>&</sup>lt;sup>70</sup> Kerrville Ex. 1 at 5-10, Attachments A-F.

<sup>&</sup>lt;sup>71</sup> KPUB Ex. 1 at 6.

<sup>&</sup>lt;sup>72</sup> Kerr County Ex. 1 at 5-9, Attachments A-H.

<sup>&</sup>lt;sup>73</sup> Kerr County Ex. 1 at 6-7.

impact property values.<sup>74</sup> Thus, it is apparent that the existing communities in Kerr County value the placement of the proposed transmission line away from the ongoing development in Kerrville and northern Kerr County.

Kerrville and Kerr County also intervened to present the special concerns they share as local governments. Specifically, the placement of the proposed transmission line in the areas of proposed major developments will impair their abilities to raise much-needed funds through property taxes. Mayor Wampler testified that:

[C]onservatively, that the impact -- the economic impact by the line going along 1-10 as proposed would have an effect of over half a million dollars in taxable -- future taxable dollars. That equates to 32 percent of our current taxable ad valorem value. I think that once that impact is felt, it's perpetual and would be extremely negative and damaging to our future as a city.<sup>75</sup>

Kerr County Judge Pat Tinley described similar negative potential impacts on Kerr County. He demonstrated that the land values of the developed parcels along I-10 are valued substantially higher than the parcels that have not yet been developed. City and county governments raise funds for civil services through property taxes; reducing the property values along I-10 and northern Kerr County will lower the funds available for law enforcement, road maintenance, emergency services and other civic services provided to residents of the County. The communities of Kerrville and Kerr County, through their elected officials, have expressed their desire for selection of a route that avoids the use of Links Y16, Y17b, Y18, Y19b, Y20, c1a, b57a, c3, c9, c6 and c8. Staff MK15 uses only one of those links, c6.

Given the competing community concerns of avoiding the Hill Country versus avoiding habitable structures and cities, Staff MK15 strikes a good balance between those interests. However, following I-10 through Kerrville permits the line to continue along a compatible corridor.

<sup>74</sup> Ahrens Ex. 1 at 1-2; Swanson Ex. 1 at 1-2; Schwartz Ex. 1 at 2-3.

<sup>&</sup>lt;sup>75</sup> Tr. at 718-719.

<sup>&</sup>lt;sup>76</sup> Kerr County Ex. 2 at 4-5, Attachments A and B.

<sup>&</sup>lt;sup>77</sup> Kerr County Ex. 1 at 5-6.

Those routes would affect more habitable structures and may require moving structures that are in the ROW, but they would avoid the rural residential subdivision of Tierra Linda.

# d. Other Community Values

Tierra Linda Ranch

Routing along I-10 but avoiding Kerrville would route the line through Tierra Linda. The subdivision currently has a pipeline easement through it, and LCRA TSC proposes to route the line parallel to that existing easement. The owners of the 15 directly-affected habitable structures intervened as did the Homeowners' Association and other residents and property owners in the subdivision even if they were not considered to be directly affected.<sup>78</sup> They all oppose the line running through their subdivision and note that a pipeline ROW may not be compatible with a transmission line because the impact of the pipeline easement is minimal in comparison.

#### P-Line Intervenors

The P-Line intervenors also express concern for the resources of the Hill Country. They argue that the existing 138-kV line is old and small. The proposed line would be much larger and more intrusive. The line would cross ranch land that has been held in the same family for generations. P-Line Intervenors note that the communities along the P-Lines are rural with shared values for preserving cultural resources and history. Because the P-Line routes perform poorly on so many of the routing criteria, they are not recommended as discussed throughout this PFD.

Fort McKavett

Several intervenors note the community values concern about Fort McKavett. 80 The issues

<sup>&</sup>lt;sup>78</sup> Unlike in other CCN cases, LCRA TSC chose not to object to requests to intervene from individuals who would not be considered directly affected landowners under the Commission's rules.

<sup>&</sup>lt;sup>79</sup> P-Line Initial Brief at 5.

<sup>80</sup> Six Mile Initial Brief at 11-12; THC Initial Brief at 3; Saba Initial Brief at 12-13.

relating to the routes close to and visible from Fort McKavett are addressed in the sections related to historical resources. The recommended route does not affect Fort McKavett.

# e. Monopoles

A number of intervenors have requested the use of steel and spun concrete poles, commonly called "monopoles," for the proposed project. LCRA TSC filed its application proposing lattice structures to be consistent with its proposal in Docket No. 35665 and because lattice is the most cost-effective structure type. As a result, its base cost estimates for routes and segments assume lattice structures. 22

Regardless of the type of structures used, the double-circuit-capable 345-kV structures required for the project will be visible to landowners and the public. Because LCRA TSC recognizes the support expressed for monopole structures, it also included detailed cost information for a variety of structure types, including mixtures using both steel poles and spun concrete poles. LCRA TSC has repeatedly stated its position that any of its proposed structures are acceptable and will be used if the PUC determines such structures are preferred. The ultimate decision as to structure type necessarily rests with the PUC and its balancing of costs and benefits. 84

The ALJs support the use of monopoles to the extent it is cost-effective and particularly in any areas with denser population, such as along I-10 though population centers such as Sonora, Junction, and Kerrville if the line is ultimately routed through those communities. There was strong support from almost all intervenors for the use of monopoles, which tends to show that the use of monopoles is a shared community value.

Along Staff MK15, the ALJs support and recommend monopoles through Tierra Linda.

<sup>&</sup>lt;sup>91</sup> LCRA TSC Ex. 7 at 12-17.

<sup>82</sup> Id. at 19 and CDS-3; LCRA TSC Ex. 14 at 5.

x3 LCRA TSC Ex. 7 at 13, 18-19; LCRA TSC Ex. 14 at 5-12, CDS-2REB, and CDS-3REB.

<sup>84</sup> LCRA TSC Ex. 14 at 12.

#### 3. Recreation and Park Areas

LCRA TSC notes that avoiding parks and recreational areas was a consideration in designing the routes proposed in the Application. PBS&J reviewed U.S. Geological Survey topographic maps, Texas Department of Transportation (TxDOT) county highway maps and federal, state, and local maps, the TPWD "Texas Outdoor Recreation Inventory," the Texas Outdoor Recreation Plan, recent aerial photography, and conducted a limited field reconnaissance. As a result of that review, PBS&J identified two parks or recreation areas located within 1,000 feet of the preferred route MK13 centerline, Flat Rock Ranch, and a TxDOT roadside park. Other notable recreation areas within the study area are the Old Tunnel Wildlife Management Area (Old Tunnel WMA) and Fort McKavett State Historical Site, one of the best preserved and most intact examples of a Texas Indian Wars military post, both addressed below. Of the other 59 primary alternative routes, 53 are located within 1,000 feet of additional parks or recreation areas (with a few routes within this range of as many as seven such areas).<sup>85</sup>

Staff notes that one park/recreation area is crossed by 27 of the proposed routes, including MK13 and Staff MK15. The lines pass within 1,000 feet of the Flat Rock Ranch, which features mountain biking and camping areas, paralleling the eastern side of the Horse Hollow generation tie 345-kV transmission line. Only one park/recreation area is within 1,000 feet of the centerline of MK13 and Staff MK15. MK32 and MK33 run within 1,000 feet of six and seven parks/recreation areas, respectively.<sup>86</sup>

## a. Old Tunnel Wildlife Management Area

TPWD is the owner and operator of the 16.1 acre Old Tunnel WMA, located in Kendall County. TPWD opposes all routes that use Links A3 or O4, which run within 500 feet of the Old Tunnel area's western boundary. The only route in contention that uses either Link A3 or O4 is

<sup>&</sup>lt;sup>85</sup> LCRA TSC Ex. 1, Application at 40, and EA at 2-64, 2-68, 5-24; LCRA TSC Ex. 9 at 26; LCRA TSC Ex. 20, Ex. RRR-3R (rev. Table 6-1).

<sup>86</sup> Staff Ex. 1 at 33; LCRA TSC Ex. 23 at 1; LCRA TSC Ex. 1 at 5-23; LCRA TSC Ex. 26.

MK22, which is a P-Line route. Most of the original filed routes that used those links were part of the KG project. Although the KG line is not a part of this proceeding and the ALJs recommend against the P-Line routes, they address TPWD's arguments in the event the Commission considers a route that would impact the Old Tunnel. The Old Tunnel area is comprised of an abandoned railroad tunnel and includes a bat colony of up to three million Brazilian free-tailed bats and three thousand cave myotis -- more mammals than any other Wildlife Management Area in Texas. The Old Tunnel includes nature trails for hiking and bird watching, educational programs, bat watching, and guided nature tours. TPWD estimates that 21,324 visitors visited the Old Tunnel just to watch bats emerge from the tunnel. TPWD estimates the annual economic benefit to the region of at least \$748,000.87

TPWD is concerned that the line, if placed on Links A3 or O4, would result in bat mortality and possible abandonment of the colony. As a result of potential harm to the Old Tunnel as an environmental and recreational resource, TPWD opposes any route that uses these links. As discussed in the environmental section below, the ALJs find that TPWD has raised genuine questions about the potential impact of transmission lines on the bat colonies at the Old Tunnel. The ALJs do not recommend a route using any of the links opposed by TPWD regarding the Old Tunnel.

<sup>&</sup>lt;sup>87</sup> LCRA TSC Ex. 1, EA at 2-65, Table 4-1; TPWD Ex. 1 at 3, 6, 10, 12; TPWD Ex. 3 at 4; TPWD Ex. 2 at 10.

#### b. Fort McKavett

A number of intervenors, including the THC and TPWD oppose links that would impact the view shed and historic and aesthetic value of Fort McKavett. The THC owns and operates the Fort McKavett State Historic Site in Menard County, Texas (Fort). The THC is an agency of the State of Texas, charged with providing leadership and coordination in the field of historic preservation, using its facilities to stimulate the protection of historic resources, and conducting related educational programs. These duties are in furtherance of the THC's mission to protect and preserve the state's historic and prehistoric resources for the use, enjoyment, and economic benefit of present and future generations. <sup>89</sup>

The Fort was designated as a state historic site on May 17, 1968, in order to help preserve its role in history as a federal fort protecting settlers on the mid-l9th-century Texas frontier. Fort McKavett is among the most intact, surviving 19th-century frontier military installations in Texas. The Fort is a State Historic Site, as well as a National Historic District listed on the National Register of Historic Places. Fort McKavett is part of TPWD's Great Texas Wildlife Trails, as well as the THC's Texas Forts Trail. The Fort McKavett State Historical Site is also designated a riparian conservation area. 90

The Fort is located in the vicinity of a number of the north-central routes and segments proposed by LCRA TSC. They are: b16b, b17b, the Z1 and Z2 lines connecting those routes, and the Powell Ranch proposed modification to route/segment b16b, Option 2 (THC Opposed Routes). Although the ALJs recommend against a northern-central route that would impact the Fort, they nevertheless address the THC's arguments in the event the Commission considers these segments.

Thomas Alexander, a THC commissioner and historian explained that for defensive reasons, the Fort was built between 75 and 100 feet above the surrounding terrain. The THC is concerned

<sup>88</sup> TPWD Ex. 4 at 25; THC Ex. 4 at 5, 8-9; THC Ex. 18; Tr. at 554-555, 584, 645-647, 760-761, 969-970, 972.

<sup>&</sup>lt;sup>89</sup> TEX. GOV'T CODE §§ 442.002(a), 442.003, 442.005(i), (l).

<sup>&</sup>lt;sup>90</sup> Six Mile Ex. 1 at 7; LCRA TSC Ex. 1, EA at 2-66, 2-67, 2-72; TPWD Ex. 4 at 32.

that transmission towers of up to 180 feet in height would be easily visible from the grounds of the Fort. The towers would range from 1.18 miles (b16b), 1.26 miles (Z1 and Z2), and 1.55 miles (b17b) from the Fort. Mr. Alexander and THC witness Michael Garza, the Fort's site manager, explained that the Fort remains isolated from modern development, with pristine views in all directions; they note that the view from the Fort is much as it was in the mid-nineteenth century. Mr. Alexander testified that it is this ambiance, virtually unchanged for nearly 160 years, that makes the Fort unique and valuable. The Fort hosts living history events, star parties, Boy Scout functions, and visitor tours throughout the year. The THC notes that the isolation and historical character of the Fort contributes greatly to the efficacy of these events. As a result, the THC argues that transmission towers of up to 180 feet in height would directly and negatively impact those view sheds from the Fort, and would likewise negatively impact the Fort's historic character, its isolation, and the overall appeal of the Site. 91

LCRA TSC disagrees, noting that there is no evidence that the proximity and visibility of the line will repel tourists interested in visiting the Fort. <sup>92</sup> Furthermore, LCRA TSC argues that the THC lacks evidentiary support for its arguments regarding the view shed and impact on the appeal of the Fort. As discussed above, however, THC submitted expert testimony to support its arguments regarding the view shed and historic and aesthetic value of the fort. Also, LCRA TSC acknowledged that the comparative view shed impact of existing cell towers in the vicinity of the Fort would be substantially less than a transmission line of 120 to 180 feet. <sup>93</sup> Although the THC did not establish that tourists would avoid the Fort due to the proximity of a large transmission line, LCRA TSC did not conduct a causation analysis either. <sup>94</sup> While it is unclear what impact, if any, the lines would have on tourism at the Fort, the ALJs agree with the THC that the line would have a negative impact on Fort McKavett's historic character, the Fort's view shed, and the aesthetic values associated with its preservation and isolation.

<sup>91</sup> THC Ex. 18 at 4, 7-8, 12-13 and Ex. 1-17; THC Ex. 4 at 7-9, THC Ex. 1 at RFI Response No. 1-4.

<sup>92</sup> LCRA TSC Ex. 11 at 11.

<sup>&</sup>lt;sup>93</sup> THC Ex. 18 at 4.

<sup>94</sup> Tr. at 1358-1359.

## c. Camp Sol Mayer

Camp Sol Mayer is a 300-acre Boy Scout camp with 18 permanent buildings. The Boy Scout troops that use Camp Sol Mayer participate in a wide variety of activities, including horsemanship, shooting sports, swimming, canoeing, row boating, climbing/repelling, fishing, soil and water conservation, handicrafts, ecology/nature, camping, first aid, fire safety, mammal study, lifesaving, pioneering and wilderness survival. Additionally, camp sites may be reserved by the public on a space-available basis. 95

Opponents of segment b17b argue that it would cross the southwest corner of the camp, passing near several camping areas and near where the camp's horses are maintained. ROW clearing for the transmission line on the southwest portion of the camp would eliminate many trees that are along the western boundary line and the San Saba River. The camp would also be impacted by Links Z1 and Z2, which are both in close proximity to the camp. The ALJs do not recommend any routes that use these links.

## d. Tierra Linda Ranch

Tierra Linda Ranch has questioned whether LCRA TSC evaluated a private park that it claims is potentially affected by a proposed link. LCRA TSC argues, however, that private recreation areas such as Tierra Linda's are not included in the PUC's CREZ CCN Application definition of "parks and recreation areas." LCRA TSC explains that the PUC's consideration of "parks and recreation areas owned by a governmental body or an organized group, club or church" is an objective means to identify park and recreation areas. Without this objective standard, many landowners who use their private property for a variety of private recreational uses could raise this issue and introduce inappropriate subjectivity into the evaluation process. The ALJs find that

<sup>95</sup> Saba Group Ex. 3 at 4-5.

<sup>&</sup>quot;6 Saba Group Ex. 3 at 4-6.

<sup>&</sup>lt;sup>97</sup> Tr. at 1265-1268.

<sup>98</sup> LCRA TSC Ex. 9 at 27.

LCRA TSC and PBS&J properly identified parks and recreation areas consistent with the Commission's definition. Nevertheless, the ALJs recommend that the Commission consider the line's potential negative impact on the residents' recreational use of their property.

## e. Flat Rock Ranch

Flat Rock Ranch is a privately owned mountain biking and camping facility open to the public. The ranch is crossed (for 1.68 miles) by 27 of the alternative routes. The routes parallel the eastern side of an existing NextEra transmission line, which also crosses through the property along its western boundary. LCRA TSC contends that potential interference with recreational activities and impacts to these facilities would be indirect because the mountain bike trails could be spanned by LCRA TSC's transmission line structures. LCRA TSC also argues that visual impacts would be minimal because these routes parallel an existing transmission line. Staff concluded that the line could be constructed in a way that would not unduly disturb the recreational activities at the property. Considering the existence of the NextEra line, the ALJs agree with LCRA TSC and Staff on this matter.

<sup>99</sup> LCRA TSC Ex. 1, EA at 5-23 to 5-24.

<sup>100</sup> Staff Ex. 2 at 27.

## 4. Cultural, Aesthetic, and Historical Values

#### a. Aesthetic Values

### Background

"Aesthetics" refers to the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities. Aesthetic values considered from a public standpoint in the EA, include topographical variation (hills, valleys, etc.), prominence of water in the landscape, vegetation variety (forests, pasture, etc.), diversity of scenic elements, degree of human development or alteration, and overall uniqueness of the scenic environment compared to the larger region. <sup>101</sup>

Based upon the consideration of these aesthetic values, PBS&J found that the study area reflects overall a medium to high level of aesthetic value for the region. Particularly the eastern portion of the study area, located in the Hill Country, is within an area of the state noted for its scenic beauty and characterized by impressive topographical relief, vegetation and wildflowers, abundant wildlife, and plateaus. LCRA TSC asserts that the level of human impact to the study area is relatively high, mainly due to the extensive agricultural and oil and gas operations, the development of numerous cities, and the development of rural subdivisions. The presence of various large creeks and rivers present some viewscapes of high aesthetic value. There are also a number of designated routes or trails, scenic overlooks, and rest areas, within the study area that emphasize the Hill Country's natural beauty and other unique attractions. <sup>102</sup>

In order to evaluate aesthetic impacts from LCRA TSC's various alternative routes for the Project, PBS&J conducted field investigations to determine the estimated length of the line that would be visible from selected publicly accessible areas. These areas included those of potential

<sup>101</sup> LCRA TSC Ex. 1, EA at 2-71; LCRA TSC Ex. 20 at 10.

<sup>102</sup> LCRA TSC Ex. 1, EA at 2-71 to 2-3; LCRA TSC Ex. 9 at 27.

community value, recreational areas, particular scenic vistas that were encountered during the field surveys, and U.S. and state highways within the study area. Measurements were made to estimate the length of each of the primary alternative routes that would fall within the foreground visual zone (0.50 mile, unobstructed by vegetation or topography) of recreational areas or major highways. The determination of visibility of the transmission line from various points was calculated from USGS maps and aerial photography. <sup>103</sup>

All of LCRA TSC's 60 primary alternative routes for the MK Project have some amount of ROW within the foreground visual zone of U.S. and state highways, in part a direct result of the deliberate inclusion of alternative routes paralleling U.S. and state highways. The length of route ROW within the foreground visual zone ranges from 7.80 (Routes MK3 and MK5) to 157.87 miles (Route MK33). Although a rather large number of parks and recreation areas are located within the study area, small portions of the routes' ROW would be located within the foreground visual zone of parks and recreation areas, ranging from 0.47 mile (Route MK23) to 10.00 miles (Route MK33). LCRA TSC's preferred route MK13 has 8.46 miles of ROW within the foreground visual zone of U.S. and state highways, and 4.24 miles of ROW within the foreground visual zone of parks or recreational areas. <sup>104</sup>

LCRA TSC notes that with regard to visibility by the public, the alternative routes that follow all or portions of I-10 will be much more visible to more people than any of the alternative routes away from I-10.<sup>105</sup>

Staff noted that construction of the Project will likely have both temporary and permanent negative aesthetic impacts, including views of ongoing construction, the cleared ROW, and the transmission facilities. LCRA TSC also stated that construction of the line could have both temporary and permanent aesthetic effects, and therefore identified various mitigation measures

<sup>103</sup> LCRA TSC Ex. I, EA at 5-26.

<sup>104</sup> LCRA TSC Ex. 1, EA at 26 to 5-27; LCRA TSC Ex. 20, Ex. RRR-3R (Rev. EA Table 6-1).

<sup>105</sup> LCRA TSC Ex. 20 at 10.

<sup>106</sup> Staff Ex. 1 at 36; Staff Ex. 2 at 28.

available to assist in reducing those impacts, including the manner in which ROW would be cleared and maintained. 107

A number of intervenors requested the use of steel and spun concrete poles, commonly called "monopoles," for the proposed project. LCRA TSC explains that the Application proposes lattice structures to be consistent with its proposal in Docket No. 35665 and because lattice is the most cost-effective structure type. The Company's base cost estimates for routes and segments assume lattice structures. <sup>108</sup>

Regardless of the type of structures used, the double-circuit-capable 345-kV structures required for the project will be visible to landowners and the public. A number of intervenors have stated a preference for monopoles based on aesthetic interests. LCRA TSC notes that because lattice towers are not solid, they may blend into background views, while monopoles, which are large in diameter, can appear prominent in both background and close foreground views.<sup>109</sup>

Because LCRA TSC recognizes the support expressed for monopole structures, it also included detailed cost information for a variety of structure types, including mixtures using both steel poles and spun concrete poles. The ALJs note that LCRA TSC has repeatedly represented that any of the proposed structures are acceptable and will be used if the PUC determines such structures are preferred. Because this is a matter of cost and landowner or community-specific, the ALJs agree with the Company that the ultimate decision as to structure type necessarily rests with the PUC and its balancing of costs and benefits.

If monopole structures are approved for at least certain locations, LCRA TSC requests that the Commission permit the Company to have the flexibility in design to deploy both steel and spun

<sup>&</sup>lt;sup>107</sup> LCRA TSC Ex. 1, EA at 1-8 to 1-28, 2-71 to 2-73, 5-26.

<sup>108</sup> LCRA TSC Ex. 7 at 12-19 and CDS-3; LCRA TSC Ex. 14 at 5.

<sup>109</sup> LCRA TSC Ex. 7 at 16-17.

<sup>&</sup>lt;sup>110</sup> LCRA TSC Ex. 7 at 13, 18-19; LCRA TSC Ex. 14 at 5-12, CDS-2REB, and CDS-3REB.

<sup>111</sup> LCRA TSC Ex. 14 at 12.

concrete poles where appropriate for each to produce a cost-effective result. LCRA TSC also notes that, unlike other TSPs whose ROWs can change depending on which structure type is used, this is not the case with LCRA TSC. In LCRA TSC's case both lattice towers and monopoles will fit within a 100-foot ROW, which is as narrow, generally speaking, as the ROW for a double-circuit 345-kV transmission line can be made.

#### Discussion

In this docket, the Commission is faced with a choice regarding aesthetic values between placing the line along a northern or central route where it will be viewed by far fewer people, or placing it along I-10 (and possibly other highways) where it will be viewed by far more people. As explained below, the ALJs recommend that placing the line along a highway is a far better choice from an aesthetic values perspective.

First, however, in terms of numbers of habitable structures affected, Staff points out that it considered the aesthetic impact caused by the visibility of the line from habitable structures within 500 feet of the centerline of the ROW. Viewing aesthetics strictly from this perspective, MK13 impacts the fewest number of habitable structures. A review of LCRA TSC Exhibit 26 reveals that MK13 impacts only 18 habitable structures; Staff MK15 impacts 55; the Weinzierl proposed MK15 routes impact 45 each; if those three routes are altered to remain along I-10 past Kerrville, MK 61 (Weinzierl) and 62 (Staff) impact an additional 73 habitable structures, while MK 63 (Segrest) impacts 77 more. Finally, Routes MK32 and 33 impact 151 and 153 habitable structures respectively, the most significant impact on the aesthetic values in terms of structures.

Staff also notes that MK13 has a length of 8.46 miles visible from US and State highways, whereas Staff MK15 has a visibility for a length of 49.11 miles. MK33 has the highest impact, with a length of 157.87 miles along US and State highways. With regard to visibility from

<sup>112</sup> LCRA TSC Ex. 20 at 6-85 to 6-93; LCRA TSC Ex. 26.

<sup>113</sup> Staff Ex. 1 at 37.

parks/recreation areas, MK33 has the highest visibility of LCRA TSC's alternate routes with a length of 10 miles visible from state parks and recreational areas. MK13 is visible for a length of 4.24 miles from state parks and recreation areas. Staff MK15 has 4.43 miles of ROW within the foreground visual zone of parks/recreation area. 114

As with community values, the aesthetic impact of the line is largely a function of who is viewing it from where. Kerrville argues that Route MK13 is preferable in terms of aesthetic values, because Route MK13 travels along the fifth least amount of right-of-way in the foreground visual zone of highways. 115 Kerrville notes that one way to measure aesthetic disturbance is to calculate how many people would be affected by the disturbance. LCRA TSC witness Rob Reid testified that alternative routes following all or any portion of I-10 will have maximum visibility by people. The most recent TxDOT traffic counts indicated 18,800 vehicle trips per day on I-10 within Kerrville on an annual average basis. As a result, Mr. Reid concluded that "the routes along I-10 will be much more visible to more people than any of the alternative routes away from I-10." Routes MK33, MK32, MK61, MK62, and MK63 have between 64.22 and 157.87 miles within the foreground visual zone of U.S. and State Highways. 117 Route MK 13 only has 8.46 miles of the route within the foreground visual zone of U.S. and State Highways. 118 And in response to certain intervenors who state that I-10 "is not driven by citizens for its scenic views," 119 Kerrville points out that Route MK 13 also avoids aesthetic disturbance to two of the best Scenic Overlooks and Rest Areas in Texas that are located along I-10 in the vicinity of Links Y16 and Y20 and/or c1b. 120 As a result, Kerrville argues that, by avoiding I-10 and these scenic rest stops, Route MK13 presents minimal aesthetic disturbance to the study area.

<sup>114</sup> LCRA TSC Ex. 1, EA at Table 6-1.

<sup>115</sup> LCRA TSC Ex. 1, EA at 6.1.3.1 at 6-96.

<sup>116</sup> LCRA TSC Ex. 20 at 10.

<sup>117</sup> LCRA TSC Ex. 26.

<sup>118</sup> LCRA TSC Ex. 26.

<sup>119</sup> Nancy Lind Initial Brief at 5.

<sup>&</sup>lt;sup>120</sup> LCRA TSC Ex. 1, EA at 2.11 at 2-73; Tr. at 246-247.

Parties opposed to central routes first argue that focusing solely on visibility from highways does not address the full range of aesthetic impacts. The ALJs agree. Aesthetic impacts to the Hill Country were expressed as a concern throughout the process including the Open Houses. And although LCRA TSC Exhibit 26 reflects numeric measures of aesthetics, full consideration of the line's aesthetic impact requires consideration of factors that are not included in the chart. These intervenors generally opine that routing the line across ranches in the heart of the Hill Country, will ruin the visual appearance of the landscape. CVA witness Mr. Jonathan Ogren testified, "[t]he transmission lines through the interior components of the study area would have a detrimental effect on the vast viewsheds that are a characteristic of the Hill Country and they would negatively impact the economic and natural capacity of the land through visual degradation." 122

Opponents of the central and northern routes also note that the central study area contains large tracts of relatively unfragmented and undeveloped land. The natural beauty of this largely unspoiled region, includes scenic vistas, meadows, and oak-lined creeks and rivers, and is cherished by residents and visitors alike. In contrast, the I-10 corridor is more densely developed than the surrounding Hill Country area. In contrast, the I-10 corridor is more densely developed than the

And although the southeastern portion of the study area is recognized and valued for its scenic vistas, segments that follow I-10 transect an area that is largely commercial in nature. <sup>126</sup> They point out that the area already has elevated signage, such as billboards, and commercial development such as gas stations, and restaurants that do not evoke the same type of aesthetic sensitivity as the other areas of the Hill Country where undeveloped natural beauty is preserved. <sup>127</sup> The ALJs agree.

<sup>121</sup> Tr. at 1331; WR Ex. 1 at 6.

<sup>122</sup> CVA Ex, 4 at 8.

<sup>123</sup> CVA Ex. 9 at 9-10; TPWD Ex. 4 at 14; Tr. at 827-828.

<sup>124</sup> CVA Ex, 3 at 14-15.

<sup>125</sup> CVA Ex. 9 at 10.

<sup>126</sup> Gillespie Ex. 1 at Att. 3; LCRA TSC Ex. 1 at 2-71.

<sup>127</sup> Kerrville Ex. 1 at 5; Kerr County Ex. 3; Tr. at 708.

In reaching the recommendation that the line will have less aesthetic impact along a highway, the ALJs have made rational inferences, based on the evidence, that it would be far more jarring to see a 345-kV transmission line in a relatively remote and undeveloped area than to see it along I-10. The obvious downside to a route along I-10 is the sheer number of people who will see the line. However, as with most interstate highways, I-10 is by and large, a means of transportation across the state, where aesthetically pleasing views are incidental. Travelers and anyone in the proximity of I-10 in this part of Texas will see a myriad of commercial development including gas stations, convenience stores, chain and fast-food restaurants, strip malls, traffic – including heavy tractor-trailers, car lots, power lines, roadways – including feeder roads, and all of the development associated with small towns, larger municipalities, and cities like San Antonio. To be clear, the drive along I-10 west of San Antonio can be very aesthetically pleasing, but considering the existing development along this highway, it is far more likely that a 345-kV line will be lost in the visual foreground than if it were run along a central route through what is undoubtedly the aesthetically pleasing and relatively undeveloped Texas Hill Country.

# b. Cultural, Historic, and Archeological Sites

## Background

LCRA TSC explains that much of the study area has a high probability of containing previously unrecorded cultural resource sites. Therefore, PBS&J's analysis of these environmental criteria for the cultural resources evaluation was based on known data regarding sites in the area, the density of the sites, and the National Register of Historic Places (NRHP) and State Archaeological Landmark (SAL) potential for the sites. LCRA TSC notes that mitigation and construction practices are available to reduce or eliminate impacts to cultural resources sites. <sup>128</sup>

One method used by archeologists to assess an area for potential cultural resources is to

<sup>&</sup>lt;sup>128</sup> LCRA TSC Ex. 1, EA at 5-29 to 5-30, 5-32.

identify "high probability areas" (HPAs) where cultural resource sites might occur. Locations that are usually identified as HPAs for the occurrence of pre-historic sites include water crossings, stream confluences, drainages, alluvial terraces, wide floodplains, upland knolls and areas where lithic resources may be found.<sup>129</sup>

PBS&J's literature and records review indicate that in the portions of the study area where archeological investigations have been conducted, 174 recorded prehistoric or historic archeological sites are either crossed by one of LCRA TSC's primary alternative routes or are within 1,000 feet of the centerline of such a route. Of these, 147 are associated with the MK proposed routes, nine are associated with the KG proposed routes, and 18 sites are shared by both.<sup>130</sup>

Of the 60 primary alternative routes evaluated for the MK Project, 54 cross one or more recorded historic or prehistoric sites, with four routes crossing at least 15 or more sites. All 60 routes have additional recorded historic or prehistoric sites within 1,000 feet of the ROW centerline, with numbers ranging between 6 and 46 sites. Of the primary alternative routes, 22 cross one NRHP-listed or determined eligible site, and the other 38 cross no such sites. Exactly half (30) of the primary alternative routes have ROW centerline within 1,000 feet of one or more additional NRHP-listed or determined eligible sites, ranging from one to six sites, and the other 30 have none. Staff notes that the number of recorded historical/archaeological sites within 1,000 feet of the centerline of the routes varies from 8 to 70 sites.

There are 23 known or recorded historical or archeological sites either crossed (two sites) or located within 1,000 feet of the preferred route MK13 ROW centerline (21 sites). For Staff MK15 there are 47 sites.<sup>134</sup>

<sup>129</sup> LCRA TSC Ex. 1, EA at 5-30.

<sup>130</sup> LCRA TSC Ex. 1, EA at 5-30.

<sup>111</sup> LCRA TSC Ex. 20, Ex. RRR-3R (Rev. EA Table 6-1); LCRA TSC Ex. 1, EA at 5-31 to 5-32.

<sup>&</sup>lt;sup>132</sup> These sites include recorded historic and prehistoric sites and National Register-listed or determined eligible sites.

<sup>133</sup> Staff calculation using data at Table 6-1, Items 37-40.

<sup>134</sup> LCRA TSC Ex. 1 at 41; LCRA TSC Ex. 9 at 27; LCRA TSC Ex. 20, Ex. RRR-3R (Rev. EA Table 6-1).

Length of HPAs for ROW of LCRA TSC's 60 primary alternative MK routes ranged from a low of approximately 77.43 miles (Route MK20) to a high of approximately 126.95 miles (Route MK51), for routes of varying lengths. Route MK13 (the MK preferred route) has a moderate HPA number, 103.53 miles. Route MK13 (the MK preferred route)

LCRA TSC did not consider Fort McKavett to be a directly-affected landowner and none of the route segments proposed in this docket cross the Fort. The distances between the segments that pass by the Fort are from approximately 1.18 miles to over 7 miles from the Fort site. The Fort has been more fully discussed in the Parks and Recreation section of this PFD.

Finally, LCRA TSC notes that in the process of evaluating the primary alternative routes in recommending the preferred route, potential for impact on cultural resources did not present a primary evaluation criterion for comparison between LCRA TSC's routes.<sup>137</sup>

<sup>&</sup>lt;sup>135</sup>LCRA TSC Ex. 20, Ex. RRR-3R (Rev. EA Table 6-1) and Ex. RRR-4R (Rev. EA Table 6-2); LCRA TSC Ex. 1, EA at 6-30.

<sup>136</sup> LCRA TSC Ex. 20, Ex. RRR-3R (Rev. EA Table 6-1) and Ex. RRR-4R (Rev. EA Table 6-2).

<sup>&</sup>lt;sup>137</sup> LCRA TSC Ex. 1, EA at 6-96, 6-98.

#### Discussion

A number of intervenors offered expert archaeological testimony regarding the potential for the existence of historic sites on their properties. LCRA TSC, however, has specifically acknowledged that many areas of the Hill Country have high potential for the occurrence of archeological sites. The Company outlined a plan for addressing any sites encountered during construction in Section 5.3 of the EA. LCRA TSC argues, however, that no evidence was offered regarding specific impacts on cultural resources that would warrant consideration for purposes of routing the proposed transmission line. Nor is there evidence that LCRA TSC's method for addressing archeological sites during construction is inappropriate. Staff proposes that specific language be included in the order requiring LCRA TSC, if it finds any archeological or cultural resources during construction, to cease work immediately in the vicinity of the resources and notify the THC to determine what appropriate actions should be taken. Although LCRA TSC obviously possesses expertise in dealing with archeological sites, the ALJs support Staff's recommendation in addition to those measures proposed by the Company.

Kerrville argues that Route MK13 respects historical values by avoiding known historical landmarks in the study area. <sup>140</sup> The group notes that MK13 avoids Fort McKavett <sup>141</sup> and also avoids historic sites in Mason County, such as the Pinta Trait <sup>142</sup> and Fort Mason. <sup>143</sup> In response, a number of intervenors who oppose a central route note that Route MK13 does not avoid historical areas in the southeastern portion of the study area. <sup>144</sup> These intervenors also argue that a central route would have a negative impact on historical values. They point out that many ranches in the interior of the

<sup>&</sup>lt;sup>138</sup> LCRA TSC Ex. 9 at 27-28; LCRA TSC Ex. 20 at 8-9.

<sup>139</sup> Staff Ex. 1 at 14; Staff Ex. 2 at 16.

<sup>&</sup>lt;sup>140</sup> Kerrville refers to the Kerrville group of parties, including the City of Kerrville, Kerr County, KPUB, and Cecil Atkisson.

<sup>141</sup> Garza Ex. 18 at 4-7; Alexander Ex. 4 at 4-7; Tr. at 1469.

<sup>&</sup>lt;sup>142</sup> P-Line Ex. 9 at 2-3.

<sup>143</sup> P-Line Ex. 7 at 3-7.

<sup>144</sup> Gillespie Initial Brief at 8.

study area contain historical artifacts.<sup>145</sup> These parties generally argue that the selection of Route MK15 alternatives will have a lesser impact on historical values than would the selection of a central route. Route MK15, for example, crosses 7.5 fewer miles of ROW across areas of high archeological/historical site potential than MK13. MK15 also has three fewer National Register-listed or determined-eligible sites within 1,000 ft of the centerline of the ROW than MK13. Finally, while the City of Kerrville argues that Route MK13 avoids historic landmarks such as Fort McKavett and Fort Mason, Gillespie County notes that the same is equally true for Route MK62 Modified. Modified.

The ALJs first note that the majority of the routes in contention avoid Fort McKavett. From a historical and archeological perspective, the ALJs prefer routes parallel to I-10 as opposed to the central routes. The existence of the highway, in addition to commercial and residential development normally associated with proximity to an interstate highway system means that historical sites in the area are more likely to have been disturbed. In contrast, the central routes are more likely to impact previously undisturbed sites of historical value. Taking everything into consideration, the ALJs recommend that, from a historical and archeological perspective, the routes along I-10 are better suited for placement of the line than central routes such as MK13.

## 5. Environmental Integrity

#### a. Background

LCRA TSC's consultant PBS&J, examined a wide range of environmental information in its EA, which was researched and analyzed through a variety of methods and by representatives of various environmental disciplines. In developing the EA, the geographic locations of environmentally sensitive and other restrictive areas within the study area were located and considered during the route delineation process. Each alternative route was evaluated, considering a

<sup>145</sup> WR Ex. 1 at 5; McGinley L-Ranch Ex. 1 at 11.

<sup>146</sup> LCRA TSC Ex. 26.

<sup>147</sup> Kerrville Initial Brief at 7.

variety of criteria and environmental conditions present. As a result of this process, LCRA TSC represents that all routes presented in the Application (and all segments that form those routes) provide environmentally acceptable alternatives and the overall impact of the routes was greatly reduced.<sup>148</sup>

Factors considered particularly important in the ecological evaluation of potential impacts from the line includes the length across potential Golden Cheeked Warbler (Warbler) habitat, the length across upland and riparian woodland, the length paralleling/utilizing existing ROW, and the length parallel to and within 100 feet of streams. Based on the relationship, sensitivity, and relative importance of the major environmental criteria, LCRA TSC focused on paralleling existing ROW, potential impacts to threatened/endangered species, and woodlands as among the primary evaluation criteria used to recommend a preferred route. Based on these criteria, LCRA TSC's preferred route (MK13) was ranked first from an ecological standpoint in the EA.<sup>149</sup>

The Company acknowledges that, as with all transmission lines, some impacts are inevitable. However, based upon an assessment of environmental conditions and in consideration of construction techniques and mitigation measures, LCRA TSC asserts that the Project will cause only short-term impacts to soil, water, and ecological resources. The Company has undertaken a permitting process under Section 10 of the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS) to appropriately consider impacts to federally listed species and their habitat, regardless of the route ultimately approved by the Commission. <sup>151</sup>

Animal species potentially occurring along the proposed transmission routes include the federally listed (endangered) Black-Capped Vireo (Vireo) and Warbler, and the state-listed (threatened) Zone-Tailed Hawk, Bald Eagle, Texas Tortoise, and Texas Horned Lizard. Table 2.5 of the EA lists all threatened or endangered species of potential occurrence in the study area based on

<sup>148</sup> LCRA TSC Ex. 9 at 9, 34,

<sup>&</sup>lt;sup>149</sup> LCRA TSC Ex. 1, EA at 5-16, 6-84, 6-96, 6-98.

<sup>150</sup> LCRA TSC Ex. 9 at 28; LCRA TSC Ex. 1, EA at 5-1 to 5-16.

<sup>151</sup> LCRA TSC Ex. 9 at 28.

information from USFWS, TPWD, and TPWD's Natural Diversity Database (TXNDD). The project is not expected to adversely impact populations of any federally listed endangered wildlife species, and it is unlikely that it will result in adverse impacts to federal and state listed threatened species. Nevertheless, LCRA TSC is aware of and has prepared for the need to obtain a permit from USFWS to take endangered species habitat. Before construction, an assessment will be made to verify whether any habitat for endangered or threatened species is present along the route that is approved. Finally, LCRA TSC plans to undertake mitigation projects in conjunction with this project in order to protect Warbler and Vireo habitats, among other species. [52]

Based on the EA, LCRA TSC considers wildlife habitat throughout the study area to be fragmented by land use impacts such as roads, brush clearing associated with ranching and agricultural activities, pipelines, electric distribution lines, and a host of other activities. According to the Company, whether fragmentation of habitat is of actual consequence to individual wildlife species depends on additional considerations, including the particular species.<sup>153</sup>

Once a route is selected, LCRA TSC proposes to account for the location of endangered/threatened species on individual landowners' property or additional known occupied habitat by routing adjustments, construction procedures and techniques, and mitigation. The Company points out that various transmission service providers have faced these conditions in certification proceedings and there exists an established set of Commission-accepted adjustments, procedures, techniques and mitigation to allow the successful completion of the Project for any route

<sup>152</sup> LCRA TSC Ex. 1, EA at 1-25, 5-13 to 5-15; Table 2-5; LCRA TSC Ex. 9 at 28-29, 33.

<sup>151</sup> LCRA TSC Ex. 20, at 44.

the Commission selects.<sup>154</sup> In the past, both formal and informal post-order consultation with other agencies has allowed transmission service providers the ability to accommodate these concerns.<sup>155</sup>

After the route is selected by the Commission, the Company proposes to consult with the USFWS for known occupied or potential habitat for endangered species. As part of those efforts, LCRA TSC will use a Habitat Conservation Plan (HCP) development and Endangered Species Act Section 10(a) permitting process that is ongoing with the USFWS. As a result of these measures, even if Warbler and Vireo are present along the Commission selected route, the Company represents that the Project will neither jeopardize their continued existence, nor have a significant adverse impact to those populations.<sup>156</sup>

Finally, the Company notes that different techniques are available to accommodate all federally-listed endangered species identified in the study area. The Commission may select a route that passes through an area containing plant species composition and configuration favorable to a protected species, or there may even be known individuals of the species scattered throughout the area. In that case: the route could be adjusted in minor ways to avoid higher quality "blocks" of habitat; transmission towers could be placed in existing "openings" with limited further clearing for ROW access; and/or permits could be granted for appropriate clearing permissions along with possible mitigation, depending on a number of considerations.<sup>157</sup>

Staff

Staff's witnesses reviewed and considered the EA, responses to requests for information, and

<sup>154</sup> The Company noted the following LCRA TSC projects that properly dealt with the presence of endangered species and/or potential habitat after the Commission selected a route: Kendall-CPS Tie (Kendall County) Docket No. 29065; Andice-Glasscock (Williamson County) Docket No. 28450; Hill Country (Kendall & Bexar County) Docket No. 29684; Sandy Creek (Llano County) Docket No. 29833; Medina Lake-CPS Tie (Bandera & Medina Counties) Docket No. 32934; Rim Rock-Goat Creek (Kerr County) Docket No. 33844. All of these projects have been successfully constructed and where appropriate, in consultation with the USFWS. For some of these projects, no consultation was required. LCRA TSC Ex. 20 at 14-15.

<sup>155</sup> LCRA TSC Ex. 9 at 28-30.

<sup>156</sup> LCRA TSC Ex. 20 at 15-16.

<sup>157</sup> LCRA TSC Ex. 9 at 30.

testimony and statements of position.<sup>158</sup> Staff concluded that any route selected in this case will affect the environmental integrity of the study area.<sup>159</sup> Staff notes that items 13 and 27-36 of the 41 criteria evaluated by LCRA TSC reflect the environmental impact of the proposed routes.<sup>160</sup> Those factors measure the miles of ROW that will be in rangeland/pastureland, in upland woodland, or bottomland/riparian woodland habitat, in potential wetlands, in known federally endangered/threatened species habitat, in potential Warbler habitat, across open water or 100-year flood plains, paralleling streams or rivers and the number of streams or river crossings that will be made by the transmission line.<sup>161</sup>

Staff also notes that the construction of a line in rangeland/pastureland would be less detrimental than it would be in a woodland habitat. Mr. Reid testified that construction in rangeland/pastureland will recover from the effects of construction because the habitat will regrow within the ROW. Woodland habitat, however, requires a greater regenerative time compared to pastureland. 162

To illustrate general difference among the primary routes in contention, Staff outlined the environmental criteria on three routes, Staff MK15, MK13 and MK33 (a complete list of the routes in contention and relative criteria is found in LCRA TSC Ex. 26). The environmental statistics for those three routes are: <sup>163</sup>

| Criteria                          | Staff MK15 | MK13   | MK33   |
|-----------------------------------|------------|--------|--------|
| Miles of<br>Rangeland/pastureland | 140.98     | 129.72 | 150.54 |
| Miles of upland woodland habitat  | 31.88      | 29.20  | 36.80  |
| Miles of bottomland/riparian      | .75        | 1.37   | 1.24   |

<sup>158</sup> Staff Ex. 1 at 9

<sup>159</sup> TPWD Ex. 5.

<sup>160</sup> LCRA TSC Ex. 1 at Table 6.

<sup>16!</sup> LCRA TSC Ex. 1 at Table 6.

<sup>162</sup> LCRA TSC Ex. 1 at 5-11; LCRA TSC Ex. 23 at 1; Tr. at 396 -397.

<sup>163</sup> LCRA TSC Ex. 23 at 1.

| Criteria   | Staff MK15 | MK13 | MK33  |
|--|------------|------|-------|
| woodland   |            |      |       |
| Miles of potential wetlands  | .21        | .27  | .40   |
| Miles of known/occupied federally endangered or threatened species habitat | .88        | .55  | 0     |
| Cross miles of open water  | .11        | .08  | .08   |
| Miles of 100-year flood plains   | 7.58       | 5.13 | 14.67 |
| Miles of streams and rivers paralleled                                     | 2.46       | 1.34 | 1.82  |
| Streams crossed  | 160        | 144  | 143   |
| Rivers crossed   | 2          | 4    | 4     |

Staff found that all three routes rank well in terms of the miles of known/occupied federally endangered or threatened species habitat. On its face, MK13 ranks very well in limiting the miles through potential Warbler habitat, although the limits of TXNDD records are discussed below. Upland woodland is the primary habitat for the Warbler though that species is also found in bottomland/riparian habitat. Of the three primary routes, MK13 impacts the least upland woodland habitat. Staff MK15 impacts 2.68 miles more upland woodland than MK13 and MK33 impacts 7.6 miles more. The statistics for the impacts on bottomland/riparian woodland range from 3 miles more than MK13 to a little under one tenth of a mile less than MK13. MK33 and similarly situated routes traverse 36 miles of upland woodland habitat, almost 7 more miles of upland woodland habitat than MK13 and 5 miles more than Staff MK15. MK33 and MK13 impact more bottomland/riparian woodland habitat than Staff MK15. MK33 and MK13 impact more bottomland/riparian woodland habitat than Staff MK15. MK33 and MK13 impact more bottomland/riparian woodland habitat than Staff MK15.

Specific arguments raised by Staff are addressed below.

#### TPWD

TPWD's participation in this docket is also discussed below. TPWD provided comments and recommendations regarding the Project in a letter dated September 24, 2010 (TPWD Letter) and through the testimony of four TPWD witnesses. TPWD asserts that construction of any of the

<sup>164</sup> LCRA TSC Ex. 23 at 1.

proposed routes would require almost entirely new ROW and take significant amounts of existing wildlife habitat. Although the TPWD Letter states its opposition to all routes in the Application, to the extent the Commission approves a transmission line in this docket, TPWD supports routes MK32 and MK33 because they would have the least adverse impact on fish and wildlife resources. The specifics of TPWD's recommendations are discussed below. 165

TPWD owns and operates the 16.1 acre Old Tunnel WMA in Kendall County, Texas, located within 500 feet of Links A3 and O4, the latter of which is part of proposed route MK 22. <sup>166</sup> TPWD opposes all routes that use Links A3 or O4 because of the expected negative impact to the public benefits of Old Tunnel WMA, and the Old Tunnel bat colony. Impacts on the bat colony are discussed separately below.

There is one major concern raised by TPWD regarding data collection for the TXNDD records that many parties, including LCRA TSC, specifically rely on. Due to lack of access to private property, the absence of TXNDD records at a specific site does not mean that the species does not occur there. Most TXNDD records are gathered from publicly accessible lands (parks and wildlife management areas) and highway ROW. Most of the impacted Project area, however, consists of privately owned ranch land. Endangered species and their habitat on private lands are little known due to this lack of access and state laws governing the collection and dissemination of biological information from private lands. As a result, much of the empty space on the map represents record gaps for which no information was available because they have not been surveyed. However, known TXNDD records for most species follow highway ROW, are located in state, county or city parks and preserves, or are found close to university campuses such as the one at Junction, where biologists or scientists are more likely to recognize an endangered species. TPWD argues the only way to determine if a species is present on a project is to conduct on-the-ground surveys in potential habitat at the time of year when the species is most likely to be present, and only with repeated visits.<sup>167</sup>

<sup>165</sup> Staff Ex. 7 at 78; TPWD Ex. 5.

<sup>166</sup> TPWD Ex. 1 at 3, 12; TPWD Ex. 3 at 4; LCRA TSC Ex. 1 at Table 4-1.

<sup>&</sup>lt;sup>167</sup> Staff Ex. 1, Appendix C at bates 55-56; TPWD Ex. 4 at 10-11.

The issue of insufficient information on endangered species and habitat raises a major concern for the ALJs over the use of TXNDD records to demonstrate potential impact of the routes. There are two primary problems that flow from this. First, surveys cannot be conducted as requested by TPWD. Second, the conclusion that the I-10 routes will take more habitat than central and northern routes is thrown into serious doubt, because the TXNDD records are an incomplete sample and the matter is more nuanced than counting the sheer amount of property taken.

As discussed below, there appears to be no reasonable remedy for the lack of species and habitat information in the study area. Limited access to private property rules out a series of Project area-wide surveys. And even if limited to a Commission-selected route, TPWD's proposal of multiple on-the-ground surveys in potential habitat at specific times of the year is simply unworkable for a project of this scope and within the CREZ timeframe. TPWD may be correct that the only way to establish species occurrence at a specific site is through such surveys. Nevertheless, the ALJs consider them too cumbersome, potentially costly, and time-consuming for implementation. Furthermore, without access to private property before the CCN is approved, there is no means for LCRA TSC to conduct the surveys.

As for selecting a route based on environmental factors, parties opposed to the I-10 routes reference their sheer length and TXNDD records to argue that these routes involve more habitat loss. While this may facially accurate, based on TPWD's clarification, the ALJs do not consider the absence of TXNDD records to establish the absence of species or habitat. Furthermore, as argued by TPWD, CVA, and other supporters of MK32 and MK33, the I-10 corridor is obviously fragmented to a much greater extent than the central routes, although those routes involve fragmentation as well. Fragmentation is discussed below.

To be clear, the ALJs do not discount the value of TXNDD records in this proceeding for certain purposes. TXNDD records, however, appear to have limited value in establishing the absence of a particular species or habitat in certain areas. As noted by Staff, a thorough analysis of

the impacts of a route on environmental integrity must also evaluate the type of habitat in which the endangered species is likely to be located.

Kerrville argues that TPWD's testimony and recommendations should be given little to no weight, because TPWD provided conflicting recommendations in this proceeding. As addressed above, the TPWD Letter appears to recommend rejection of all routes on environmental grounds, while TPWD witnesses and TPWD's Initial Brief recommend MK32 or MK33. Kerrville explains this change in position by noting that TPWD witness Dr. Karen Clary only reviewed the testimony of LCRA TSC, Staff, and CVA. Dr. Clary also admitted that she met with members of CVA. <sup>168</sup>

Kerrville raises a valid point. The ALJs would have preferred that Dr. Clary had reviewed more evidence in reaching her conclusions. However, she still possesses the qualifications to support her opinions and she did review evidence in this proceeding. As for TPWD's change in positions, the ALJs do not consider such a change to render TPWD's recommendations useless. To the contrary, TPWD's position is consistent in that it opposes the Project on environmental grounds, but that if a route must be selected, it prefers MK32 or MK33.

Kerrville also complains that TPWD focused only on wildlife habitat fragmentation to the exclusion of all other factors, such as impacts to upland woodlands or impacts to wetlands. <sup>169</sup> Again, while the ALJs prefer that a party's position be as developed as possible, TPWD addressed wetlands, creeks, and streams as specifically discussed below. Regardless, TPWD provided evidence in this case that the ALJs found valuable.

Kerrville criticizes TPWD's preference for MK32 or MK33 arguing that it is contrary to PBS&J's findings on ecological factors, which ranked Route MK13 first ecologically.<sup>170</sup> Kerrville argues that TPWD's preferred routes cross more Warbler habitat than others, in order to minimize

<sup>&</sup>lt;sup>168</sup> Staff Ex. 1, Appendix C at bates 52; Staff Ex. 7 at 59, 62, 75-77; PUC Staff Ex. 8.

<sup>169</sup> TPWD Ex. 4 at 13.

<sup>170</sup> Tr. at 1469-1470.

total habitat fragmentation.<sup>171</sup> PBS&J found that Route MK 13 crosses the least amount of potential Warbler habitat and the thirteenth least amount of upland woodland.<sup>172</sup> However, this again raises the issue of the limited utility of TXNDD records in comparative analysis, due to the lack of access to private lands. MK32 and MK33 parallel l-10, providing access for survey of habitat, while MK13 crosses a great deal of private land. As a result, the ALJs are not persuaded by this criticism of TPWD's route preference.

Finally, Staff, LCRA TSC, and a number of intervenors note that TPWD's recommendation is based solely upon environmental impacts and does not account for other factors the Commission must evaluate when approving a route, such as cost, constraints, prudent avoidance, or impacts on aviation. The ALJs expressly acknowledge the limits of TPWD's recommendation. However, solely from an environmental standpoint the ALJs agree with TPWD's preference for MK 32 or MK33.

#### b. Discussion

#### Land Fragmentation

Although many intervenors expressed concern over land fragmentation, it is one of the greatest concerns of those parties opposed to the central routes. From a fragmentation perspective, the ALJs conclude that the absence of a major highway or transmission line for much of the central study area argues against placing the line there and favors paralleling the I-10 corridor.

Parties opposed to the central routes generally argue that MK32 and MK33 are most preferable in terms of minimizing habitat fragmentation. TPWD's Dr. Clary and CVA's expert

<sup>171</sup> Tr. at 830-833.

<sup>172</sup> LCRA TSC Ex. 1, EA at 6.1.3.1 at 6-96 and Table 6-1; LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>173</sup> Tr. at 839,

<sup>&</sup>lt;sup>174</sup> For parties other than TPIVD and CVA who generally support these routes, see, Weinzierl Initial Brief at 8-9; Gillespie County and City of Fredericksburg Initial Brief at 9; Six Mile Ranch Initial Brief at 13. In the alternative,

Dr. Neal Wilkins testified that avoiding additional fragmentation of wildlife habitat is one of the most important environmental considerations in this proceeding – for TPWD it is the single greatest concern regarding the environmental impact of the line. Although there is relatively little existing habitat fragmentation within the MK study area, Dr. Clary testified, "this project has the potential to fragment wildlife habitat on a scale not seen since the construction of I-10." In fact, major highway ROW comprises the largest corridors of habitat fragmentation in the area, particularly the I-10 corridor. In contrast, the portion of the study area north of I-10 contains some of the "largest blocks of unfragmented wildlife habitat on the Edwards Plateau."

Dr. Wilkins testified that land fragmentation, and its consequence, is one of the greatest statewide challenges to wildlife management and conservation in Texas. In 2000, a report from the Governor's Task Force on Conservation concluded that "The fragmentation of . . . family owned farms and ranches poses perhaps the greatest single threat to our wildlife habitat and to the long-term viability of agriculture in Texas." <sup>177</sup>

Dr. Wilkins explained that development of a new corridor, which is in contrast with the surrounding landscape, is likely to stimulate current landowners to sell their property. Landowners are aware that the construction of ROW creates an opportunity for that area to be considered a compatible corridor, opening the door for the cumulative effects of widened ROW and additional construction for future pipelines and/or transmission lines. Dividing a large tract into smaller parcels causes a series of changes that often negatively impact wildlife management, natural resource conservation, and agricultural production. For instance, smaller operations impact economies-of-scale for wildlife management and animal agriculture. 178

some of these parties argue that if other factors make these routes unacceptable, MK15 is the next best option.

<sup>175</sup> TPWD Ex. 4 at 14, 20.

<sup>&</sup>lt;sup>176</sup> TPWD Ex. 5 at 6; TPWD Ex. 4 at 4, 13-14; CVA Ex. 1 at 17, 25.

<sup>177</sup> CVA Ex. 1 at 10,

<sup>178</sup> CVA Ex. 1 at 10-11.

Dr. Wilkins also testified that MK13 and all of the links contributing to the central routes cut through the middle section of lands managed by the Doss-Harper Wildlife Management Association (WMA). These landowners manage their wildlife resources in a cooperative that helps them overcome some of the inefficiencies common to land fragmentation. Some of these privately-managed lands have been managed for generations under the same ownership. Along Links b36, b50, b51, and b42-47, Route MK13 would run through the center of the Doss-Harper WMA for approximately 12 miles.<sup>179</sup>

CVA, TPWD, Weinzierl, and other opponents of a central route recommend a route that parallels the greatest extent of existing disturbed corridor, like the I-10 corridor, because habitat along highways is already fragmented. Dr. Wilkins explained that:

When a right-of-way is placed along a wide corridor such as I-10, the effects to the species are lessened due to the fact that the potential habitat removed . . . does not further fragment larger patches into numerous smaller patches. 180

As a result, these parties recommend MK32 and MK33 because they follow US 277 and I-10. As TPWD's witness, Dr. Clary concluded, "[s]uch a route would have the least adverse impact on wildlife and habitat in this part of the Edwards Plateau." <sup>181</sup>

In response, Staff and a number of other intervenors argue that the longer the transmission line traverses any habitat, the more damage it inflicts. These parties oppose MK33 and MK32, asserting that they cause more damage to habitat because they are longer – MK33 is the longest proposed route at 161.09 miles. From that perspective, MK13 is the most favorable route as it is shortest at 134.99 miles. Staff proposes that Staff MK15 is a fair compromise, because it falls between these two routes at 144.13 miles. <sup>182</sup>

Although the ALJs ultimately recommend Staff MK15, in terms of fragmentation, they are

<sup>179</sup> CVA Ex. 1 at 12-14.

<sup>&</sup>lt;sup>180</sup> CVA Ex. 1 at 17.

<sup>&</sup>lt;sup>181</sup> TPWD Ex. 5 at 6; CVA Ex. 1 at 17, 25.

<sup>&</sup>lt;sup>182</sup> LCRA TSC Ex. 23

not persuaded that it is superior to MK32 or MK33. The ALJs find the sheer counting of miles overly simplistic. The ALJs agree with TPWD, CVA, Weinzierl, and others that the I-10 corridor is already heavily fragmented, whereas the central and northern routes (to a somewhat lesser extent) are not. And to the extent that Staff and opponents of MK32 and MK33 rely on the TXNDD, TPWD has made clear that there is less information about the northern and central routes than the I-10 corridor due to limited access for sampling.

The ALJs do, however, agree with Staff's environmental evaluation of the P-Line routes. In particular, although those routes parallel a 138-kV transmission line for a considerable distance, Staff determined they were not preferable to other routing alternatives, in part, because of the environmental impacts of such routing. The benefits expected from routing parallel to an existing transmission line are not experienced in this situation because the existing footprint of the 138-kV transmission line is small and substantially re-grown such that it doesn't have a deleterious effect on the habitat. P-Line Intervenors provided considerable evidence that the existing line is in various stages of re-growth with prevalent groundcover and a moderate amount of woody vegetation. As a result, adding another much taller line with sizably larger structures and a wider ROW will have a more significant impact on the wildlife habitat, including endangered species habitat, than construction along more compatible ROWs such as roads or highways.

In response to concerns over fragmentation, the Company notes that the voluntary activities of many current landowners result in, or will result in, fragmentation including fencing and roads, clearing of cedar or brush, re-seeding with native grasses, improving structures, enhancing property for recreation, business, or family interests, and future development, all of which alter land's pristine

<sup>183</sup> Tr. at 829.

<sup>184</sup> P-Line Ex. 16 at 3.

condition. <sup>185</sup> In addition, LCRA TSC argues that land fragmentation also results from the decisions of individual landowners to subdivide and/or sell their property. <sup>186</sup>

While LCRA TSC is correct that landowner activities throughout the Project area results in fragmentation, the ALJs find that fragmentation associated with a project of this size and scope is qualitatively and quantitatively different from those activities. As argued by TPWD and CVA, the scale of the Project and its potential for land fragmentation rivals that of the creation of the I-10 corridor through the Hill Country. From a fragmentation perspective, the ALJs conclude that MK32 and MK33 are superior to other routes.

#### Oak Wilt

Intervenors opposed to a central route are also concerned that fragmentation could lead to the spread of Oak Wilt disease. Oak Wilt is caused by a fungus that clogs water-conducting vessels in infected oak trees, causing them to wilt and ultimately die. While Oak Wilt can be spread through the roots of oak trees, it can also be spread much longer distances by sap-feeding beetles that carry spores from infected trees and deposit them on "wounds" in uninfected trees. Once a new tree is infected, the disease will spread through root contact to other nearby trees at a rate of approximately 75 feet per year.<sup>187</sup>

Parties concerned about Oak Wilt argue that the central portion of the Hill Country, which is currently impacted by very little Oak Wilt, could become susceptible to the disease as a result of the cutting and pruning necessary to clear and maintain the ROW for the proposed line. Parties opposed to a central route argue that the impact will be greatest in the central portion of the study area. They note that approximately 700 to 1,600 live oaks per mile will be removed and another 200-500 live oaks per mile will need to be pruned. These parties argue that routes that follow existing disturbed corridors, where the trees are more likely to have been cleared or previously exposed to Oak Wilt,

<sup>&</sup>lt;sup>185</sup> LCRA TSC Ex. 11 at 9-10; LCRA Ex. 20 at 16. LCRA TSC points out that two intervenors – Triple Oaks Partners, Ltd and CEW Ventures have subdivided their land and are building roads and utilities for a residential community, and yet claim that their land is "untouched by man-made infrastructure" and offers "scenic views." Initial Brief of Triple Oaks Partners at 8, Initial Brief of CEW at 5; Tr. at 843-850.

<sup>186</sup> LCRA TSC Ex. 20 at 16.

<sup>&</sup>lt;sup>187</sup> CVA Ex. 2 at 5-6.

will pose less risk of increasing the spread of the disease. As a result, they argue that routes along the I-10 corridor, such as MK32, MK33, and variants of MK15, and other previously disturbed areas should be used to the greatest extent practicable to minimize the impact and spread of Oak Wilt. The ALJs agree and note that it reflects another reason the I-10 corridor is superior from an ecological perspective.

#### Warbler and Vireo

Potential habitat for both the federally and state-endangered Vireo and Warbler is likely to be encountered along most of the routes. There are known occurrences of the Vireo and Warbler along or near segments proposed as part of route alternatives for the Project. Data provided by Loomis Partners, Inc. documents that all of the routes cross potential Warbler habitat. Among the routes, MK13 crosses the least amount of known potential Warbler habitat (approximately 3.34 miles). But the ALJs again caution against giving too much weight to the absence of TXNDD records in areas on private land.

LCRA TSC argues that the presence of, or claimed potential habitat for Vireo should not be considered a conclusive factor or even a deciding factor in the choice between routes for several reasons. First, echoing TPWD's concerns, the Company explains that without ground inspection of particular ecological areas, it is difficult to impossible to determine the presence of suitable habitat for Vireo, due to particular species composition and configuration needed. Vireo habitat consists of patchy shrubs interspersed with open areas and cannot be identified by aerial photography. For that reason, USFWS does not accept aerial imagery interpretation as confirmation of the presence or absence of Vireo habitat. Thus, all routes cannot be equally evaluated for Vireo habitat.

Second, given the nature of the study area, the Company deems it likely that areas of actual inhabited Vireo habitat occur throughout the area and along most, if not all, routes. Consistent with

<sup>188</sup> CVA Ex. 2 at 9-13.

<sup>189</sup> LCRA TSC Ex. 20 at 13; LCRA TSC Ex. 1, EA 5-13 and 5-14.

<sup>196</sup> LCRA TSC Ex. 20 at 27.

TPWD's concerns over use of TXNDD records, LCRA TSC notes that while reported occurrences may be identified in TXNDD and brought forth by landowners, Vireo will likely occur on other routes and at other locations not documented presently. Additional locations of Vireo will likely be discovered post-certification and pre-construction on any route chosen. Thus, it is unlikely that potential habitat and actual Vireo can be avoided as part of the certification process.

Third, based on the Commission's past practices and the work of utilities with USFWS, accommodations for the species can be made through structure placement, ROW clearance and other forms of mitigation. Specifically, Mr. Reid stated that LCRA TSC could place structures in open areas or route around habitat that is identified in the field thereby minimizing the impact on Vireo. LCRA TSC asserts that this allows the Commission to accommodate a host of competing concerns in comparing potential routes.<sup>191</sup>

As for the Warbler, its occurrence and potential habitat is different from the Vireo. Due to species composition and configuration, it is possible to identify and map potential habitat with some accuracy through certain types of aerial photography. Attempts can then be made to minimize/avoid potential habitat, in addition to reviewing TXNDD data in making comparisons.

CVA, however, takes issue with LCRA TSC's quantification of the impact to Warblers and Vireos. CVA argues that the Company simply quantified the total length of each proposed route that would cross potential habitat, rather than examining which routes would result in the greatest additional habitat fragmentation. According to Dr. Wilkins, "it is not necessarily the length of potential habitat cleared that is relevant, but it is the ultimate habitat fragmentation created that is the most relevant metric" in evaluating impacts to Warblers. [92]

Nevertheless, as with the Vireo, the Company argues the presence of potential habitat or even the occurrence of Warbler along a route is not a fatal flaw, but rather one of many issues to be

<sup>&</sup>lt;sup>191</sup> LCRA TSC Ex. 9 at 29; Tr. at 1200.

<sup>&</sup>lt;sup>192</sup> CVA Ex. 1 at 14-15, 17, 25,

evaluated by the Commission. LCRA TSC argues that Warbler populations are not inconsistent with either existing or newly-constructed transmission line ROW.<sup>193</sup>

Finally, the Company notes that transmission line projects in Texas have been successfully constructed through known occupied habitat for Warbler and Vireo. The Commission-selected route for the LCRA TSC Segovia transmission line in Kimble County (Docket No. 20313), which parallels Link b23a in this docket, was routed through known occupied habitat of the Warbler. Through informal consultation with the USFWS, the line was successfully placed and constructed. CPS Energy's portion of the Cagnon-Kendall transmission line passed through known occupied habitat of the Warbler in Bexar County. Through formal consultation with USFWS, the line was constructed and CPS Energy voluntarily conducted three years of monitoring surveys for Warblers. The number of Warblers and Warbler territories in proximity to the line has increased since the line was constructed. Finally, the Morgan Creek-Twin Buttes-Red Creek-Comanche transmission line (Docket No. 22798) was routed by PBS&J, certificated by LCRA TSC, and constructed by American Electric Power Co. on behalf of LCRA TSC through known occupied habitat and high quality potential habitat of the Vireo in an area north of San Angelo with informal consultation with USFWS.

The ALJs conclude that Vireo and Warbler habitat are likely to be present throughout the Project area, regardless of the route chosen. As discussed above, the TXNDD records may not reflect the actual presence of habitat or species. Based on the evidence, the ALJs conclude that some impact on the Vireo or Warbler should be assumed. Nevertheless, LCRA TSC has a demonstrated capacity in dealing with endangered species and implementing mitigation efforts.

<sup>193</sup> LCRA TSC Ex. 9 at 29-30.

<sup>&</sup>lt;sup>194</sup> Application of Lower Colorado River Authority to Amend Certificate of Convenience and Necessity for a Proposed 138 kV Transmission Line in Kimble County, Docket No. 20313 (May 21, 1999).

<sup>&</sup>lt;sup>195</sup> LCRA TSC Ex. 20 at 15; Application of West Texas Utilities Company to Amend Certificate of Convenience and Necessity for Proposed Transmission Line in Sterling, Coke, Tom Green, Concho, Coleman, and McCullough Counties, Docket No. 22798 (Aug. 10, 2001).

Creeks, Streams, and Rivers

Several intervenors raised concerns regarding environmental impacts on creek and river crossings. As set out below, each alternative route involves several such crossings. Construction in a flood plain is also a concern because it may impede the flow of water or result in erosion and sedimentation impacts. Returning to Staff's three representative routes, Staff notes that MK33 impacts three times more miles of 100-year flood plain than MK13 and twice as many miles as Staff MK15. MK15.

The EA notes that length parallel to streams and rivers is a highly significant environmental factor. MK13 has 1.34 miles parallel to rivers and streams, the lowest length of the routes listed in LCRA TSC Ex. 26. MK32 and MK33 parallel 1.93 and 1.82 miles, respectively. Staff MK15 has 2.46 miles. The P-Line routes range between 3.49 and 3.73 miles, the highest among those routes. Stated another way, Staff's route parallels 0.64 miles more than MK33 and 1.12 more miles than MK13, though it crosses fewer rivers than either. 198

Staff MK15 and MK32 have only two river crossings, while MK13 and MK33 have four river crossings each. The P-Line routes are the highest with five river crossings each. MK13 and MK33 have among the lowest number of stream crossings, at 144 and 143, respectively. MK32 has 154 crossings, while Staff MK15 has 160. The P-Line routes cross between 186 and 190 streams, the highest among the routes listed in LCRA TSC Ex. 26. 199

LCRA TSC has established that creek and river crossings can be spanned by the line in a manner that is technically feasible and also minimally disruptive of natural resources in the surrounding area. In order to address construction effects near rivers and creeks, LCRA TSC intends to implement appropriate erosion control measures as described in sections 1.5, 5.1.2, 5.1.3, and

<sup>196</sup> LCRA TSC Ex. 1, EA at 5-4.

<sup>&</sup>lt;sup>197</sup> LCRA TSC Ex. 26.

<sup>198</sup> LCRA TSC Ex. I, EA at 6-84; LCRA TSC Ex. 26.

<sup>199</sup> LCRA TSC Ex. 26.

5.1.4 of the EA. LCRA TSC will also develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to prevent silting of bodies of water, including creeks, rivers, and springs. The SWPPP will be in effect during all phases of construction and until re-growth is achieved.<sup>200</sup>

LCRA TSC expects that the Project will not adversely impact water resources and streams, including Ecologically Significant Stream Segments (ESSS). TPWD has designated ESSS throughout the state based on criteria related to "biological function, hydrological function, riparian conservation areas, water quality, aquatic life, aesthetic value, and the presence of threatened or endangered species or unique communities." In its April 1, 2010 letter to LCRA TSC, TPWD stated that it "strongly recommends that the proposed project avoid any adverse impacts to . . . ESSSs." Due to the nature of the study area, all of the route options would cross at least one ESSS and many of the routes will cross more than one ESSS, some at more harmful locations than others. Nevertheless, LCRA TSC maintains that there will be no adverse impact in light of the Company's proposals for spanning creeks and other measures that are intended to be minimally disruptive of natural resources in the surrounding area. <sup>203</sup>

Weinzierl Ranch notes that all routes using Links b21c or z4, b33 or z5, b34, or b35a, will cross the James River ESSS, and the majority of central routes use one of these links.<sup>204</sup> In addition, all routes that use Links b44, b50b, b52, or O3 would cross the Pedernales River ESSS (most of the MK routes use one of these links). For example, Route MK13 crosses both the James River on Link b33, as well as the Pedernales River on Link b50b.<sup>205</sup> Weinzierl points out that Staff MK15, MK32, and MK33 cross neither. Because these routes travel south to parallel the 1-10 corridor, they contain a single ESSS crossing—the Fessenden Branch.<sup>206</sup> Further, the Fessenden Branch crossing

<sup>&</sup>lt;sup>200</sup> LCRA TSC Ex. 7 at 28-29.

<sup>&</sup>lt;sup>201</sup> LCRA Ex. 1, EA at 2-15 to 2-16; see also 31 TAC § 357.8.

<sup>&</sup>lt;sup>202</sup> LCRA Ex. 1, EA at Appendix F.

<sup>&</sup>lt;sup>203</sup> LCRA TSC Ex. 14 at 18; LCRA TSC Ex. 20 at 45-46; LCRA TSC Ex. 1, EA at 2-15 to 2-16, 5-2 to 5-8, and Fig. 3.

<sup>&</sup>lt;sup>204</sup> LCRA TSC Ex. 1, EA at Fig. 3-1c, g; LCRA Ex. 2 at Exhibit SM-2.

<sup>&</sup>lt;sup>205</sup> LCRA TSC Ex. 1, EA at Fig. 3-1d, g; LCRA Ex. 2 at Exhibit SM-2.

<sup>&</sup>lt;sup>206</sup> LCRA TSC Ex. 1, EA at Fig. 3-1g.

on Link b29d is at a previously disturbed location, where the stream is already crossed by I-10.<sup>207</sup> As a result, Weinzierl argues that this crossing poses a much lower impact than the James River and Pedernales River crossings on the central routes.

The Company anticipates potential impacts to mussel species to be minimal. The Commission has found that the appropriate way to address potential mussel impacts is to examine carefully the factual assertions concerning the impacts and consider whether standard construction techniques would alleviate any potential impacts. In this case, the Company argues that no impact has been demonstrated and construction techniques are adequate to deal with potential impacts. Although certain links among the KG routes cross the Live Oak Creek mussel sanctuary, LCRA TSC will span the creek upstream of the lower dam at Lady Bird Johnson Park. As a result LCRA TSC argues that impacts to this particular mussel sanctuary will be minimal.<sup>208</sup>

Six Mile Ranch notes that the headwaters of the San Saba River located between FM 864 in Menard County upstream and Fort McKavett in Menard County is an ESSS. This segment contains one of only four known remaining populations of the state-listed Texas Fatmucket freshwater mussel and one of only four known remaining populations of the state-listed Texas Pimpleback freshwater mussel. TPWD recommends that the proposed project avoid any adverse impacts to this ESSS. 209 While the ALJs are confident that LCRA TSC can minimize any impact to this ESSS, the ALJs nevertheless consider this another reason to avoid routes that impact Fort McKavett.

Although the ALJs recommend against the P-Lines, the P-Line Intervenors note that TPWD's comments and P-Line Intervenors' witness Kevin Ramberg's testimony reference the presence of two mussel sanctuaries along MK-22, MK-23 and MK-24, including the San Saba River Mussel sanctuary and the Live Oak Creek TPWD Mussel Sanctuary (crossed by KG routing links, as well). Mr. Ramberg also testified that Segment P1 crosses limestone considered the likely recharge zone of the Clear Creek Gambusia karstic spring cave complexes, which are the habitat for a

<sup>&</sup>lt;sup>207</sup> LCRA TSC Ex. 1, EA at Fig. 3-1g.

<sup>&</sup>lt;sup>208</sup> LCRA TSC Ex. 1, EA at 5-15; LCRA TSC Ex. 20 at 47.

<sup>&</sup>lt;sup>209</sup> TPWD Ex. 4 at 32-34; LCRA TSC Ex. 1, EA at 2-15.

federally-listed endangered fish, the Clear Creek Gambusia. The Clear Creek Gambusia exists only in the Clear Creek stream complex.<sup>210</sup>

McGinley L-Ranch and Armstrong Exempt Trust argue that along MK13, the land in the area of segments b36, b50a, and b51 is sensitive in many ways. These links (among others throughout the study area, including the P-Lines) cross karstic terrain formed by the dissolution of limestone. The terrain is generally characterized by sinkholes, caves, cavities, and depressions that channel water underground. "Karstic formations are web-like and interconnected to the degree that a perturbation in a formation may have a result in another formation long distances away." Heavy equipment for construction of the line as well as the installation of the poles themselves can disturb the surface and subsurface water systems and their flow back into an aquifer. LCRA TSC acknowledged that with caves near the surface "you can impact it [the cave] and have issues . . . [with] installing foundations. [LCRA] prefer[s] to find out about them in advance, relocate structures, do things not to encounter them when you drill a hole to install a foundation." The McGinley L-Ranch's hydrology system plays a part in actively recharging the Edwards aquifer. The McGinley L-Ranch's springs also serve as the headwaters for Threadgill Creek, a tributary to the Llano River, in turn a tributary to the Colorado River. If the line were built on these links, some springs on the McGinley L-Ranch would be within 200 and 400 yards of the line.

Although LCRA TSC has established that it can safely span creeks and streams, the ALJs find that issues associated with potential risks to mussel sanctuaries, karstic formations, and ESSS as factors that reinforce the unattractiveness of the P-Lines, MK13, and other central routes from an environmental perspective. To the extent that the I-10 links may implicate floodplain issues, LCRA TSC SWPPP may be able to prevent or mitigate silting of bodies of water, including creeks, rivers, and springs until re-growth is achieved. In particular, streams, rivers and floodplains along I-10 have already been impacted, unlike much of the central and northern Project areas.

<sup>210</sup> Staff Ex. 1 at 67; P-Line Ex. 6 at 3-4.

<sup>211</sup> P-Line Ex. 3 at 6.

<sup>212</sup> Tr. at 236.

<sup>213</sup> McGinley Ranch L- Ex. 1 at 16; McGinley L Ranch Ex. 2 at 5-10; McGinley L- Ranch Ex. 3 at 10.

Old Tunnel WMA and Bat Issues

Old Tunnel WMA issues are also generally discussed under Recreation and Park Areas. However, certain issues specific to environmental concerns warrant further discussion here. TPWD is concerned that the line, if placed on Links A3 or O4, would result in bat mortality and possible abandonment of the colony. As a result of potential harm to the Old Tunnel as an environmental and recreational resource, TPWD opposes any route that uses these links.

Professor John Baccus, who testified on behalf of TPWD, is an expert on human impacts on birds and mammals through land disturbance or habitat modification. In particular, he has spent a great deal of time researching and publishing articles on bat populations in Texas, New Mexico, Mexico, and Asia. Professor Baccus testified that biologists have recently become alarmed at the risk posed to birds and bats by power lines. In particular, he articulated concerns raised by the proximity of a transmission line to the Old Tunnel, in that: based on observed flight patterns, the bats will fly into the area of the line; subsonic, ultrasonic and ambient noise may place the colonies at risk and in fact, may attract bats to the line; and electromagnetic radiation may affect the bats' navigation capacities. 214

LCRA TSC argues that for segments A3 and O4 structure designs, all conductor-to-conductor and conductor-to-tower clearances are well above the recommended clearance of 60 inches, therefore electrocution of bats should not be an issue with this transmission line. The Company also argues that a lack of bat collisions with respect to existing transmission lines demonstrates there is no serious risk of collisions for bat populations from the line. LCRA TSC notes that no evidence exists of any collisions with the existing 138-kV line near Old Tunnel WMA despite reported observations of bat emergences on over 2500 occasions. Further, LCRA TSC argues there is no evidence of bat collisions in similar situations, such as with the Austin Energy

<sup>&</sup>lt;sup>214</sup> TPWD Ex. 3 at 6-8.

double-circuit 138-kV transmission line near the Congress Avenue Bridge bat colony. 215

LCRA TSC also argues that TPWD's concerns are speculative and lack evidentiary foundation, because some of the studies cited by Dr. Baccus are speculative, contradictory, or do not focus sufficiently on bats, as opposed to birds. While these are valid criticisms, they do not completely undermine the evidentiary basis for TPWD's concerns. Dr. Baccus' testimony was supported by literature and symposiums, with which he was familiar. Most importantly, these studies and Mr. Baccus' testimony are sufficient evidentiary support for TPWD's concern that the line may have some impact on bat populations, even if the scientific research is conflicting as to the nature of that impact. The ALJs find that TPWD has raised genuine questions about the potential impact of transmission lines on the bat colonies at the Old Tunnel. The ALJs do not recommend a route using any of the links opposed by TPWD regarding the Old Tunnel.

Finally, Links b34 and b36 of MK13 cross the headwaters of the James River basin and approach the Little Devil's River. As the route crosses the Little Devil's and James Rivers, it comes in close proximity to the Eckert James River Bat Cave Preserve, with one of the largest known concentrations of breeding Mexican free-tailed bats anywhere. The ALJs' conclusion that TPWD raised valid concerns over the line's impact on bat colonies applies equally to this bat cave preserve.<sup>217</sup>

<sup>215</sup> LCRA TSC Ex. 14 at 33; LCRA TSC Ex. 20 at 50,

<sup>&</sup>lt;sup>216</sup> LCRA TSC Ex, 16 at 12-14; LCRA TSC Ex. 20 at 48-52.

<sup>&</sup>lt;sup>217</sup> CVA Ex. 1 at 12-14.

#### e. Conclusion

The central study area, and to a somewhat lesser extent the P-Lines, are relatively unfragmented compared to the I-10 corridor. Land fragmentation and Oak Wilt are major environmental concerns for the ALJs -- the impact of the line is expected to be greatest in the central study area, where there may be relatively fewer TXNDD records. Although there are also concerns over flood-plains, and paralleling and crossing rivers, creeks, and streams, LCRA TSC has a demonstrated ability to span these areas and use SWPPP. From an environmental perspective, the ALJs agree with TPWD, Weinzierl, and CVA that paralleling US 277 and the I-10 corridor is the best way to avoid major fragmentation associated with the line's new ROW. As a result, the ALJs recommend MK32 or MK33 as the routes, best designed to avoid all of the negative consequences of habitat fragmentation.

However, the ALJs are aware that other factors weigh against selecting routes MK32 or MK33. In recognition of these factors, certain parties opposed to a central route request that the Commission use the highest length of compatible corridors possible. Although Staff MK15 is the ultimate recommendation of the ALJs, MK62 maximizes the length of Staff MK15 parallel to I-10. As a result, the ALJs rank MK62 second from an environmental standpoint (along with MK61). Of the remaining routes, Staff's is best. Nearly 60 miles of MK15, or 44% of its total length, would parallel existing ROW, including a substantial distance along I-10. MK15 would parallel a much greater length of existing ROW than Route MK13 or other central routes. As a result, the ALJs recommend Staff MK15 as clearly preferable to any of the central routes in terms of minimizing habitat fragmentation.

<sup>&</sup>lt;sup>218</sup> LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>219</sup> LCRA TSC Ex. 1, EA at 6-85 to 6-92.

# 6. The Effect of Granting the Certificate on the Ability of this State to Meet the Goal Established by Section 39.904(a)

In order to fulfill the renewable energy goals established by the Legislature in PURA § 39.904(a), the Commission adopted, in Docket No. 33672, a transmission plan to deliver renewable energy to the market. In Docket No. 35665, the Commission designated certain transmission service providers to build the required transmission facilities. In Docket No. 33672, the Commission determined that the transmission facilities identified in its final order, including the Project, were necessary to deliver to customers the renewable energy generated in the CREZ. As a designated CREZ project that will provide transmission capacity for the delivery of renewable energy, the ALJs find that the Project plays a key role in helping this State to meet the goal established by PURA § 39.904(a).

## 7. Engineering Constraints

#### a. Kimble County Airport and Llano River Floodplain

The Kimble County Airport, located just north of I-10 in Junction presents one of the more significant engineering constraints. The runway is oriented north-south, and the transmission line if it is approved along either the MK 15 routes using Links b19b and b19c or the MK 32 or 33 routes using Link Y11 will pass perpendicular to the runway either to the north or the south of the airport. Construction of the line along any of the links will require Federal Aviation Administration (FAA) notification. Link Y11 also runs through the Llano River floodplain, further complicating construction of the line.

#### i. Links b19b and b19c, North of the Airport

LCRA TSC has proposed routing options that it asserts will maintain reliability of the line, are feasible to construct, and which LCRA TSC believes are likely to be accepted by the FAA.

<sup>220</sup> CVA Ex. 7 at 3.

Links b19b and b19c to the north of the airport are segments proposed to bypass the airport restrictions but still permit routes that generally follow the I-10 corridor.

While the routes north of the airport using Links b19b and b19c would technically violate the FAA Part 77 imaginary surface and would require FAA notification, LCRA TSC believes that the segment could be built without FAA objection. The proposed links are located behind and below the crest of a hill that lies in the northern approach to the airport.<sup>221</sup> The hill itself violates the Part 77 imaginary surface rules because the imaginary surface runs through the hill.<sup>222</sup> Construction along segments b19b and b19c would be below the existing obstacle clearance slope and well below the instrument approach slope.<sup>223</sup> As a result, it is LCRA TSC's belief, based upon its experience with the FAA and upon the opinion of its airport consultant, that the FAA would not object to the construction.<sup>224</sup> In addition, there are adjustments that LCRA TSC could make to work out a solution with the FAA, if necessary. Lower structures could be used, minor route deviations could move the structures to locations slightly more downhill from the airport, or warning lights could be added.<sup>225</sup>

While construction along these links would require FAA notification, construction is feasible because the proposed line would not violate the published obstacle clearance slope or instrument approach slopes and room exists for minor route adjustments, reduced height structures or warning lights should such adjustments be required by the FAA.

<sup>&</sup>lt;sup>221</sup> LCRA TSC Ex. 14 at 35-36 and CDS-5REB and CDS-6REB.

<sup>&</sup>lt;sup>222</sup> Id.: LCRA TSC Ex. 15 at 9.

<sup>&</sup>lt;sup>223</sup> LCRA TSC Ex. 15 at 9-11; LCRA TSC Ex. 14 at 35-36.

<sup>&</sup>lt;sup>224</sup> LCRA TSC Ex. 15 at 11.

<sup>&</sup>lt;sup>225</sup> LCRA TSC Ex. 15 at 9-11; LCRA TSC Ex. 14 at 35-36.

# ii. Link Y11, South of the Airport

Link Y11 is proposed as a part of the routes that follow I-10 through the Junction area, including Route MK 33.<sup>226</sup> Construction along Y11 would locate the line approximately 1,200 to 1,800 feet from the south end of the airport's primary runway. In addition to the constraint presented by the airport, this area presents unique engineering challenges as it is in a flood plain and is on a narrow strip of land between I-10 and the northern bank of the Llano River north of Junction. As a result, there is limited room for route adjustments to avoid the airport because the main flood channel of the river lies to the south and the location of the city itself precludes a move farther south to avoid the flood channel.<sup>227</sup>

Considering these conditions, LCRA TSC tried to design an overhead solution that would avoid the high cost of underground construction. Such an overhead solution had to stay beneath the published obstacle clearance slope but permit sufficient surface clearance over flood levels so that line clearances could be maintained and the line could remain in service during flood events. An overhead solution is not available in the professional engineering opinion of LCRA TSC's transmission design staff because it would not meet industry standards.<sup>228</sup> The only solution that will permit a safe, reliable transmission line along this segment that will achieve the purpose for which the PUC has ordered LCRA TSC to construct the line is an underground transmission line for approximately one-half mile to get past the airport restrictions. Given the high cost of this solution (approximately \$54 million for that one-half mile), the links bypassing the airport to the north are preferable.<sup>229</sup>

<sup>&</sup>lt;sup>226</sup> LCRA TSC Ex. 7 at 35-36; LCRA TSC Ex. 14 at 35-38.

<sup>&</sup>lt;sup>227</sup> LCRA TSC Ex. 7 at 35; LCRA TSC Ex. 14 at 36-38; Tr. at 1463-64.

<sup>&</sup>lt;sup>228</sup> LCRA TSC Ex. 7 at 35; Tr. at 1216.

<sup>&</sup>lt;sup>229</sup> LCRA TSC Ex. 7 at 35; LCRA TSC Ex. 14 at 36-38; Tr. at 1188-1191, 1462-1466.

# iii. Intervenors' and Staff's Arguments

The Segrest parties and CVA addressed the concerns of routing around the Kimble County Airport. The Segrest parties support the preferred route and the P-Line routes. They own property along Links b19b and b19c and do not want the transmission line routed through their property. They argue that because there may be difficulties in constructing the line either north or south of the airport, the line should be placed much farther to the north along the preferred route or the P-Line.<sup>230</sup>

Although CVA advocates for a route that parallels I-10 for its entire length, CVA recognizes that the additional cost of \$54 million to bury the transmission line south of Kimble County Airport along Link YII is prohibitive. CVA argues, however, that the line does not have to be buried along Link YII. CVA's expert, Frank McIllwain, is a pilot and an engineer with airport design experience. Mr. McIllwain testified that he believes the FAA would not object to construction of the transmission line on Link YII if the heights of the structures do not exceed 61 feet. LCRA TSC's expert witness, William Griffin, P.E., acknowledged on cross examination that a structure 60 feet tall would not be determined by the FAA to be an obstruction to air navigation. A structure of that height would, however, have reliability issues in the event of a flood because the wires would be close to the rising water level, which would require taking the line out of service in the event of a flood. For that reason, LCRA TSC cannot build a safe and reliable above-ground transmission line south of the Kimble County airport.

LCRA TSC, the entity that will be responsible for the safe construction, operation and maintenance of the D to K line, testified that an above-ground line along I-10 near the Kimble

At the hearing, the Segrest parties proposed a route identified as Segrest MK15, which was routed south of the airport and included the underground construction on Link Y11. In briefing, Segrest no longer advocated for its route because of the cost of underground construction and advocated instead for MK13 or one of the P-Lines. The routes that are north of the Kimble County airport cross the Segrest parties' properties.

<sup>&</sup>lt;sup>231</sup> CVA Initial Brief at 9.

<sup>&</sup>lt;sup>232</sup> CVA Ex. 7 at 6.

<sup>&</sup>lt;sup>233</sup> Tr. at 1303, 1462.

<sup>&</sup>lt;sup>234</sup> LCRA TSC Ex. 7 at 35.

County airport is not a safe, reliable, and viable option.<sup>235</sup> For these reasons Staff does not believe it would be prudent to recommend construction of the line on Y11 except as an underground facility. Staff also agrees with CVA that the cost of underground construction is prohibitive.

#### iv. Analysis

Although the ALJs agree with CVA and TPWD that environmentally, the best choice for the line would be to parallel I-10 as much as possible, underground construction along Link Y11 is too expensive to recommend. The weight of the evidence does not support CVA's contention that Link Y11 can be built above ground. Although Links b19b and b19c may require some modification if the FAA expresses concern about the construction, those modifications would be considerably cheaper than building the line underground at Link Y11. Given that LCRA TSC is responsible for ensuring that the line is safe and reliable, the better option is to route the line north of the Kimble County Airport. Staff, Weinzierl, and CVA alternate proposal MK32 all route around the airport along Links b19b and b19c. Staff MK15 best balances the factors of cost, paralleling ROW, prudent avoidance, and environment. MK32 and 33 are better in terms of the environmental factors but are poor on cost and prudent avoidance. Therefore, the ALJs recommend Staff MK15.

#### b. P-Line Concerns

The P-Line Intervenors raise concerns about the difficulty of constructing transmission lines along the P-Lines due to the geology of caves and granite.

Mason County is geologically "karstic," which means the terrain is formed by the dissolution of bedrock, and is generally characterized by sinkholes, caves, cavities and depressions that channel water underground. These formations are interconnected in such a way that disturbances in the formation may impact another formation some distance away. CRA would prefer to avoid caves when constructing transmission lines/structures, because encountering them when drilling for

<sup>235</sup> Tr. at 1404-1406.

<sup>&</sup>lt;sup>236</sup> P-Line Ex. 24 at 15 (picture by Mr. Meinzer from his book Texas Hill Country, showing caves).

<sup>&</sup>lt;sup>237</sup> P-Line Ex. 3 at 6.

foundations is problematic. P-Line Intervenors assert that because the karstic features are not necessarily visible from the surface, construction of the project through Mason County would be complicated by the delays that would occur as caves are encountered, which would require LCRA to find another area to which it could re-locate the transmission structures.<sup>238</sup>

The Llano, or Central Texas, Uplift is a central basin having a rolling floor studded with rounded granite hills 400 to 600 feet high.<sup>239</sup> The foundation requirements for transmission structures vary depending on soil types. Because granite is the dominant soil type in the Llano Uplift, in Mason County the cost for construction of any of the P-Lines would be higher regardless of the type of structures used.<sup>240</sup>

LCRA TSC has indicated, and it is undisputed, that it can construct the transmission line along any route. There is no evidence that it cannot construct the line along the P-Line routes. However, as discussed in other sections, the P-Line routes are among the least desirable in terms of reliability issues, cost, and environmental effects.

#### 8. Costs, Using Existing Compatible ROW, and Prudent Avoidance

## a. Tension Between Cost, Paralleling ROW and Prudent Avoidance

No party disputed LCRA TSC's cost estimates. The 60 filed routes for the McCamey D to Kendall transmission line range in cost from \$251.8 million to \$406.8 million.<sup>241</sup> Of the routes in discussed in depth at the hearing, the cost estimates range from \$266.4 million (MK13) to \$406.8 million (MK33). Staff MK15 is estimated to cost \$302.3 million. The P-Line routes all cost over \$315 million.<sup>242</sup>

<sup>&</sup>lt;sup>238</sup> Fr. at 236.

<sup>&</sup>lt;sup>239</sup> P-Line Ex. 10 at Ex. BG-2 and BG-3 (photos); P-Line Ex. 24 at 12 - 13.

<sup>&</sup>lt;sup>240</sup> LCRA TSC Ex. 7 at 14 and CDS-2.

<sup>&</sup>lt;sup>241</sup> LCRA TSC Ex. 14, Ex. CDS-2REB at 4.

<sup>&</sup>lt;sup>242</sup> LCRA TSC Ex. 26.

Although MK13 is the least expensive route in contention at the hearing, the difference in the cost estimates associated with using MK13 does not outweigh the benefits associated with paralleling as much existing cleared ROW as is feasible. Although Staff MK15, MK61, 62, and 63, and CVA's MK32 are more expensive than LCRA TSC's preferred route, they parallel I-10 for a much greater distance than the preferred route, thereby avoiding ranch land located in the central part of the study area. These areas north of I-10 in the study area are remote, largely unfragmented, and sparsely populated. This region includes the "virgin ranch" lands to which Commissioner Smitherman referred when the Commission delayed this project and ordered the study of addition routes, including the I-10 corridor. The preferred route also parallels parcel lines for the least distance of any of the routes in contention. Staff's route parallels Ranch Road 1624 to merge with I-10, making it the most western route that does not follow Highway 277. None of the filed routes use existing ROW.

The table below illustrates the tension in this case between the high environmental and aesthetic impact of not following existing ROW compared to the expected lower cost of a shorter, straighter route.<sup>244</sup> It also shows how many habitable structures would be affected by the route.

<sup>&</sup>lt;sup>243</sup> See, e.g. TPWD Ex. 4 at 14; Tr. at 827-828; CVA Ex. 9 at 9-10.

<sup>&</sup>lt;sup>244</sup> This table is derived from LCRA TSC Ex. 26.

| Route               | Overall length | Length paralleling existing ROW <sup>245</sup> | Cost in millions | Number of habitable structures |
|---------------------|----------------|--|------------------|--------------------------------|
| MK13<br>(preferred) | 134.99         | 39.34  | \$266.4          | 18                             |
| MK15                | 135.63         | 59.76  | \$286.8          | 45                             |
| Staff MK15          | 144.13         | 79   | \$302.3          | 55                             |
| MK22                | 155.29         | 94.17  | \$326.4          | 44                             |
| MK23                | 151.84         | 80.75  | \$315.6          | 43                             |
| MK24                | 151.5          | 87.53  | \$315.9          | 37                             |
| MK32                | 164.42         | 130.25   | \$349.3          | 151                            |
| MK33                | 161.09         | 132.96   | \$406.8          | 153                            |
| MK61                | 133.31         | 60.86  | \$287.3          | 118                            |
| MK62                | 141.81         | 80.09  | \$302.9          | 128                            |

The higher habitable structure counts along MK32, 33, 61, and 62, are primarily a result of the line running parallel to I-10 through Kerrville.

P.U.C. SUBST. R. 25.101(a)(4) defines the term "prudent avoidance" as "the limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort." Essentially, prudent avoidance includes the consideration of reasonable and cost-effective routing adjustments to limit EMF exposure by minimizing the number of habitable structures in close proximity.

It is undisputed that all of LCRA TSC's filed routes are consistent with the Commission's prudent avoidance policy.

<sup>&</sup>lt;sup>245</sup> This section includes any ROW paralleled, whether highway, transmission line, pipeline, or road. For the P-Line routes (MK22, MK23, and Mk24), it includes the existing 138-kV line that may not be compatible ROW with a 345-kV CREZ line.

#### b. Best Balance of Cost, Paralleling, and Prudent Avoidance

Because all filed routes comply with the Commission's policy on prudent avoidance, no route can be completely excluded on the basis of prudent avoidance alone. While the preferred route has the fewest habitable structures, it is weak environmentally and parallels significantly less existing ROW than other routes. As discussed throughout this PFD, given the length of this line, the characteristics of the Hill Country, and the tremendous opposition to routing the line through the Hill Country, a better solution is to parallel more existing cleared ROW, such as I-10.

CVA's two preferred routes parallel as much existing highway ROW as possible. Staff MK15 parallels I-10 but not Highway 277, thereby reducing the cost. Staff's preferred route also uses Links b84 and b86, which bisect AC Ranches. AC Ranches has agreed to have the transmission line routed through its property. Because a landowner along those links has agreed to take the line, Staff recognized that agreement as an indication of community values and recommended routing the line along those links. However, other landowners along b84 and b86 are members of CVA and oppose the line on those links and others not paralleling the highway.

The parties agree that running the transmission line along I-10 south of the Kimble County Airport underground is prohibitively expensive. Therefore, a better recommendation is to follow I-10 as much as possible, as Staff MK15 does, deviating north of the Kimble County Airport, and deviating north of Kerrville. Going through Kerrville along MK33, 61, or 62, adds several habitable structures but it avoids cutting through the Tierra Linda Ranch subdivision. The habitable structures along the links that run through Kerrville include 59 habitable structures along Links Y18 and Y19b. Of these 59 habitable structures, 17 would need to be relocated. Of the 17 habitable structures identified as being located within the right-of-way near Interstate 10 in the vicinity of Kerrville, only six would be within the ROW if LCRA TSC constructed the line using a 100' instead of a 140' ROW for this portion of the line. Additionally, the City of Kerrville is concerned with the

<sup>246</sup> Staff Ex. 1 at 25.

<sup>247</sup> Tr. at 706.

<sup>248</sup> Tr. at 1317-1324.

line running close to the city and its growing population.<sup>249</sup> Both Kerrville and Kerr County are concerned that running the transmission line either parallel to I-10 or deviating just to the north of I-10 will impact existing and future development.<sup>250</sup>

If the line deviates round Kerrville using Link b56, which must be used if the line deviates around Kerrville from the west along I-10, it will affect the Tierra Linda Ranch subdivision. <sup>251</sup> The line would parallel an existing pipeline easement through the subdivision. Landowners in Tierra Linda, both those directly affected by the proposed line, and those who are not directly affected by the proposed line intervened to argue that the line should not go through their subdivision.

LCRA TSC identified 15 habitable structures within 500' of the ROW centerline along Link b56 within Tierra Linda Ranch. One structure lies within 69 feet of the proposed centerline.<sup>252</sup> These habitable structures lie along a linear distance of approximately ¾ mile, or 4,000 feet.<sup>253</sup> Thus, Tierra Linda argues that the density of the housing development along with the vocal opposition of its homeowners' association should weigh strongly against routing the transmission line through the subdivision.

Whether a route is chosen that runs along I-10 through the northern portions of Kerrville or deviates around Kerrville through the Tierra Linda Ranch subdivision, landowners will be affected. Some structures along I-10 will have to be moved if the line goes through Kerrville. But the northern portions of Kerrville are already affected and bisected by I-10. I-10 is an exiting disturbance in the landscape that is not natural or scenic. Moving the line into an area that does not have a large scar across the landscape already is more damaging than placing it along an already-disturbed area. Not only is it better environmentally, as TPWD and CVA argue, but it helps to

<sup>&</sup>lt;sup>249</sup> Kerrville Ex. 1 at 4; Kerr County Ex. 1 at 5-8.

<sup>&</sup>lt;sup>250</sup> Kerrville Ex. 1 at 5-10, Attachments A-F; KPUB Ex. 1 at 6. These issues are also discussed in the community values section of the PFD.

<sup>&</sup>lt;sup>251</sup> Tierra Linda is not affected by LCRA TSC's preferred route, the P-Line routes or any of the routes that follow I-10 through Kerrville.

<sup>252</sup> Tr. at 1264.

<sup>&</sup>lt;sup>253</sup> Tr. at 279 – 280.

preserve the scenic nature of the Hill Country, which position CVA has held throughout the proceeding. Therefore, although they affect more habitable structures than MK13 and are more expensive, Staff MK15, CVA's second choice of MK32, and MK62 provide a better balance of the factors of cost, paralleling existing ROW, and prudent avoidance.

#### c. EMF

Several individual intervenors expressed concerns about possible adverse effects from electric-magnetic fields (EMF), including health effects and impacts to electrical and mechanical devices. LCRA TSC's proposed alternative routes reflect reasonable investments of money and effort in order to limit exposure to electric and magnetic fields. The project design incorporates, where technically feasible, optimal phasing arrangements and ground clearance heights that result in lower EMF levels, which is consistent with prudent avoidance from an engineering perspective. 255

A series of EMF measurements at various locations along the proposed routes (in Fredericksburg, Kerrville, Junction, and Menard) demonstrates, in relation to the calculated EMF levels modeled for the proposed project, that EMF from this project are within the range of the fields that people can experience every day in their normal living and working environments, and are substantially below the EMF exposure limits adopted by recognized international organizations.<sup>256</sup>

Extensive scientific research has been conducted on EMF and health over the past several decades. Based on the large body of scientific research on EMF and human health, there is no reliable scientific basis to conclude that exposure to power frequency EMF from these 345-kV transmission lines will cause or contribute to adverse health effects, including the development of childhood leukemia or other childhood and adult cancers, or other health problems such as neurological disorders or adverse reproductive outcomes, in persons along the proposed line route. <sup>257</sup>

<sup>&</sup>lt;sup>254</sup> See e.g. Foster Ex. 2 at 8; TPWD Ex. 1 at 13; TPWD Ex. 3 at 7-8.

<sup>255</sup> LCRA TSC Ex. 9 at 33; LCRA TSC Ex. 2 at 30; LCRA TSC Ex. 8 at 15; LCRA TSC Ex. 7 at 11-12.

<sup>256</sup> LCRA TSC Ex. 8 at 15; LCRA TSC Ex. 7 at 11-12; LCRA TSC Ex. 19 at 6; LCRA TSC Ex. 14 at CDS-1R,

<sup>&</sup>lt;sup>257</sup> LCRA TSC Ex. 17 at 16-17; LCRA TSC Ex. 18 at 14-15; Tr. 1430-1431.

Based on the large body of scientific research on EMF and animals, there is no reliable scientific basis to conclude that power frequency EMF from these 345-kV transmission lines will cause or contribute to adverse effects on the well-being of animals living along the route of the transmission line. Given that scientific research on EMF has shown no reproducible effects on genetic changes related to the development or progression of cancer, there is no reliable scientific basis to conclude that exposure to power frequency EMF would make an existing cancer worse.<sup>258</sup>

There is nothing unusual about the EMF levels from the proposed project. They are within the range of EMF exposures that can be experienced in daily home and work environments and are substantially below the public EMF exposure limits adopted by international organizations.<sup>259</sup>

The EMF concerns raised by the intervenors are not a basis for choosing between any particular route or altering any particular route for the proposed transmission line.

## G. Preliminary Order Issue Nos. 7 and 8

Are there alternative routes or facilities configurations that would have a less negative impact on landowners? What would be the incremental cost of those routes? If alternative routes or facility configurations are considered due to individual landowner preference: (a) have the affected landowners made adequate contributions to offset any additional costs associated with the accommodations; and (b) have the accommodations to landowners diminished the electric efficiency of the line or reliability?

Several alternatives to LCRA TSC's preferred route were proposed by intervenors. LCRA TSC represents that none of the proposed alternatives, each made up of segments that were part of the Application, would diminish the efficiency of the line or its reliability. Staff concluded that no alternative routes or facilities that would have a less negative impact on landowners than those proposed by LCRA TSC were proposed by any party or were apparent from Staff's review of the

<sup>&</sup>lt;sup>258</sup> LCRA TSC Ex. 16 at 15.

<sup>&</sup>lt;sup>259</sup> LCRA TSC Ex. 8 at 15.

application.<sup>260</sup> However, Staff has identified a number of minor route adjustments that can be made at reasonable cost and included these adjustments in its recommendation.

A brief description of the modifications to the preferred route, alternatives, and associated cost issues are addressed below. No intervenor testified regarding an offer to offset additional costs associated with a requested accommodation due to landowner preferences.<sup>261</sup>

## 1. Alternative Routes Evaluated by LCRA TSC

LCRA TSC Ex. 26 (Attachment A to the PFD) is a comparison of suggested alternative routes in addition to LCRA TSC's preferred route. The alternatives described below are formulated from segments contained in the EA. The following is a descriptive comparison of the routes represented in LCRA TSC Ex. 26. The descriptions begin with LCRA TSC's environmental and routing consultant witness's summary of key points of the preferred route, <sup>262</sup> and continue with comparable points in routes either suggested by Staff and intervenors as having less negative impact on landowners, or suggested by the ALJs for comparative purposes.

# a. MK 13 (LCRA TSC preferred route)

- base cost \$266.4 million;
- 134.99 mile length;
- 18 habitable structures within 500 feet;
- 29% paralleling existing ROW;
- avoids towns and cities (such as Eldorado, Sonora, Junction, Menard, Mason, Kerrville, and Fredericksburg), and Fort McKavett;
- crosses least amount of potential Warbler habitat (3.34 miles);
- avoids Tierra Linda;
- avoids visibility of major roadways.<sup>263</sup>
- b. MK 15 (Weinzierl preferred route)
  - base cost \$286.8 million;
  - 135.63 mile length;

<sup>260</sup> Staff Ex. 1 at 11-12, 19.

<sup>261</sup> Staff Ex. 1 at 12; Staff Ex. 2 at 14.

<sup>&</sup>lt;sup>262</sup> Tr. at 1469-1470.

<sup>&</sup>lt;sup>363</sup> Tr. at 1469-1470.

- 45 habitable structures within 500 feet;
- 44% paralleling existing ROW;
- avoids towns and cities, and Fort McKavett;
- routes around Kimble County Airport using segments to north of airport;
- crosses high amount of potential Warbler habitat (15.35 miles);
- parallels existing ROW through Tierra Linda;
- parallels I-10 between Junction and Kerrville.<sup>264</sup>

## c. MK 15A (Weinzierl Alternate)

- base cost \$286.6 million;
- 137.02 mile length;
- 45 habitable structures within 500 feet;
- 44% paralleling existing ROW;
- · avoids towns and cities, and Fort McKavett;
- routes around Kimble County Airport using segments to north of airport;
- crosses high amount of potential Warbler habitat (15.35 miles);
- crosses one willing landowner;
- parallels existing ROW through Tierra Linda;
- parallels I-10 between Junction and Kerrville.<sup>265</sup>

### d. MK 15 Modified (PUC Staff Recomm.)

- base cost \$302.3 million;
- 144.13 mile length;
- 55 habitable structures within 500 feet;
- 55% paralleling existing ROW;
- avoids Fort McKavett;
- routes around Kimble County Airport using segments to north of airport;
- crosses high amount of potential Warbler habitat (15.9 miles);
- crosses one willing landowner;
- parallels existing ROW through Tierra Linda;
- parallels I-10 both north of Junction and between Junction and Kerrville.<sup>266</sup>

<sup>&</sup>lt;sup>264</sup> Weinzierl Ex. 3; See LCRA TSC Ex. 20 (Ex. RRR-3R); LCRA TSC Ex. 26 and observations based on LCRA TSC testimony, intervenor and Staff testimony, and Hearing on the Merits discussions.

<sup>&</sup>lt;sup>265</sup> Id

<sup>&</sup>lt;sup>266</sup> PUC Staff Ex. 1 at 21-25; See LCRA TSC Ex. 20 (Ex. RRR-3R); LCRA TSC Ex. 26 and observations based on LCRA TSC testimony, intervenor and staff testimony, and Hearing on the Merits discussions.

# e. MK 22 ("P-line route"; Opposed by P-line intervenors)

- base cost \$326.4 million:
- 155.29 mile length;
- 44 habitable structures within 500 feet;
- 61% paralleling existing ROW;
- avoids towns and cities but approaches NW portion of Fredericksburg, and avoids
   Fort McKavett and Kimble County Airport;
- crosses less potential Warbler habitat than MK 15 routes but more than LCRA TSC preferred route;
- avoids Tierra Linda;
- lower lengths paralleling state, U.S. and interstate highways than MK15 routes.<sup>267</sup>

#### f. MK 23 (P-line route variant)

- base cost \$315.6 million;
- 151.84 mile length;
- 43 habitable structures within 500 feet;
- 53% paralleling existing ROW;
- other factors similar to MK 22.<sup>268</sup>

## g. MK 24 (P-line route variant)

- base cost \$315.9 million;
- 151.5 mile length;
- 37 habitable structures within 500 feet;
- 58% paralleling existing ROW;
- other factors similar to MK 22. 269

#### h. MK 32 (U.S. Hwy. 277 and I-10 route variant)

- base cost \$349.3 million;
- 164.42 mile length:
- 151 habitable structures within 500 feet;
- 79% paralleling existing ROW;
- avoids Eldorado, Sonora and Junction but not Kerrville, and avoids Fort McKavett;
- routes around Kimble County Airport using segments to north of airport;
- crosses relatively high amount of potential Warbler habitat (17.36 miles);
- avoids Tierra Linda;
- very high length paralleling state, U.S. and interstate highways.<sup>270</sup>

<sup>&</sup>lt;sup>267</sup> LCRA TSC Ex. 26 and observations based on LCRA TSC testimony, intervenor and staff testimony, and Hearing on the Merits discussions; LCRA TSC Ex. 20 (Ex. RRR-3R).

<sup>&</sup>lt;sup>268</sup> LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>269</sup> LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>270</sup> LCRA TSC Ex. 26.

# i. MK 33 (U.S. Hwy 277 and I-10 route variant)

- base cost \$406.8 million;
- 161.09 mile length;
- 153 habitable structures within 500 feet;
- 83% paralleling existing ROW;
- avoids Eldorado and Sonora, passes through Junction and Kerrville, and avoids Fort McKavett;
- routes underground along I-10 near Kimble County Airport;
- crosses between high and low amount of potential Warbler habitat comparable to MK 15 routes (13.23 miles);
- avoids Tierra Linda;
- very high length of proposed ROW parallel to state, U.S. and interstate highways.

# j. MK 61 (modified MK 15 with 1-10 segments used beginning in SW Gillespie County)

- base cost \$287.3 million;
- 133.31 mile length;
- 118 habitable structures within 500 feet;
- 46% paralleling existing ROW;
- avoids towns and cities except Kerrville, and Fort McKavett;
- routes around Kimble County Airport using segments north of airport;
- crosses relatively high amount of potential Warbler habitat (17.08 miles);
- avoids Tierra Linda; about half of length parallel to state, U.S. and interstate highways.<sup>272</sup>

# k. MK 62 (modified MK15 PUC Staff Recommended with I-10 segments beginning in SW Gillespie County)

- base cost \$302.9 million;
- 141.81 mile length;
- 128 habitable structures within 500 feet;
- 56% paralleling existing ROW;
- avoids towns and cities except Kerrville, and Fort McKavett;
- routes around Kimble County Airport using segments north of airport;
- crosses relatively high amount of potential Warbler habitat (17.63 miles);
- crosses one willing landowner:
- avoids Tierra Linda; about half of length parallel to state, U.S. and interstate highways.<sup>273</sup>

<sup>&</sup>lt;sup>271</sup> LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>272</sup> LCRA TSC Ex. 26.

<sup>&</sup>lt;sup>273</sup> LCRA TSC Ex. 26.

# 2. Routing Adjustments Evaluated by LCRA TSC

During and after the public involvement phase of the project, numerous parties contacted LCRA TSC with requests to modify particular route segments to moderate the impact of a proposed transmission line route on their property. LCRA TSC prepared Attachment 13 to the Application<sup>274</sup> and Corrected Supplemental Attachment 13.<sup>275</sup> Both documents evaluate the proposed modifications that were not made part of the routes contained within the Application.<sup>276</sup>

The route modifications found in Attachment 13 are all technically feasible from an engineering and environmental perspective and each affect noticed landowners only. However, LCRA TSC did not adopt these modifications due to issues including additional cost, the use of larger angle structures, and an increase in overall length.<sup>277</sup>

After the filing of the Application, LCRA TSC continued to work with potentially affected landowners. Corrected Supplemental Attachment 13 discusses numerous route modifications that landowners have proposed to mitigate or reduce the impact of the proposed transmission line on their property. Many of these modifications were either proposed in discovery responses or discussed at the Technical Conference held by LCRA TSC on September 1, 2010, or at the Settlement Conferences held by LCRA TSC on September 20, 21, and 22 in Eldorado, Junction, and Fredericksburg, respectively. Each of the proposed modifications, found in Corrected Supplemental Attachment 13, is technically feasible from an engineering and environmental perspective and affects only noticed property owners, but potentially in a different manner, and may add costs and length to the project.

One proposed modification requires separate attention. In the event the Commission

<sup>&</sup>lt;sup>274</sup> LCRA TSC Ex. 1, Attachment 13.

<sup>&</sup>lt;sup>275</sup> LCRA TSC Ex. 1.C, Corrected Supplemental Information for Attachment 13 to the CREZ CCN Application (Oct. 25, 2010), Interchange Item No. 3007. See Appendix A and B to LCRA TSC's Initial Brief, summary tables of route modifications from Attachment 13 and Corrected Supplemental Attachment 13.

<sup>276</sup> Section 4 of the EA includes the route modifications that have been incorporated into the routes found in the Application.

While most of these modifications added cost, a few would decrease the cost of the Project.

considers MK 22, 27, or 46, the Nances, who participated as members of the A3/O4 group, request that the Commission reject the proposed Bannwolf Modification, because it would substantially increase the impact of Link O4 on their property. The Nances argue that the Bannwolf Modification would reroute the line from their northern property boundary through the middle of their 65 acre tract. Mr. Bannwolf does not own property or a habitable structure within 500 feet of the centerline. Nevertheless, Mr. Bannwolf met with LCRA TSC on September 21, 2010, to develop this modification. The Nances were not invited to, nor did they attend this meeting. The manner in which the Bannwolf Modification was created was not in keeping with LCRA TSC's typical efforts to develop landowner modifications. Had LCRA TSC been aware of the Nances' objection to the Bannwolf Modification, they would probably not have included it as a possibility for consideration in this docket. For these reasons, the ALJs find that the Bannwolf Modification should be rejected.

## H. Preliminary Order Issue No. 9

Has LCRA TSC proposed modifications to the transmission improvements described in the CREZ Order? If so: (a) would such improvements reduce the cost of transmission or increase the amount of generating capacity that transmission improvements for the CREZ can accommodate; (b) would such modifications speed up the project's implementation timeline, achieve other technical efficiencies, or otherwise be cost-effective and consistent with the CREZ Transmission Plan; and (c) have all such modifications been submitted to the Electric Reliability Council of Texas (ERCOT), and has ERCOT made a recommendation to LCRA TSC to be filed in this proceeding?

LCRA TSC has proposed one modification to the project as it is contained in the CREZ Order in Docket No. 37928. In the Application, LCRA TSC proposed using a different conductor than the one ERCOT assumed in the CTO Study. Based on LCRA TSC's transmission line rating methodology, a transmission line using bundled Merrimack conductor in the location of the Project does not result in the 5000 Amps capacity assumed by ERCOT in its CTO Study. Therefore, LCRA TSC proposes that the 345-kV double-circuit transmission line between the McCamey D and Kendall Stations will be constructed using bundled Cumberland conductor (2x1926.9 Aluminum

<sup>&</sup>lt;sup>278</sup> Tr. at 472-474.

<sup>279</sup> Tr. at 478-481.

Conductor Steel Supported/trapezoidal wire (ACSS/TW)) instead of the bundled Merrimack conductor (2x1433 ACSS/TW) that ERCOT assumed in its CTO Study. Staff also concluded this modification was cost-effective and consistent with the CTO Study. ERCOT reviewed the LCRA TSC conductor modification and recommended the use of the bundled Cumberland conductor that LCRA TSC proposes in the Application. 282

# I. Preliminary Order Issue No. 10

Are there discrepancies between the estimated total cost included in the Application in this docket and the cost identified for the proposed project in the CREZ Transmission Plan? If so, what are the reasons for the discrepancies?

ERCOT estimated the "overnight" cost for the MK Project at \$257.56 million and 137 miles in length. LCRA TSC's estimated cost for LCRA TSC's preferred route MK13 is \$219.5 million, with estimated costs for all 60 evaluated routes ranging from \$199.9 million to \$328.8 million. 283 LCRA TSC's estimates range, respectively, both below and above ERCOT's CTO costs for the transmission lines included in this project. 284 ERCOT estimated the "overnight" costs for CREZ projects based on unit costs included in the CTO Study. The reasonable variation between LCRA TSC's projected costs and the ERCOT "overnight" estimates is due to several factors. First, LCRA TSC's estimates include costs not contemplated by ERCOT, such as costs for potential endangered species habitat mitigation, longer routes, complex terrain, constrained paths, and capitalized interest. Second, LCRA TSC's estimated construction costs are higher due to project-specific considerations, such as difficulties associated with maneuvering equipment in rugged terrain and drilling foundations in harder geologic substrates typical in the Hill Country area, substantial length changes within the evaluated routes, and endangered species issues. 285

<sup>&</sup>lt;sup>280</sup> LCRA TSC Ex. 6 at 17.

<sup>281</sup> Staff Ex. 1 at 12, 14, 20-21.

<sup>&</sup>lt;sup>282</sup> LCRA TSC Ex. 6 at 19.

<sup>&</sup>lt;sup>283</sup> LCRA TSC Ex. 7 at 22.

<sup>&</sup>lt;sup>294</sup> LCRA TSC Ex. 14 (Ex. CDS-2REB, table of length and costs by proposed route, at 3).

<sup>&</sup>lt;sup>285</sup> LCRA TSC Ex. 7 at 21, 22. LCRA TSC Exhibits CDS-3 and CDS-4 compare estimated CTO and LCRA TSC route cost and length comparisons for the Project.

Staff concluded that the estimated costs for LCRA TSC's MK routes range from \$251.8 million to \$406.18 million, while the CTO estimate is \$257.56 million. Staff explained that the CTO Study assumed straight line lengths for the project which does not account for topography or related constraints in estimating the size and cost of various routes. The CTO estimated a cost of \$1.88 million per mile. Staff also notes that on an "apples to apples" basis, the cost of Staff MK15 is \$31.32 million more than the CTO estimate.

#### J. Supplemental Preliminary Order Issue No. 1

On or after September 1, 2009, did the Texas Parks and Wildlife Department provide any recommendations or informational comments regarding the Application pursuant to Section 12.0011(b) of the Texas Parks and Wildlife Code?

#### 1. TPWD Participation

TPWD provided recommendations or informational comments regarding the Application pursuant to Section 12.0011(b) of the Texas Parks and Wildlife Code. In particular, TPWD provided the following comments:

On January 21, 2009, TPWD provided preliminary information and recommendations regarding the entire CREZ Scenario 2 Project to the PUC.

On May 12, 2009, TPWD provided comments to PBS&J on the general study area for the proposed CREZ LCRA TSC Westwind/Kendall-Gillespie-Newton 345 kV transmission line project, which included portions of this Project (Docket No. 38354, Item 173, CCN Application, Attachment I, EA, vol. 111).

On June 2, 2009, TPWD provided comments to PBS&J on the general study area for the proposed CREZ LCRA TSC Twin Buttes-Kendall 345 kV transmission line project, which also included portions of this Project (Docket No. 38354, Item 173, CCN Application, Attachment I, EA, Vol. III).

<sup>&</sup>lt;sup>286</sup> Staff Ex. 1 at 13; LCRA TSC Ex. 7 at 22; LCRA TSC Ex. 1 at Attachment 2.

<sup>287</sup> Staff Ex. 1 at 13, 20.

On January 27, 2010, the TPWD provided PBS&J with project-specific Geographic Information System (GIS)-based maps (shape files) of recorded occurrence locations of rare and protected species and other rare resources in the Project Area specific to the development of the EA.

On April 1, 2010, TPWD provided comments to PBS&J on the general study area for the Project (Docket No. 38354, Item 173, CCN Application, Attachment 1, EA, vol. 111).

After receiving the July 28, 2010 notice letter from LCRA TSC as a directly affected landowner of Old Tunnel WMA, TPWD intervened. On September 24, 2010, TPWD sent Staff a letter that included its comments and recommendations concerning the Project. TPWD also filed testimony in this docket, was deposed by Staff regarding its specific routing proposals, responded to written discovery from Staff, participated at the hearing on the merits, and filed post-hearing briefing. 289

#### 2. TPWD's Recommendations on Routing

The TPWD Letter recommended that the Commission reject all of LCRA TSC's proposed routes, "because insufficient information is available to clearly understand the potential impacts to wildlife, state managed areas and water resources stemming from construction of the proposed alternatives." As discussed above in the environmental discussion, TPWD pointed out that due to the lack of access to private property, the lack of TXNDD records at a specific site on an alignment does not mean that the species does not occur there. <sup>291</sup>

Furthermore, TPWD asserts that construction of any of the proposed MK alternatives would require almost entirely new ROW and take significant amounts of existing wildlife habitat. Although the TPWD Letter states its opposition to all routes in the Application, to the extent the

<sup>288</sup> Staff Ex. 1 at 13; Staff Ex. 2 at 15.

<sup>&</sup>lt;sup>289</sup> Staff Ex. 1 at 13.

<sup>&</sup>lt;sup>290</sup> Staff Ex. 1, Appendix C at bates 52.

<sup>&</sup>lt;sup>291</sup> Staff Ex. 1, Appendix C at bates 55-56.

Commission approves a transmission line in this docket, TPWD supports routes MK32 and MK33 because they would have the least adverse impact on fish and wildlife resources.<sup>292</sup>

TPWD's routing arguments have been more thoroughly discussed above in sections regarding environmental issues. Neither Staff nor LCRA TSC agrees with TPWD's recommendations because, when the routes are analyzed using the entirety of the factors in PURA and the Commission's Rules and not focusing solely on the issue of the new fragmentation of wildlife habitat, their preferred routes are superior. Staff also notes that a number of engineering constraints on MK33 near Junction impose additional costs and may result in the delay of the Project's completion.

# 3. TPWD's Recommendations for Surveying the Project Area and Mitigation of Environmental Impact

Through the communications described above, TPWD also provided comments and recommendations to LCRA TSC and Staff to avoid adverse impacts to migratory birds, rare and protected species, existing wildlife and habitat, unique native plant and animal communities, watercourses, wetlands, ecologically significant stream segments, mussel sanctuaries, and parks and recreation areas. TPWD stated that a significant potential threat to wildlife habitat is the spread of invasive species along the transmission line corridor. As a result, TPWD made recommendations to prevent the establishment and spread of invasive species during transmission line construction and revegetation. In addition to TPWD's recommendations regarding route selection set out above, TPWD also recommends that a comprehensive mitigation plan be imposed for the life of the project to address impacts to natural resources.

In response, LCRA TSC and Staff note that some of TPWD's recommendations can be

<sup>&</sup>lt;sup>292</sup> Staff Ex. 7 at 78; TPWD Ex. 5; TPWD Initial Brief.

<sup>&</sup>lt;sup>293</sup> TPWD Ex. 4 at 9-10; Staff Ex. 1 at 54-55.

<sup>&</sup>lt;sup>204</sup> TPWD Ex. 4 at 18.

<sup>&</sup>lt;sup>295</sup> Staff Ex. 1 at 54-55.

<sup>&</sup>lt;sup>296</sup> TPWD Ex. 4 at 41-42.

implemented, some are already followed by the Company, some should not be implemented, and some are inapplicable to this project. Additionally, Staff and LCRA TSC argue that TPWD fails to consider in its analysis other factors that the Commission and the Company must consider and balance in considering the application, including the numerous routing criteria that involve direct impacts on people. 298

Nevertheless, the Company specifically represents that it complies with all applicable laws and regulations, including the Migratory Bird Treaty Act and those related to the applicable regulations of the North American Electric Reliability Corporation (NERC), the USFWS, TCEQ, and the United States Army Corps of Engineers (USACE). LCRA TSC also stated that will follow the procedures described in the latest publications for protecting raptors from Avian Power Line Interaction Committee (APLIC).<sup>299</sup>

LCRA TSC and Staff argue that Staff's recommended Ordering Paragraphs are sufficient to address TPWD recommendations or requests.<sup>360</sup> LCRA TSC also argues that TPWD's recommendations or requests should not be implemented in this docket for the reasons discussed below.

LCRA TSC represents that the Company and PBS&J's development of preliminary segments and routes sought to avoid known occupied habitat locations of federally listed endangered or threatened species, based on the TXNDD records and Loomis Partners (Loomis) data for identifying potential Warbler habitat. As a result, the Company notes that the concept of "avoidance first" was used in the routing.<sup>301</sup>

LCRA TSC also argues that TPWD "polygon" information (based on TXNDD) alone does

<sup>&</sup>lt;sup>297</sup> LCRA TSC Ex. 14 at 39.

<sup>&</sup>lt;sup>298</sup> Staff Ex. 7 at 26-27,

<sup>&</sup>lt;sup>299</sup> LCRA TSC Ex. 14 at 39.

<sup>300</sup> LCRA TSC Ex. 14 at 41.

<sup>301</sup> LCRA TSC Ex. 7 at 14; LCRA TSC Ex. 14 at 39-41; LCRA TSC Ex. 20 at 45-48.

not appropriately indicate "avoidance areas" because it establishes very little until considered along with existing land uses, the specific TXNDD element of occurrence data, the requirements of the species and the nature of transmission line impacts (including mitigation). TPWD's polygon data is useful only as an initial reference point and should not be relied upon for definitive choices between routes.<sup>302</sup>

Regarding on-ground surveys, LCRA TSC argues that they cannot be conducted throughout the Project areas, due to the lack of access to private property and the tremendous amount of time and resources required to review the study area. The Company argues that it is more appropriate to conduct a detailed assessment of potential habitat of threatened and endangered species after the Commission has selected a route, to continue consulting with the USFWS, and implement measures to comply with the Endangered Species Act as necessary.<sup>303</sup>

The ALJs agree that it would be very inefficient, time-consuming, and costly to conduct such surveys for Project-wide action areas, before the Commission's approval of a route. As for TPWD's suggestion that if endangered species habitat is present, "a survey for the presence of the species should be conducted..." ECRA TSC has committed to identify potential endangered species habitat along the route approved by the Commission in its dealings with USFWS and does not intend to conduct presence/absence surveys, which could delay the project. The ALJs agree with this approach. 304

Because the Project is subject to NERC reliability requirements, including vegetation management, LCRA TSC is required to remove trees, brush, and undergrowth from the ROW that could potentially interfere with the safe and reliable operation of the line. Furthermore, although LCRA TSC typically does not remove low growing ground cover, it must trim trees that overhang the ROW, and it needs to remove vegetation that could potentially interfere with access to the lines. The Company points out that utilities that violate NERC requirements, fail to remove vegetation,

<sup>&</sup>lt;sup>302</sup> *Id*.

<sup>&</sup>lt;sup>303</sup> Id.

<sup>&</sup>lt;sup>304</sup> Id.

and consequently experience outages can be subject to substantial fines. The ALJs agree that LCRA TSC must comply with NERC requirements and reasonably maintain access to the line. Any TPWD recommendation to the contrary must be disregarded.<sup>305</sup>

Nevertheless, LCRA TSC commits to minimize the amount of flora and fauna disturbed during construction of the line, except to the extent necessary to establish appropriate ROW clearance. After construction of the line, LCRA TSC will determine if any reseeding of the ROW in herbaceous species or a cover of forage crop would be useful and practical to facilitate erosion control. LCRA TSC commits to consider landowner preferences in doing so.<sup>306</sup>

To the extent practical, LCRA TSC will also avoid or mitigate adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and USFWS. LCRA TSC intends to address re-vegetation in its TCEQ-required SWPPP and re-vegetation will be performed to the extent reasonable, feasible, and practical, except where permanent structures (e.g., berms, gabions, retaining structures, etc.) installed by the Company would be used to control erosion and sedimentation. As for wetland disturbance, LCRA TSC intends to coordinate with the USACE concerning any methods or measures to be employed. As a result, LCRA TSC argues that TPWD's, Guidelines for Construction and Clearing Within Riparian Areas recommending certain methods be employed in "General Mitigation Measures" and "General Stream Conservation Criteria" are unnecessary. While some of TPWD's recommended methods may already be instituted as acknowledged by the Company, the ALJs find that LCRA TSC's measures are adequate to avoid adverse environmental impacts beyond those necessitated by the installation of the line itself. 307

Regarding risks to birds from construction harassment, habitat loss/fragmentation, and collisions/electrocutions, the Company will work with USFWS concerning these issues. LCRA TSC intends to place avian markers for flyways at river crossings, and LCRA TSC's phase spacing for this transmission line far exceeds the minimums in the guides recommended by TPWD (e.g.,

<sup>&</sup>lt;sup>105</sup> Id.

<sup>&</sup>lt;sup>306</sup> Id.

<sup>&</sup>lt;sup>107</sup> Id.

Suggested Practices for Raptor Protection on Power Lines and Mitigating Bird Collisions with Power Lines"). 308

LCRA TSC states that it does not expect to employ significant channel modification, construct significant stream crossing structures, or conduct significant stream maintenance once an appropriate ROW for the line is established. The Company intends to avoid clearing trees and other vegetation along stream banks, except as necessary to establish an appropriate ROW for the line. LCRA TSC will re-vegetate where reasonable, feasible, and practical. As a result, the Company argues that TPWD's Guidelines for Construction and Clearing Within Riparian Areas recommending certain methods be employed in "Channel Modification," "Stream Crossing Structures," and "Stream Maintenance" are unnecessary.<sup>309</sup>

LCRA TSC argues that it should not be required to develop and implement a compensatory mitigation plan for the life of the project in cooperation with TPWD. The Company notes that it is already working with the jurisdictional authority (USFWS) to determine a permitting mechanism for endangered species in this and other projects. TPWD's jurisdictional authority does not extend to this project and no state law or regulation requires electric utilities to comply with TPWD's request or recommendation. The Company argues that the strategies presented in the Application adequately avoid or minimize the impacts on regulated and unregulated native wildlife resources. The ALJs agree with Staff and LCRA TSC on these matters and recommend that their proposals be put in place rather than TPWD's. 310

Finally, in the Conclusion and Recommendation sections of their testimony, Mohammed Ally and Brian Almon recommended that the Commission include in its final order paragraphs to mitigate the impact of the Project, including mitigation procedures addressing the discovery of archeological artifacts, raptor protection, herbicide use, flora and fauna disturbance, erosion control, landowner impact, and bird diverters on river crossings. Mr. Ally and Mr. Almon testified that their

<sup>&</sup>lt;sup>108</sup> ld.

<sup>&</sup>lt;sup>309</sup> Id.

<sup>&</sup>lt;sup>310</sup> Id.

recommended mitigation paragraphs would address a number of TPWD's concern and other issues are addressed in Staff's routing recommendation.<sup>311</sup> The ALJs agree.

#### VI. CONCLUSION

While the ALJs would prefer that Routes MK32 or 33 be approved by the Commission for the same reasons TPWD, Weinzierl, and CVA present, the ALJs acknowledge that Staff MK15 represents a more balanced weighing of the Commission's routing criteria and recommend it for Commission approval. As for TPWD's survey and mitigation recommendations, while TPWD raises valid concerns and recommends solutions to those concerns, due to limited resources, time-constraints, practicality, and past practice in other CREZ cases, the ALJ recommend that Staff and LCRA TSC's approaches to these issues be adopted, instead of those proposed by TPWD.

#### VII. FINDINGS OF FACT

#### Procedural History, Notice, Jurisdiction, and Project Background

- 1. LCRA Transmission Services Corporation (LCRA TSC) is a non-profit corporation providing service under Certificate of Convenience and Necessity (CCN) No. 30110.
- On July 28, 2010, LCRA TSC filed an application with the Public Utility Commission of Texas (Commission) to amend its CCN to include the McCamey D to Kendall to Gillespie Competitive Renewable Energy Zone (CREZ) 345-kV transmission line project (Application). The two lines that comprised this project, McCamey D to Kendall, and Kendall to Gillespie, were identified by ERCOT in its CREZ Transmission Optimization Study (CTO Study), and originally assigned to LCRA TSC to construct as a "Priority Project" in Commission Staff's Petition for the Selection of Entities Responsible for Transmission Improvements Necessary to Deliver Renewable Energy from Competitive Renewable Energy Zones, Docket No. 35665, Order on Rehearing (May 15, 2009).
- 3. On December 1, 2010, the Commission determined that the Kendall to Gillespie portion of the transmission line would be replaced with a cost-effective alternative that does not require the construction of a transmission line between the Kendall and Gillespie substations at this time.

<sup>311</sup> Staff Ex. 1 at 13-16; Staff Ex. 2 at 15-17.

- 4. LCRA TSC's double-circuit McCamey D to Kendall preferred route and each of the other 59 proposed alternative McCamey D to Kendall routes extend from LCRA TSC's approved McCamey D Station (to be renamed Big Hill Station), located in northern Schleicher County, to the existing Kendall Station in western Kendall County. The alternative McCamey D to Kendall routes proceed generally in a northwesterly to southeasterly direction, in multiple varied corridors. This line may be located in portions of Schleicher, Menard, Mason, Sutton, Kimble, Kerr, Gillespie, and Kendall counties, depending on the route selected.
- 5. LCRA TSC filed 60 alternate routes. The links in the Application can be combined to form over 20,000 different forward progressing routes.
- 6. Typical structure heights are expected to be approximately 105-185 feet above the ground surface, depending on the type of structures used.
- 7. LCRA TSC will install two 345-kV circuits on the transmission line.
- 8. LCRA TSC will build and own the new McCamey D (Big Hill) Station for the project, which Station will accommodate both the project proposed in this docket and another of its CREZ priority projects (Twin Buttes to McCamey D 345-kV line), as well as another CREZ project of South Texas Electric Cooperative, Inc. (McCamey C to McCamey D 345-kV line) and future wind generation interconnect facilities to be constructed and owned by Electric Transmission Texas at the collection stations associated with the McCamey D Station.
- LCRA TSC owns the existing Kendall Station, at which additional equipment will be installed to accommodate the termination of the new 345-kV transmission lines for this project.
- 10. Written direct notice of the Application was mailed on July 28, 2010, to each owner of land whose property would be directly affected by the proposed transmission line.
- 11. Written direct notice was mailed to several directly-affected landowners whose names had not appeared on LCRA TSC's original list.
- 12. On July 28, 2010, LCRA TSC also mailed written direct notice of the Application to additional area landowners who might be affected by various potential routing configurations described in the Application and LCRA TSC's direct testimony.
- 13. Written notice was mailed on July 28, 2010 to the municipalities of Boerne, Comfort, Eldorado, Sonora, Menard, Junction, Mason, Harper, Fredericksburg, Ingram, and Kerrville, and to county officials of Schleicher, Sutton, Menard, Kimble, Mason, Gillespie, Kerr, and Kendall counties.
- 14. Written notice was mailed on July 28, 2010, to nine neighboring utilities providing electric utility service, specifically Bandera Electric Cooperative (BEC), Central Texas Electric Cooperative (CTEC), Pedernales Electric Cooperative (PEC), Southwest Texas Electric Cooperative, Inc. (SwTEC), American Electric Power (AEP) Texas North Company, Cap

- Rock Energy Corporation, City of Fredericksburg, Kerrville Public Utility Board (KPUB), and City of Mason.
- 15. Notice of the Application was published in the following newspapers: San Angelo Standard Times, Eldorado Success, Junction Eagle, Mason County News, Boerne Star and Record, Fredericksburg Standard, Comfort News, San Antonio Express-News, Austin American-Statesman, Devil's River News, Kerrville Daily Times, Menard News & Messenger, West Kerr Current and Harper News.

#### **Material Deficiencies**

16. No material deficiencies exist in the Application.

#### CREZ Priority Transmission Plan

- 17. The Application is for a CREZ priority project.
- 18. The project will accomplish the intended results for the CREZ priority project between the McCamey D and Kendall stations.
- 19. In addition, the project will also provide increased transmission support to meet growing needs in Central Texas and the Hill Country.

#### Route

#### Community Values

- 20. To address and consider community values, LCRA TSC conducted 20 public meetings on May 4, 2009, May 5, 2009, May 7, 2009, May 11, 2009, May 12, 2009, and May 14, 2009. In addition, LCRA TSC conducted public meetings on February 15 and February 16, 17, 18, 22, 23, and 24, 2010.
- 21. LCRA TSC considered expressions of community values in a review of the questionnaires, letters, meetings, phone calls, and other public input it has received. LCRA TSC received additional information about community values at the Technical Conference held on September 1, 2010, and at the Settlement Conferences it held on September 20, 21, and 22, 2010.
- 22. Based on input from the open houses and throughout the proceeding, strong community values included: avoiding the Texas Hill Country; reducing the effect of the line on habitable structures, particularly in developed areas; reducing the effect on rural residential subdivisions, and building the line with monopoles.
- 23. The community values of avoiding habitable structures in developed areas and avoiding the Hill Country are competing values.
- 24. Staff MK15 parallels roadways for much of its distance, thereby avoiding much of the Hill Country.
- 25. Where Staff MK15 parallels I-10, it does not cut a new path through the heart of the Hill Country. I-10 has already cut through the area and Staff MK15 will not cut an entirely new corridor through the area.
- 26. Staff MK15 parallels other right-of-way (ROW) for over 54% of its length.
- 27. Staff MK15 deviates around the cities of Junction and Kerrville.
- 28. Kerrville and the Kerrville Public Utility Board have spend over \$1 million in infrastructure for development along I-10 in the vicinity of Links Y16, Y17b, Y18, Y19b, and Y20, which are included in Routes MK32, 33, 61, and 62.
- 29. Tierra Linda Ranch, a rural subdivision crossed by Staff MK15 has an existing pipeline easement, which Staff MK15 will parallel.
- 30. Staff MK15 provides the best balance between the community values of avoiding the Hill Country, and avoiding habitable structures and cities.
- 31. Monopoles should be used through Tierra Linda Ranch.

#### Recreational and Park Areas

- 32. Avoiding parks and recreational areas was a consideration in designing the routes proposed in the Application. PBS&J reviewed U.S. Geological Survey topographic maps, Texas Department of Transportation (TxDOT) county highway maps and federal, state, and local maps, the Texas Parks and Wildlife Department's (TPWD) "Texas Outdoor Recreation Inventory," the Texas Outdoor Recreation Plan, recent aerial photography, and conducted a limited field reconnaissance.
- 33. MK13 and Staff MK15 each have one park or recreation areas located within 1,000 feet of the centerline. MK32 and MK33 run within 1,000 feet of six and seven parks/recreation areas, respectively.
- 34. TPWD is the owner and operator of the 16.1 acre Old Tunnel Wildlife Management Area (Old Tunnel WMA), located in Kendall County. The Old Tunnel WMA is comprised of an abandoned railroad tunnel and includes a bat colony of up to three million Brazilian free-tailed bats, three thousand cave myotis. The Old Tunnel WMA includes nature trails for hiking and bird watching, educational programs, bat watching, and guided nature tours. TPWD estimates that 21,324 visitors visited the Old Tunnel to watch bats emerge from the tunnel. TPWD estimates the annual economic benefit to the region of at least \$748,000.
- 35. The line should avoid the Old Tunnel bat colony.
- 36. The Texas Historical Commission (THC) owns and operates the Fort McKavett State Historic Site in Menard County, Texas (Fort McKavett), one of the best preserved and most intact examples of a fort from the Texas Indian Wars. The Fort is a State Historic Site, as well as a National Historic District listed on the National Register of Historic Places. Fort McKavett is part of TPWD's Great Texas Wildlife Trails, as well as the THC's Texas Forts Trail. The Fort McKavett State Historical Site is also designated a riparian conservation area.
- 37. For defensive reasons, the Fort was built between 75 and 100 feet above the surrounding terrain. Transmission towers of up to 180 feet in height may be easily visible from the grounds of the Fort. The towers would range from 1.18 miles (Link b16b), 1.26 miles (Links Z1 and Z2), and 1.55 miles (Link b17b) from the Fort. The Fort remains isolated from modern development, with pristine views in all directions; the view from the Fort is much as it was in the mid-nineteenth century. The Fort hosts living history events, star parties, Boy Scout functions, and visitor tours throughout the year. Transmission towers of up to 180 feet in height would directly and negatively impact those view sheds from the Fort, and would likewise negatively impact the Fort's historic character, its isolation, and the overall appeal of the Site.
- 38. Camp Sol Mayer is a 300-acre Boy Scout camp with 18 permanent buildings. Link b17b would cross the southwest corner of the camp, passing near several camping areas and near

where the camp's horses are maintained. ROW clearing for the transmission line on the southwest portion of the camp would eliminate many trees that are along the western boundary line and the San Saba River. The camp would also be impacted by Links Z1 and Z2, which are both in close proximity to the camp.

#### Aesthetic and Historical Values

#### Aesthetics

- 39. "Aesthetics" refers to the subjective perception of natural beauty in the landscape and attempts to define and measure an area's scenic qualities. Aesthetic values considered from a public standpoint in the Environmental Assessment and Alternative Route Analysis (EA), include topographical variation, prominence of water in the landscape, vegetation variety, diversity of scenic elements, degree of human development or alteration, and overall uniqueness of the scenic environment compared to the larger region.
- 40. The Project area reflects overall a medium to high level of aesthetic value for the region. The eastern portion of the study area, located in the Hill Country, is within an area of the state noted for its scenic beauty and characterized by impressive topographical relief, vegetation and wildflowers, abundant wildlife, and plateaus. The presence of various large creeks and rivers present some viewscapes of high aesthetic value. There are also a number of designated routes or trails, and scenic overlooks and rest areas, within the study area that emphasize the Hill Country's natural beauty and other unique attractions.
- 41. The level of human impact to the study area is relatively high, due to the extensive agricultural and oil and gas operations, the development of numerous cities, and the development of rural subdivisions.
- 42. All of the 60 primary alternative routes for the MK Project have some amount of ROW within the foreground visual zone of U.S. and state highways, in part a direct result of the deliberate inclusion of alternative routes paralleling U.S. and state highways.
- 43. A large number of parks and recreation areas are located within the study area. Only a small portion of the routes' ROW would be located within the foreground visual zone of parks and recreation areas.
- 44. The alternative routes that follow all or portions of I-10 will be much more visible to more people than any of the alternative routes away from I-10.
- 45. Construction of the Project will likely have both temporary and permanent negative aesthetic impacts, including views of ongoing construction, the cleared ROW, and the transmission facilities.
- 46. Wherever monopole structures are approved, LCRA TSC will have the flexibility in design to deploy both steel and spun concrete poles where appropriate for each to produce a cost-effective result.

- 47. Both lattice towers and monopoles will fit within a 100-foot ROW, which is as narrow as the ROW for a double-circuit 345-kV transmission line can be made.
- 48. MK13 has a length of 8.46 miles visible from US and State highways. Staff MK15 has a visibility for a length of 49.11 miles from US and State highways. MK33 has a length of 157.87 miles along US and State highways.
- 49. MK33 has the highest visibility from parks/recreation areas with a length of 10 miles visible from state parks and recreational areas. MK13 is visible for a length of 4.24 miles from state parks and recreation areas. Staff MK15 is visible for a length of 4.43 miles from parks/recreation areas.
- 50. The aesthetic impact of the line is largely a function of who is viewing it from where.
- 51. The central Project area contains large tracts of relatively unfragmented and undeveloped land. The natural beauty of this part of the Project area includes scenic vistas, meadows, and oak-lined creeks and rivers.
- 52. I-10 is a means of transportation across the state, where aesthetically pleasing views are incidental. Travelers and anyone in the proximity of I-10 in the Project area will see commercial development including gas stations, convenience stores, chain and fast-food restaurants, strip malls, traffic including heavy tractor-trailers, car lots, power lines, roadways including feeder roads, and all of the development associated with small towns, larger municipalities, and cities like San Antonio. It is far more likely that a 345-kV line will be lost in the visual foreground along I-10 than if it were run along a central or northern route through what is undoubtedly the aesthetically pleasing and relatively undeveloped Texas Hill Country.

#### Archeological and Cultural Resources

- Much of the study area has a high probability of containing previously unrecorded cultural resource sites. PBS&J's cultural resources evaluation was based on known data regarding sites in the area, the density of the sites, and the National Register of Historic Places (NRHP) and State Archaeological Landmark (SAL) potential for the sites.
- 54. Of the 60 primary alternative routes evaluated for the Project, 54 cross one or more recorded historic or prehistoric sites, with four routes crossing at least 15 or more sites. All 60 routes have additional recorded historic or prehistoric sites within 1,000 feet of the ROW centerline, with numbers ranging between 6 and 46 sites. Of the primary alternative routes, 22 cross one NRHP-listed or determined eligible site, and the other 38 cross no such sites. Exactly half of the primary alternative routes have ROW centerline within 1,000 feet of one or more additional NRHP-listed or determined eligible sites, ranging from one to six sites, and the other 30 have none. The number of recorded historical/archaeological sites within 1,000 feet of the centerline of the routes varies from 8 to 70 sites.

- 55. There are 23 known or recorded historical or archeological sites either crossed (two sites) or located within 1,000 feet of the MK13 ROW centerline (21 sites). On Staff MK15, there are 47 sites.
- 56. Mitigation and construction practices are available to reduce or eliminate impacts to cultural resources sites. LCRA TSC planned appropriately for addressing any sites encountered during construction.
- 57. None of the route segments proposed in this case cross Fort McKavett,
- 58. MK13 does not avoid historical areas in the southeastern portion of the study area.
- 59. MK15 crosses 7.5 fewer miles of ROW across areas of high archeological/historical site potential than MK13. MK15 also has three fewer National Register-listed or determined-eligible sites within 1,000 ft of the centerline of the ROW than MK13.
- 60. Routes parallel to I-10 include commercial and residential development normally associated with proximity to an interstate highway system. Historical and cultural sites in these areas are more likely to have been disturbed than those in the central and northern Project areas.

#### Environmental Integrity

#### General, Surveys, and Mitigation

- 61. LCRA TSC's consultant PBS&J, examined a wide range of environmental information in its EA, which was researched and analyzed through a variety of methods and by representatives of various environmental disciplines.
- 62. LCRA TSC represents that all routes presented in the Application (and all segments that form those routes) provide environmentally acceptable alternatives.
- 63. LCRA TSC's preferred route (MK13) was ranked first from an ecological standpoint in the EA.
- 64. LCRA TSC avoided specific known occupied habitat locations in the process of delineating preliminary route links and alternative routes.
- 65. The Company has undertaken a permitting process under Section 10 of the Endangered Species Act with the U.S. Fish and Wildlife Service (USFWS) to consider impacts to federally listed species and their habitat.
- 66. Animal species potentially occurring along the proposed transmission routes include, but are not limited to, the federally listed (endangered) Black-Capped Vireo (Vireo) and Golden-

- Cheeked Warbler (Warbler), and the state-listed (threatened) Zone-Tailed Hawk, Bald Eagle, Texas Tortoise, and Texas Horned Lizard.
- 67. The EA lists all threatened or endangered species of potential occurrence in the study area based on information from USFWS, TPWD, and TPWD's Natural Diversity Database (TXNDD).
- 68. Once a route is selected, LCRA TSC will account for the location of endangered/threatened species on individual landowners' property or additional known occupied habitat by routing adjustments, construction procedures and techniques, and mitigation. The Company shall consult with the USFWS for known occupied or potential habitat for endangered species.
- 69. LCRA TSC will use a Habitat Conservation Plan (HCP) development and Endangered Species Act Section 10(a) permitting process that is ongoing with the USFWS.
- 70. Prior to construction, an assessment will be made to verify whether any habitat for endangered or threatened species is present along the route that is approved. LCRA TSC will seek a permit from USFWS to take endangered species habitat.
- 71. Different techniques are available to accommodate all federally-listed endangered species identified in the study area. If a route passes through an area containing plant species composition and configuration favorable to a protected species, or if known individuals of the species are in the area, LCRA TSC will adjust the route in minor ways to avoid higher quality "blocks" of habitat; transmission towers will be placed in existing "openings" to limit further clearing for ROW access; and/or permits will be sought for appropriate clearing permissions along with possible mitigation.
- 72. LCRA TSC will undertake mitigation projects to protect the habitats of Warbler, Vireo and other species.

#### Fragmentation and Oak Wilt

- 73. Wildlife habitat throughout the study area is fragmented by land use impacts such as roads, brush clearing associated with ranching and agricultural activities, pipelines, electric distribution lines, and other activities normally engaged in by landowners in the Study Area.
- 74. The Project will not jeopardize the continued existence of Warbler or Vireo.
- 75. Staff concluded that any route selected in this case will affect the environmental integrity of the study area.
- 76. Due to lack of access to private property, the absence of TXNDD records at a specific site within the Project area does not mean that the species does not occur there. Most TXNDD records are gathered from publicly accessible lands, such as parks and wildlife management areas and highway ROW. Most of the impacted Project area consists of privately owned

- ranch land. Endangered species and their habitat on private lands may not be reflected in TXNDD records due to the lack of access and state laws governing the collection and dissemination of biological information from private lands.
- 77. Major highway ROW comprises the largest corridors of habitat fragmentation in the Project area, particularly the 1-10 corridor. Avoiding additional fragmentation of wildlife habitat is one of the most important environmental considerations for the Project. Land fragmentation, and its consequence, is one of the greatest statewide challenges to wildlife management and conservation in Texas.
- 78. The portion of the Project area north of I-10 contains some of the largest blocks of unfragmented wildlife habitat on the Edwards Plateau.
- 79. The I-10 corridor is fragmented to a much greater extent than the central routes or northern routes.
- 80. MK13 and all of the links contributing to the central routes cut through the middle section of lands managed by the Doss-Harper Wildlife Management Association. Landowners who are members of the Doss-Harper Wildlife Management Association manage their wildlife resources in a cooperative that helps them overcome some of the inefficiencies common to land fragmentation. MK13 would run through the center of the Doss-Harper WMA for approximately 12 miles.
- Additional fragmentation of wildlife habitat is expected to spread Oak Wilt disease. Oak Wilt is caused by a fungus that clogs water-conducting vessels in infected oak trees, causing them to wilt and die. Oak Wilt can be spread through the roots of oak trees. Oak Wilt can also be spread much greater distances by sap-feeding beetles that carry spores from infected trees and deposit them on "wounds" in uninfected trees. Once a new tree is infected, the disease will spread through root contact to other nearby trees at a rate of approximately 75 feet per year.
- 82. The central portion of the Hill Country is currently impacted by very little Oak Wilt. Oak trees in the Project are susceptible to Oak Wilt as a result of cutting and pruning necessary to clear and maintain the ROW. It is estimated that approximately 700 to 1,600 live oaks per mile will be removed and another 200-500 live oaks per mile will need to be pruned.
- 83. The selection of MK13 or a central or northern route is expected to spread Oak Wilt more than a route that uses the I-10 corridor such as MK32, MK33, or Staff MK15.

#### Warbler and Vireo

84. Potential habitat for Vireo and Warbler is likely to be encountered along most of the routes. Data provided by Loomis Partners, Inc. documents that all of the routes cross potential Warbler habitat. There are known occurrences of the Vireo and Warbler along or near segments proposed as part of route alternatives for the Project.

- 85. Without ground inspection of particular ecological areas, it is difficult to impossible to determine the presence of suitable habitat for Vireo. Vireo habitat consists of patchy shrubs interspersed with open areas and cannot be identified by aerial photography.
- 86. Inhabited Vireo habitat occurs throughout the area and along most, if not all, routes. It is unlikely that potential habitat and actual Vireo can be avoided as part of the certification process.
- 87. Based on the Commission's past practices and the work of utilities with USFWS, accommodations for Vireo can be made through structure placement, ROW clearance and other forms of mitigation.
- 88. Due to species composition and configuration, it is possible to identify and map potential Warbler habitat with some accuracy through certain types of aerial photography. Attempts can then be made to minimize/avoid potential habitat.
- 89. Warbler populations are not inconsistent with either existing or newly-constructed transmission line ROW.
- 90. Transmission line projects in Texas have been successfully constructed through known occupied habitat for Warbler and Vireo.
- 91. The Project will have some acceptable impact on the Vireo and Warbler. LCRA TSC can institute avoidance and mitigation efforts to minimize any impact on these species.

#### Creeks, Streams and Rivers

- 92. Length parallel to streams and rivers is a highly significant environmental factor. MK13 has 1.34 miles parallel to rivers and streams. MK32 and MK33 parallel 1.93 and 1.82 miles, respectively. Staff MK15 parallels to streams and rivers for 2.46 miles. The P-Line routes range between 3.49 and 3.73 miles.
- 93. Staff MK15 and MK32 have two river crossings. MK13 and MK33 have four river crossings. MK22, MK23, and MK24 have five river crossings each.
- 94. MK13 and MK33 have 144 and 143 stream crossings, respectively. MK32 has 154 stream crossings. Staff MK15 has 160 stream crossings. MK22, MK23, and MK24 cross between 186 and 190 streams each.
- 95. Creek and river crossings can be spanned by the line in a manner that is technically feasible and minimally disruptive of natural resources in the surrounding area. For construction near rivers and creeks, LCRA TSC will implement appropriate erosion control measures as described in sections 1.5, 5.1.2, 5.1.3, and 5.1.4 of the EA. LCRA TSC will also develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to prevent silting of

- bodies of water, including creeks, rivers, and springs. The SWPPP will be in effect during all phases of construction and until re-growth is achieved.
- 96. TPWD strongly recommends that the Project avoid any adverse impacts to Ecologically Significant Stream Segments (ESSS).
- 97. All of the route options would cross at least one ESSS and many of the routes will cross more than one ESSS, some at more sensitive locations than others.
- 98. LCRA TSC expects no adverse impact to ESSSs in light of the Company's proposals for spanning creeks and other measures that are intended to be minimally disruptive of natural resources in the surrounding area.
- 99. All routes using Links b21c or z4, b33 or z5, b34, or b35a, will cross the James River ESSS, and the majority of central routes use one of these links. All routes that use Links b44, b50b, b52, or O3 would cross the Pedernales River ESSS (most of the routes use one of these links). MK13 crosses both the James River on Link b33 and the Pedernales River on Link b50b.
- 100. Staff MK15, MK32, and MK33 do not cross the James or Pedernales Rivers. These routes travel contain a single ESSS crossing—the Fessenden Branch crossing on Link b29d, which is at a previously disturbed location, because the stream is already crossed by I-10.
- 101. Potential impacts to mussel species are expected to be minimal. LCRA TSC's construction techniques are adequate to deal with potential impacts to mussel species.
- 102. Although LCRA TSC can safely span creeks and streams, due to potential risks to mussel sanctuaries, karstic formations, and ESSS, the P-Lines, MK13, and central routes are less attractive from an environmental perspective than routes that parallel 1-10.

#### Old Tunnel WMA and Bat Issues

- 103. The Eckert James River Bat Cave Preserve is located on MK13, with one of the largest known concentrations of breeding Mexican free-tailed bats located near Links b34 and b36.
- 104. The Old Tunnel WMA also has a bat colony located near Links A3 and O4. Based on observed flight patterns, the bats at Old Tunnel WMA are expected to fly into the area of the line.
- 105. For Link A3 and O4 structure designs, all conductor-to-conductor and conductor-to-tower clearances are well above the recommended clearance of 60 inches, minimizing the risk of electrocution to bats.
- 106. Although there is no evidence regarding bat collisions with the existing 138-kV line near Old Tunnel WMA, there is some scientific evidence that suggests that power lines pose some risk

to birds and bats due to subsonic, ultrasonic and ambient noise, and electromagnetic radiation.

#### Goal for Renewable Energy

107. The Project is necessary to deliver renewable energy generated in the CREZ.

#### **Engineering Constraints**

- 108. Staff MK 15 will be constructed in new areas and parallel to existing ROW. New easements will vary from an estimated minimum easement width of 100 feet to an estimated maximum easement width of 160 feet, and these widths are sufficient for all LCRA TSC structure types.
- 109. LCRA TSC will design and construct the proposed transmission line to meet nationally recognized guidelines and specifications, including the applicable version of the National Electrical Safety Code (NESC), as well as established regional electric system planning criteria to address various categories of contingency conditions and applicable PUC rules, in order to operate the proposed transmission line in a safe and reliable manner.
- 110. The Kimble County Airport presents a significant engineering constraint when routing to the south.
- 111. Links b19b and b19c, north of the airport will be built below the crest of an existing hill and will not create a new aerial obstruction.
- 112. LCRA TSC can modify the design of Links b19b and b19c if the Federal Aviation Administration requires modifications.
- 113. Link Y11, south of the airport is part of MK33. It would be located approximately 1,200 to 1,800 feet from the south end of the airport's runway.
- 114. Link Y11 would run through a flood plain north of the Llano River.
- 115. Link Y11 cannot be moved further south because it would encroach on the City of Junction.
- 116. LCRA TSC cannot build a safe and reliable transmission line along Link Y11 using aboveground construction.
- 117. Because of the engineering constraints, Link Y11 would have to be built underground at the cost of \$54 million for one-half mile, and is prohibitively expensive.
- 118. Staff MK15 deviates to the north of the Kimble County Airport using Links b19b and b19c and does not require underground construction.

#### Costs, Compatible ROW, and Prudent Avoidance

- 119. LCRA TSC's estimated transmission line costs for all routes range from \$251.8 million to \$406.8 million.
- 120. LCRA TSC's preferred route would cost approximately \$266.4 million. MK33 would cost approximately \$406.8 million. Staff MK15 is estimated to cost \$302.3 million.
- 121. The lower cost of MK13 does not outweigh the benefits associated with paralleling more ROW.
- 122. Staff MK15 parallels compatible ROW for more than 54% of its length and avoids much ranch land located in the central part of the study area.
- 123. Staff MK15 uses Links b84 and b86 along which one landowner has consented to the line.
- 124. Staff MK 15 affects 55 habitable structures.
- 125. Staff MK15 complies with the Commission's policy on prudent avoidance.
- 126. LCRA TSC's proposed alternative routes reflect reasonable investments of money and effort in order to limit exposure to electric and magnetic fields (EMF).
- 127. The project design incorporates, where technically feasible, optimal phasing arrangements and ground clearance heights that result in lower EMF levels, which is consistent with prudent avoidance from an engineering perspective.
- 128. The EMF levels from this project are within the range of the fields that people can experience every day in normal living and working environments and are substantially below the EMF exposure limits adopted by recognized international organizations.
- 129. Based on the current scientific research, there is no reliable scientific basis to conclude that exposure to power frequency EMF from the line will cause or contribute to adverse health effects in people or animals.

#### Alternative Routes with Less Impact

- 130. Staff identified a number of minor route adjustments that can be made at a reasonable cost and those adjustments are adopted along Staff MK15.
- 131. LCRA TSC identified landowner-proposed route modifications.
- 132. LCRA TSC made some modifications before filing the Application.
- 133. As part of LCRA TSC's analysis of landowner-proposed segment modifications not incorporated into LCRA TSC's proposed routes, whether proposed by the landowner before or after the CCN Application filing, LCRA TSC has provided estimates of the modified

- route length and cost associated with each of these modifications. This information facilitates the Commission's consideration of these landowner proposals.
- 134. These landowner-requested routing adjustments mapped and reviewed in LCRA TSC's Attachment 13 (as supplemented) are generally longer and generally require more angle structures than LCRA TSC's filed routes in those respective locations. These requested adjustments are generally in the same land use/habitat types as the filed routes in those locations and they are feasible adjustments from an environmental standpoint if the Commission chooses to approve any or all of them.
- 135. These routing adjustments affect only noticed landowners in a potentially different manner than shown in LCRA TSC's proposed routes and may add length and cost.
- 136. No landowner has offered financial contribution relating to alternative routes or route modifications.
- 137. The Bannwolf Modification would reroute Link O4 from a northern property boundary through the middle of the property belong to Mr. and Mrs. Nance.
- 138. The Bannwolf Modification is not adopted.
- 139. It is reasonable for LCRA TSC to use monopoles through the Tierra Linda Ranch subdivision along Link b56.

#### Proposed Modifications to CREZ Order

- 140. LCRA\_TSC\_proposes\_to\_use\_bundled\_Cumberland\_conductor\_(2x1926.9\_Aluminum\_Conductor Steel Supported/trapezoidal wire (ACSS/TW)) instead of the bundled Merrimack conductor (2x1433 ACSS/TW) that ERCOT assumed in its CTO Study.
- 141. Staff and ERCOT recommend the use of the bundled Cumberland conductor.
- 142. LCRA TSC's proposed modification to use the bundled Cumberland conductor is approved.

#### Cost Discrepancies

- 143. ERCOT estimated the overnight cost for the Project at \$257.56 million and 137 miles in length.
- 144. LCRA TSC's estimated cost for Staff MK15 is \$302.3 million.
- 145. LCRA TSC's estimates include costs not contemplated by ERCOT, including endangered species habitat mitigation, longer routes, complex terrain, constrained paths, and capitalized interest.

- 146. LCRA TSC's estimated construction costs are higher due to maneuvering equipment in rugged terrain and drilling foundations in harder geologic substrates typical in the Hill Country area.
- 147. LCRA TSC's estimated costs are reasonable even though they vary from ERCOT's estimate.

#### TPWD Comments and Recommendations

- 148. TPWD provided comments and recommendations regarding the Project in a letter dated September 24, 2010 (TPWD Letter) and through the testimony of four TPWD witnesses.
- 149. The TPWD letter and evidence addressed issues related to ecology and the environment. TPWD did not consider other factors that the Commission and utilities must consider and balance in CCN applications, including the numerous routing criteria that involve direct effects on people.
- 150. TPWD concluded that construction of any of the proposed routes would require almost entirely new ROW and take significant amounts of existing wildlife habitat.
- 151. TPWD concluded that routes MK32 and MK33 would have the least adverse impact on fish and wildlife resources.
- 152. TPWD owns and operates the 16.1 acre Old Tunnel WMA in Kendall County, Texas, located within 500 feet of Links A3 and O4, the latter of which is part of proposed route MK
  22. TPWD opposes all routes that use Links A3 or O4 because of the expected negative impact to the public benefits of Old Tunnel WMA, and the Old Tunnel bat colony.
- 153. Once the Commission approves a route, LCRA TSC can access private property and perform a survey of the area, and if permits are necessary, apply for and comply with all permit conditions.
- 154. LCRA TSC does not have access to private property prior to the selection of a route.
- 155. No requirement exists for a particular methodology for assessment of endangered species for the examination by the Commission of the "environmental integrity" factor. The Commission's acceptance of the "known habitat" analysis is not prohibited by any regulatory requirements.
- 156. LCRA TSC must comply with all applicable environmental laws and regulations governing erosion control, endangered species, storm water prevention, and all other environmental concerns.
- 157. The recommended Ordering Paragraphs are sufficient to address TPWD's recommendations or requests.

#### VIII. CONCLUSIONS OF LAW

- 1. LCRA TSC is an electric utility as defined in Public Utility Regulatory Act (PURA) §§11.004 and 31.002(6).
- 2. The Commission has jurisdiction over this matter pursuant to PURA §§14.001, 32.001, 37.051, 37.053, 37.054, 37.056, and 39.203(e).
- 3. LCRA TSC filed its CREZ CCN Application in this docket on July 28, 2010, in conformance with the Commission's standard CREZ CCN Application form and the Commission's Orders in P.U.C. Docket Nos. 33672 and 35665. LCRA TSC's Application has met the filing requirements set forth in P.U.C. SUBST. R. § 25.216(g)(2) and (3).
- 4. LCRA TSC provided proper notice of the Application in compliance with PURA §37.054 and P.U.C. PROC. R. 22.52(a).
- 5. LCRA TSC's Application is sufficient under P.U.C. SUBST. R. 25.216(g)(2) and (3).
- 6. LCRA TSC's notice of its Application was adequate.
- 7. SOAH exercised jurisdiction over this docket pursuant to PURA §14.053 and Tex. Gov'T CODE ANN. §2003.049.
- 8. This docket was processed in accordance with the requirements of PURA and the Administrative Procedure Act, TEX. GOV'T CODE ANN. Chapter 2001.
- 9. LCRA TSC is entitled to approval of the Application, as described in the findings of fact, using Staff's MK15, taking into consideration the factors set out in PURA §37.056 and P.U.C. SUBST. R. 25.101.
- 10. Staff MK15 complies with all aspects of PURA §37.056 and P.U.C. SUBST. R. 25.101, including the Commission's policy of prudent avoidance.
- 11. The Project, as a CREZ transmission project identified in Docket No. 35665, is exempt under PURA §§39.203(e) and 39.904(h) and P.U.C. SUBST. R. 25.174(d)(2) from the requirement of proving that the construction ordered is necessary for the service, accommodation, convenience, or safety of the public and need not address the adequacy of existing service, the need for additional service, the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area, and the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted.
- 12. The Proposed Project is consistent with the Commission's goals for the CREZ program and P.U.C. SUBST. R. 25.174 in that it provides (1) long-term cost effective solutions consistent

with the Final Order in Docket No. 35665, and (2) transmission facilities consistent with ERCOT's recommendations to be constructed as soon as possible to relieve existing and growing constraints in delivering wind generation and placed in service.

- 13. The Project is consistent with and in furtherance of the goals and mandates of PURA § 39.904.
- 14. Pursuant to P.U.C. SUBST. R. 25.174(d)(10), the level of financial commitment by generators is sufficient under PURA §39.904(g)(3) to grant LCRA TSC's Application for a CCN in this docket.

#### IX. ORDERING PARAGRAPHS

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

- LCRA TSC's CCN is amended and LCRA TSC's Application to build a new 345-kV
  double-circuit transmission lines that extend from the McCamey D Switching Station to the
  Kendall Switching Station is approved. The Project will follow the route described as Staff
  Route MK15.
- LCRA TSC shall implement erosion control measures as appropriate. LCRA TSC shall
  return each affected landowner's property to its original contours and grades except to the
  extent necessary to establish appropriate right-of-way, structure sites, setup sites, and access
  for the transmission line or unless otherwise agreed to by the landowner.
- 3. In the event LCRA TSC or its contractors encounter any archaeological artifacts or other cultural resources during construction of the Project, LCRA TSC shall cease work immediately in the vicinity of the resource and report the discovery to the Texas Historical Commission (THC) and take action as directed by the THC.
- 4. LCRA TSC shall follow the procedures outlined in the following publications for protecting raptors: Suggested Practices for Avian Protection on Power Lines, The State of the Art in 2006, Avian Power Line Interaction Committee (APLIC), 2006 and the Avian Protection Plan Guidelines published by APLIC in April 2005.
- 5. LCRA TSC shall install bird diverters at all river crossings.
- 6. LCRA TSC shall minimize the amount of flora and fauna disturbed during construction of the Project, except to the extent necessary to establish appropriate right-of-way clearance for the transmission line. LCRA TSC shall re-vegetate using native species considering

- landowner preferences and avoid adverse environmental impacts to sensitive plant and animal species and their habitats as identified by TPWD and USFWS.
- 7. LCRA TSC shall exercise extreme care to avoid affecting non-targeted vegetation or animal life when using chemical herbicides for controlling vegetation within the right-of-way and that such herbicide use comply with rules and guidelines established in the Federal Insecticide, Fungicide and Rodenticide Act and with the Texas Department of Agriculture regulations.
- 8. LCRA TSC shall cooperate with directly affected landowners to implement minor deviations in the approved route to minimize the impact of the Project. Any minor deviations in the approved route shall only directly affect landowners who received notice of the transmission line in accordance with P.U.C. PROC. R. 22.52(a)(3) and shall directly affect only those landowners that have agreed to the minor deviation.
- 9. LCRA TSC shall update the reporting of this project on their monthly construction progress report prior to the start of construction to reflect final estimated cost and schedule in accordance with P.U.C. SUBST. R. 25.83(b). In addition, LCRA TSC shall provide final construction costs, with any necessary explanation for cost variance, after completion of construction and when all charges have been identified.

10. All other motions, requests for entry of specific findings of fact and conclusions of law, and any other requests for general or specific relief, if not expressly granted, are denied.

SIGNED December 16, 2010.

WENDY K L HARVE

ADMINISTRATIVE LAW JUDGE

STATE OFFICE OF ADMINISTRATIVE HEARINGS

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ADMINISTRATIVE LAW JUDGE

STATE OFFICE OF ADMINISTRATIVE HEARINGS

### LCRA TSC'S EXHIBIT # 26 Page 2 of 2

#### Selected Route Composition

#### McCamey-D-Kendall-Gillespie Project

| Route            | Segments  |
|------------------|---|
| MK13             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b18-b20-b22a-b22b-b22c-b34-b36-b50a-b50b-         |
|                  | c7a-c7-c13a-c13e-c13b-c13c-c13d-c19-c20-c21   |
| MK15 /           | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-         |
| Weinzierl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-        |
| Preferred        | c21   |
| MK15A            | b3a-b5a-b5b-b14a-b14ba-b84-b86-b86a-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-             |
| Weinzierl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-        |
| Alternate        | c21   |
| MK15 Modified    | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-<br>c21 |
| MK15 Alternate   | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c12a-c12b-c12c-c19-c20-c21                   |
| MK15 Segrest     | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-         |
|                  | Y14-b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-        |
|                  | c20-c21   |
| MK22             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O2-O4-c13c-c13d-c19-        |
|                  | c20-c21   |
| MK23             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-O7-c12b-O8-           |
|                  | c13d-c19-c20-c21  |
| MK24             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-c13e-c13b-            |
|                  | c13c-c13d-c19-c20-c21   |
| MK32             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y8-b19b-b19c-b23a-b23b-b29a-Y14-b29c-        |
|                  | b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21                |
| MK33             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-Y14-          |
|                  | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21           |
|                  | Additional Routes along iH-10 past Segment b29d                                     |
| MK61             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-         |
| (modified        | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21           |
| MK15 /           |   |
| Weinzierl Pref.) |   |
| MK62             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
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| MK15 Modified    |   |
| PUC Staff)       |   |
| MK63             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-         |
| (modified        | Y14-b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21       |
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10. All other motions, requests for entry of specific findings of fact and conclusions of law, and any other requests for general or specific relief, if not expressly granted, are denied.

SIGNED December 16, 2010.

WENDY & L. HARVET

ADMINISTRATIVE LAW JUDGE

STATE OFFICE OF ADMINISTRATIVE HEARINGS

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ADMINISTRATIVE LAW JUDGE

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LCRA TSC'S EX Page 1 of 2

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| The side of the second state of the second sta | 1                                     | <del> </del> | r :  |  | 1            | · · · · · · · · · · · · · · · · · · · | 1           | 1 7         | 1       | 1      | 1 1    |        |   |   |
| THE A SECURE SEC |                                       | 1            |  | <del></del>                                      | 1            |                                       |             | <del></del> | -       |        | · ·    | 1      | 1   | 1                                       |
| AND A PART DE THE STORY OF THE PROPERTY AND ADDRESS OF THE PART OF THE PARTY AND ADDRESS OF THE  | 153.55                                | - FH         | 12.84  | 199.27   | 010          | UPL 17                                | 194.99      | P) (I       | 193 164 | 7(19   | 94.79  | N.VI   | 101.94  | . 195.54                                |
| - i but concern i die  |                                       |              |  |  |              |                                       |             |             |         |        |        |        |   |   |

### LCRA TSC'S EXHIBIT # 26 Page 2 of 2

#### Selected Route Composition

#### McCamey-D-Kendall-Gillespie Project

| Route            | Segments  |
|------------------|---|
| MK13             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b18-b20-b22a-b22b-b22c-b34-b36-b50a-b50b-         |
|                  | c7a-c7-c13a-c13e-c13b-c13c-c13d-c19-c20-c21   |
| MK15 /           | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-         |
| Weinzierl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-        |
| Preferred        | c21   |
| MK15A            | b3a-b5a-b5b-b14a-b14ba-b84-b86-b86a-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-             |
| Weinzlerl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-        |
| Alternate        | c21 ·   |
| MK15 Modified    | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-<br>c21 |
| MK15 Alternate   | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c12a-c12b-c12c-c19-c20-c21                   |
| MK15 Segrest     | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-         |
| <del>-</del>     | Y14-b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-        |
|                  | c20-c21   |
| MK22             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O2-O4-c13c-c13d-c19-        |
|                  | c20-c21   |
| MK23             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-O7-c12b-O8-           |
|                  | c13d-c19-c20-c21  |
| MK24             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-c13e-c13b-            |
|                  | c13c-c13d-c19-c20-c21   |
| MK32             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y8-b19b-b19c-b23a-b23b-b29a-Y14-b29c-        |
|                  | b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21                |
| MK33             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-Y14-          |
|                  | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21           |
|                  | Additional Routes along IH-10 past Segment b29d                                     |
| MK61             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-         |
| (modified        | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21           |
| MK15 /           |   |
| Weinzierl Pref.) |   |
| MK62             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-        |
| (modified        | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21           |
| MK15 Modified    |   |
| PUC Staff)       |   |
| MK63             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-         |
| (modified        | Y14-b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21       |
| MK15 Segrest)    |   |

# TAB D

SUAH DUCKET NO. 473-10-554 PUC DOCKET NO. 38354

# LCRA TSC'S EXHIBIT # 26 Page 1 of 2

Record Copy NOV - 1 2016 AIX

# CRITERIA FOR SELECTED ROUTES (EXCLUDING MODIFICATIONS) MCCAMEY D-KENDALL-GILLESPIE 345-KV PROJECT MCCAMEY D-KENDALL

|   | <del>,</del> |                     |                      | CAITE O REITE  |                                       |              |                |                |                 |                 |        |                                   | 1 MK52 1    | $\overline{}$                  |
|---|--------------|---------------------|----------------------|----------------|---------------------------------------|--------------|----------------|----------------|-----------------|-----------------|--------|-----------------------------------|-------------|--------------------------------|
|   | MK13         | MK15<br>(Waz) Pref) | MK15A                | MK15 Modified  | MKIS Alternate PUC Staff <sup>3</sup> | MK15 Segress |                |                |                 |                 | мказ   | MK 61<br>(MK15 Mod, Wnzl<br>Pref) | [Mod.MX25   | MK63<br>(Mod. MK15<br>Segrest) |
| Base Cost (in millions of dollars)  | \$256.4      | S286.8              | (Wnztl 2)<br>\$286.6 | \$302.3        | \$295.6                               | 5359.9       | MK22<br>5326.4 | MK23<br>5315.5 | MX24<br>\$315.9 | MX32<br>\$349.3 | 5406.B | S287.3                            | \$302.9     | \$360.5                        |
| LAND USE  | 3255.4       | 1                   | 15286.6              |                |                                       | 1 2222       | , 1310.4       | 3343.0         | 3313.3          | 3349,3          | 3453.0 | 220,3                             | 7,552.5     |                                |
| 1 Length of alternative route   | 134.99       | 135.63              | 137.02               | 144.13         | 143.31                                | 140.80       | 155.29         | 151.84         | 151,50          | 154.42          | 151.09 | 133.31                            | 141.81      | 138.48                         |
| 2 Number of hebitable structures' within 500 ft of ROW centerline   | 18           | 45                  | 45                   | 55             | 64                                    | 57           | 44             | 43             | 37              | 151             | 153    | 118                               | 128         | 134                            |
| 3 (Number of newly affected habitable structures within 500 ft of ROW centerline (not within 500 ft of an existing transmission line) | 18           | 40                  | 40                   | 51             | 6D                                    | 54           | 23             | 30             | 24              | 151             | 150    | 113                               | 123         | 131                            |
|   |              | 0 .                 | 40                   | 1 1            | n                                     | 5            | 0              | 30             | 0               | <del></del>     | 17     | 17                                | 17          | 17                             |
| 4 Number of habitable structures within the RDW   | 9.34         | 24.42               | 74.42                | 24.47          | 13.57                                 | 15.26        | 90.56          | 77.14          | 83.92           | 17<br>B.82      | 0.67   | 8.5B                              | 8,58        | 0.43                           |
| 5 Length of ROW parallel to existing transmission line ROW  | 30.20        | 35,34               | 35.34                | 54.58          | 57.83                                 | 65.44        | 3.61           | 3.51           | 3.61            |                 | 132.29 | 52.2B                             | 71.51       | 82.35                          |
| 6 Length of 90W parallel to other existing compatible ROW (highways, roads, pipelines, etc.)  | 0.00         | 0.00                | 0.00                 | 0.00           | 0.00                                  | 0.00         | 0.00           | D.DC           | 0.00            | 121.43<br>0.00  | 0.00   | 0.00                              | 0.00        | 0.00                           |
| 7 Length of ROW utilizing existing transmission line ROW  | 1.80         | 5.65                | 7.63                 | 7.63           | 9.43                                  | 7.63         | 10.43          | 9.56           | 9.56            |                 | 5.34   | 6.48                              | 8.46        | 8.46                           |
| E Length of ROW parallel to parcel lines (not following existing ROW)   | 1,80         | 3.83                | 7.63                 | 7.03           | 9,43                                  | 1            | 10.43          | 9.56           | 9.56            | 8.34            | 8,34   | 9                                 | p. 40       | 0                              |
| 9 Number of parks/recreational areas crossed by ROW   | 1.58         | 1,68                | <del> </del>         | 1.58           | 0.00                                  | 1.58         | G.DO           | D.DO           | 1 1 1           | <del></del>     | 9.00   | 0.00                              | 8.00        | 0.00                           |
| 10 Length of ROW across parks/recreational areas  | 1            | 1.00                | 1.68                 | 1 100          | 7                                     | 2            | 2              | 0.00           | 1.68            | 0.00            | 7      | 6                                 | 6           | 7                              |
| 11 Number of additional perks/recreational areas within 1,000 ft of ROW centerline  | 3,69         | 0.15                | 1                    | 0.62           | D.62                                  | 1.36         | 3.04           | <del></del> -  | 1               | 6               | 4.70   | <del></del>                       | 1.50        | 2.34                           |
| 12 Length of ROW across cropland  | +            | 133,41              | D.24                 | 140.98         |                                       | 136.26       |                | 2.70           | 2.54            | 3.95            |        | 1.14                              | 135.91      | 131.19                         |
| 13 Length of ROW across rangeland/pastureland   | 129.72       | 0.00                | 134.69               | 0.60           | 140.23                                | 0.00         | 150.33         | 147.40         | 147,14          | 155.26          | 150.54 | 128.34                            |             | 0.00                           |
| 14 Length of ROW across land irrigated by travelling systems (rolling or pivot type)  |              | <del></del>         | 0.00                 | <del></del>    | 0.00                                  | 8            | 0.00           | 0.00           | 0.00            | 0.00            | 0.00   | 0.00                              | 0.00        | 5.00                           |
| 15 Number of pipeline crossings   | 9            | , B                 | F                    | B              | G .                                   | - 8<br>8     | B              | <u> </u>       | 8               | 12              | 17     | 5                                 | <u> </u>    | 7                              |
| 16 Number of transmission line crossings  | <u>B</u>     | 7                   | 7                    |                |                                       |              | 7              | 9              | <u> </u>        | 4               | 5      | - 6                               |             | 13                             |
| 17 Number of U.S. and State highway crossings   | 6            | <del></del> _       | 9                    | , <del>{</del> | 10                                    | 12           | 10             | 10             | 9               | 12              | 15     | 10                                | 10          | 1                              |
| 18 Number of Farm-10-Market and Ranch-10-Market road crossings  | 12           |                     | 9                    | 11             | 11                                    | 12           | 9              | 9              | 9               | 15              | 15     | 12                                | 14          | 15                             |
| 19 Number of FAA-registered airports within 10,000 ft of ROW centerline   | 0            | 1                   | 1                    | 1              | 1                                     | 1            | 3              | 2              | 2               | 3               | Z      | 3                                 | 1           | 1                              |
| 20 Number of FAA-registered airports within 20,000 ft of ROW centerline   | <u>n</u>     | 0                   |                      | 0              | 0                                     | 0            |                | 11             | 1               | 0               | 0      | 0                                 | D           | . 0                            |
| 21 Number of private sirstrips within 10,000 ft of ROW centerline   | 6            | 12                  | 11                   | 11             | 11                                    | 11           | В              | 7              | 7               | 11              | 11     | 17                                | 11          | 11                             |
| 22 Number of heliparts within 5,000 ft of ROW centerline  | <u> </u>     | 0                   | 0                    | 0              | D.                                    | 2            | . 0            | 0              | 0               | 1               | 2      | 1                                 | 2           | 1                              |
| 23 Number of commercial AM radio transmitters within 10,000 ft of ROW centerline  | 0            | 0                   | 0                    | 0              | G                                     | 11           | 0              | <u> </u>       | 0               | 0               | 1      | 0                                 | 0           | 1                              |
| 24 Number of FM radio transmitters, microwave relay stations, or other electronic installations within 2,000 ft of ROW centerline     | , <u>2</u>   | 11                  | 12                   | 13             | 14                                    | 15           | 4              | 6              | 6               | 32              | 35     | 23                                | 25          | 27                             |
| AESTHETICS  |              | ·                   |                      | т              |                                       |              |                |                |                 |                 |        | <del></del>                       |             | ļ                              |
| 25 Estimated length of ROW within for eground visual 2010 of U.5 and State highways   | 8.45         | 38.37               | 38.27                | 49.11          | 49.25                                 | 60.34        | 15.83          | 20.16          | 20.16           | 146.63          | 157.87 | 64.22                             | 75.01       | 85.24                          |
| 26 Estimated length of ROW within foreground visual sone 3 of parks/recreational areas  | 4.24         | 4.43                | 4.43                 | 4.43           | 3.13                                  | 6.73         | 1.58           | D.47           | 3.18            | 7.69            | 10.00  | 5.82                              | 5.02        | 8.17                           |
| ECOLOGY   | <b></b>      |                     | 1                    | <del></del>    |                                       |              |                |                | <del>,</del>    |                 |        |                                   | ļ           |                                |
| 27 Length of ROW across upland woodland   | 29.20        | 32.35               | 31.92                | 31.68          | 31.93                                 | 32.51        | 19,34          | 19.80          | 20.41           | 36.15           | 36.80  | 33.97                             | 33.49       | 34.13                          |
| 28 Length of ROW errors bottomiand/ripatian woodland  | 1.37         | 0.63                | 0.63                 | 0.75           | D.75                                  | D.75         | 1,34           | 1.40           | 1.34            | 1.24            | 1.74   | 0.65                              | 0.80        | 0.80                           |
| 25 Length of ROW across potential wetlands  including forested wetlands   | D.27         | 0.13                | 0.15                 | 0.21           | 0.23                                  | 0.23         | 0.32           | 0.32           | D.32            | 0.38            | 0.40   | 0.19                              | 0.27        | 0.28                           |
| 30 length of ROW across known/occupied federally endangered/threatened species habitat  | 0.55         | 0.88                | 0.88                 | 0.53           | 88.0                                  | 0.00         | 0.90           | 0.00           | D.D0            | D. 88           | 0.00   | 0.08                              | D.BS        | 0.00                           |
| 31 Length of ROW across potential golden-cheeked warbler habital (as mapped by Loomis Partners, Inc.)                                 | 3,34         | 15.35               | 15.35                | 15.90          | 16.05                                 | 11.77        | 8.10           | 7.46           | 7,44            | 17,36           | 13.23  | 17.08                             | 17.63       | 13.50                          |
| 32 Length of ROW across open water (lakes, ponds)   | 0.08         | 0.05                | 0,05                 | 0.11           | 0.11                                  | 0.11         | 0.11           | 0.11           | 0.11            | 0.08            | 0.08   | 0.02                              | 0.08        | 0.08                           |
| 33 Number of stream crossings   | 144          | 144                 | 151                  | 160            | 15?                                   | 149          | 190            | 186            | 190             | 154             | 143    | 137                               | 153         | 142                            |
| 34 Number of river crossings  | 44           | 2                   | 2                    | 2              | 2                                     | 4            | 5              | 5 5            | 5               | 22              | 1 4    | 2                                 | . 2         | 4                              |
| 35 Length of ROW parallel (within 100 ft) to streams or rivers  | 1.34         | 1.79                | 2.20                 | 2,45           | 3.35                                  | 2.34         | 3.50           | 3.73           | 3.49            | 1.53            | 1.82   | 2.28                              | 2.95        | 2.84                           |
| 36 Length of ROW across 100-year floodplains  | 5,13         | 3.43                | 3.33                 | 7.53           | 7.73                                  | 12.07        | 4.36           | 3.8B           | 3.50            | 10.17           | 14.67  | 5,08                              | 9.22        | 13.72                          |
| CULTURAL RESOURCES  |              | <del></del>         | Y                    | <del></del>    | <del>,</del>                          |              | ·              |                |                 | ·               |        |                                   | <del></del> | <u> </u>                       |
| 37 Number of recorded historic and prehistoric sites crossed  | 3            | 11                  | 11                   | 17             | 117                                   | 2            | 5              | 6              | 6               | 17              | 7      | 12                                | 13          | 3                              |
| 38 Number of additional recorded historic and prehistoric sites within 1,000 ft of ROW centerline                                     | 15           | 24                  | 24                   | 27             | 77                                    | 14           | 22             | 16             | 16              | 46              | 33     | 79                                | 37          | 19                             |
| 39 Number of National Register-listed or determined-eligible sites crossed  | 11           | a                   | 0                    | 0              | D                                     | 0            | 1              | 1              | 1               | 1               | 1      | 0                                 | 0           | 0                              |
| 4D Humber of additional National Register-listed or determined-eligible sites within 1,000 ft of ROW centerline                       | 6            | 3                   | 3                    | 5              | 5                                     | 5            | D              | 0              | 0               | Б               | - 5    | 3                                 | 5           | 5                              |
| 41 tength of ROW across areas of high archeological/historical site potential   | 103,53       | 95.97               | 97.56                | 105.77         | 101.35                                | 106.97       | 104.90         | 101.76         | 102.96          | 97.59           | 98.79  | 93.56                             | 103.36      | 104.55                         |

Note: All length measurements in miles.

Single-family and multifamily dwellings and related structures, mobile homes, apartment

buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes,

schools, or other structures normally inhabited by humans or intended to be inhabited by

school, or also indicates normally measured by indicate to the mission of the humans on a daily or regular basis.

1 Property lines created by existing road, highway, or railroad ROW are not "double-counted"

in the length of ROW parallel to parcet lines criterion.

One-half mile, unobstructed.

<sup>\*</sup>One-half mile, unobstructed.

\*Route "MKJS Modified PUC Staff does not include PUC Staff witness Mohammed Ally's recommendation for monopole construction on tract c6-001 (See Attachment 13, Supplement 1, page 6, adding 50 6M), and PUC Staff witness Mohammed Ally's recommendation for a modification to Segment of (See Attachment 13, Supplement 1, page 43, adding 0.49 miles and \$1.3M).

\*Route "MKJS Alternate PUC Staff" does not include PUC Staff witness Mohammed Ally's recommendation for monopole construction on tract of-001 (See Attachment 13, Supplement 1, page 6, adding 50.6M), and PUC Staff witness Mohammed Ally's recommendation for a modification to Segment of (See Attachment 13, Supplement 1, page 43, adding 0.49 miles and \$1.3M).

SOAH DOCKET NO. 473-10-5546 PUC DOCKET NO. 38354

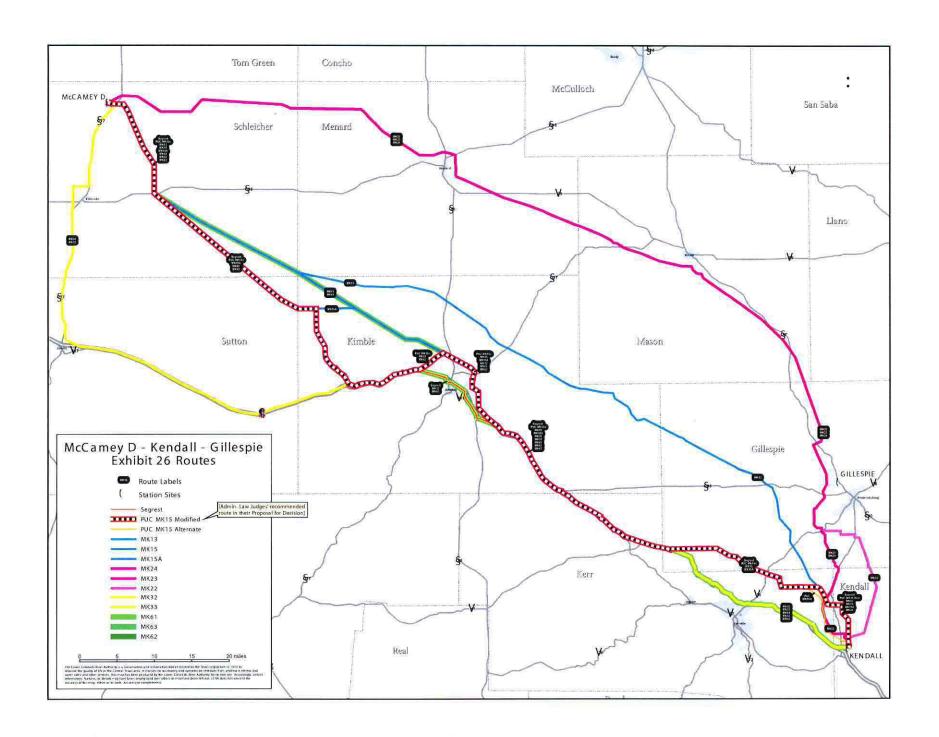
# LCRA TSC'S EXHIBIT # 26 Page 2 of 2

## Selected Route Composition

# McCamey-D-Kendall-Gillespie Project

| Route            | Segments  |
|------------------|---|
| MK13             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b18-b20-b22a-b22b-b22c-b34-b36-b50a-b50b-   |
|                  | c7a-c7-c13a-c13e-c13b-c13c-c13d-c19-c20-c21                                   |
| MK15 /           | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-   |
| Weinzierl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-  |
| Preferred        | c21   |
| MK15A            | b3a-b5a-b5b-b14a-b14ba-b84-b86-b86a-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-       |
| Weinzierl        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-  |
| Alternate        | c21   |
| MK15 Modified    | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-  |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-c20-  |
|                  | c21   |
| MK15 Alternate   | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-  |
| PUC Staff        | b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c12a-c12b-c12c-c19-c20-c21             |
| MK15 Segrest     | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-   |
|                  | Y14-b29c-b29d-b48-b53-b56-b56a-b58b-c6-c10-c11-c13a-c13e-c13b-c13c-c13d-c19-  |
|                  | c20-c21   |
| MK22             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O2-O4-c13c-c13d-c19-  |
|                  | c20-c21   |
| MK23             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-O7-c12b-O8-     |
|                  | c13d-c19-c20-c21  |
| MK24             | b3a-b3b-b10-b13aa-b83-P1-P2b-P3-P4b-P5-P6a-P7-P8b-P9-O1-O3-O6-c13e-c13b-      |
|                  | c13c-c13d-c19-c20-c21   |
| MK32             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y8-b19b-b19c-b23a-b23b-b29a-Y14-b29c-  |
|                  | b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21          |
| MK33             | b3a-b5a-Y1-Y2b-Y2c-Y3a-Y4-Y5c-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-Y14-    |
|                  | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21     |
|                  | Additional Routes along IH-10 past Segment b29d                               |
| MK61             | b3a-b5a-b5b-b14a-b14ba-b14bb-b14c-b19aa-b19ab-b19b-b19c-b23a-b23b-b29a-Y14-   |
| (modified        | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21     |
| MK15 /           |   |
| Weinzierl Pref.) |   |
| MK62             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-y5cc-y7b-y8-b19b-b19c-b23a-b23b-b29a-y14-  |
| (modified        | b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21     |
| MK15 Modified    |   |
| PUC Staff)       |   |
| MK63             | b3a-b5a-b5b-b14a-b14ba-b84-b86-b90-Y5cc-Y7b-Y9-Y10b-Y11-Y12a-Y13-b23b-b29a-   |
| (modified        | Y14-b29c-b29d-Y16-Y17b-Y18-Y19b-Y20-c1b-c1c-c14a-c14b-Y22-Y22a-c18ab-c18b-c21 |
| MK15 Segrest)    |   |

# TAB E



### TAB F

### Excerpts from PUC Order, Docket No. 38354 Competing Factors in Transmission Line Routing

"... The ALJs recommended that the Commission adopt Staff's MK15 Modified route. However, based upon a weighing of the applicable factors set out in PURA § 37.056 and P.U.C. SUBST. R. 25.101, the Commission determines that route MK63, as modified by this Order, better balances the factors of PURA § 37.056 and P.U.C. SUBST. R. 25.101. Consequently, the Commission adopts the PFD, including findings of fact and conclusions of law, except to the extent the PFD is inconsistent with this Order." Order at 1.

"The Commission has chosen route MK63, as modified by this Order, rather than Staff's MK15 Modified because the Commission finds in the area around Junction and Kerrville, it is more desirable to parallel or closely follow Interstate 10 (1-10) rather than cutting through less developed land. Particularly, in this study area, the Commission finds that 1-10 is a more compatible right-of-way for paralleling purposes than the alternative paralleling opportunities available." Order at 2.

### Community Values

- "22. Based on input from the open houses and throughout the proceeding, strong community values included: avoiding the Texas Hill Country; reducing the effect of the line on habitable structures, particularly in developed areas; reducing the effect on rural residential subdivisions; and building the line with monopoles." (Emphasis added.)
- "23. The community values of avoiding habitable structures in developed areas and avoiding the Hill Country are competing values." (Emphasis added.)
- "24. MK63 parallels roadways for much of its distance, thereby avoiding much of the Hill Country."
- "25. Where MK63 parallels 1-10, it does not cut a new path through the heart of the Hill Country. I-10 has already cut through the area and MK63 will not cut an entirely new corridor through the area."
- "30. MK63 as modified by this Order provides the best balance between the community values of avoiding the Hill Country and avoiding habitable structures and cities. (Emphasis added.)"

#### Recreational and Park Areas

"32. Avoiding parks and recreational areas was a consideration in designing the routes proposed in the application. PBS&J reviewed U.S. Geological Survey topographic maps, Texas Department of Transportation (TxDOT) county highway maps and federal, state, and local maps, the Texas Parks and Wildlife Department's (TPWD) "Texas Outdoor Recreation Inventory," the Texas Outdoor Recreation Plan, recent aerial photography, and conducted a limited field reconnaissance."

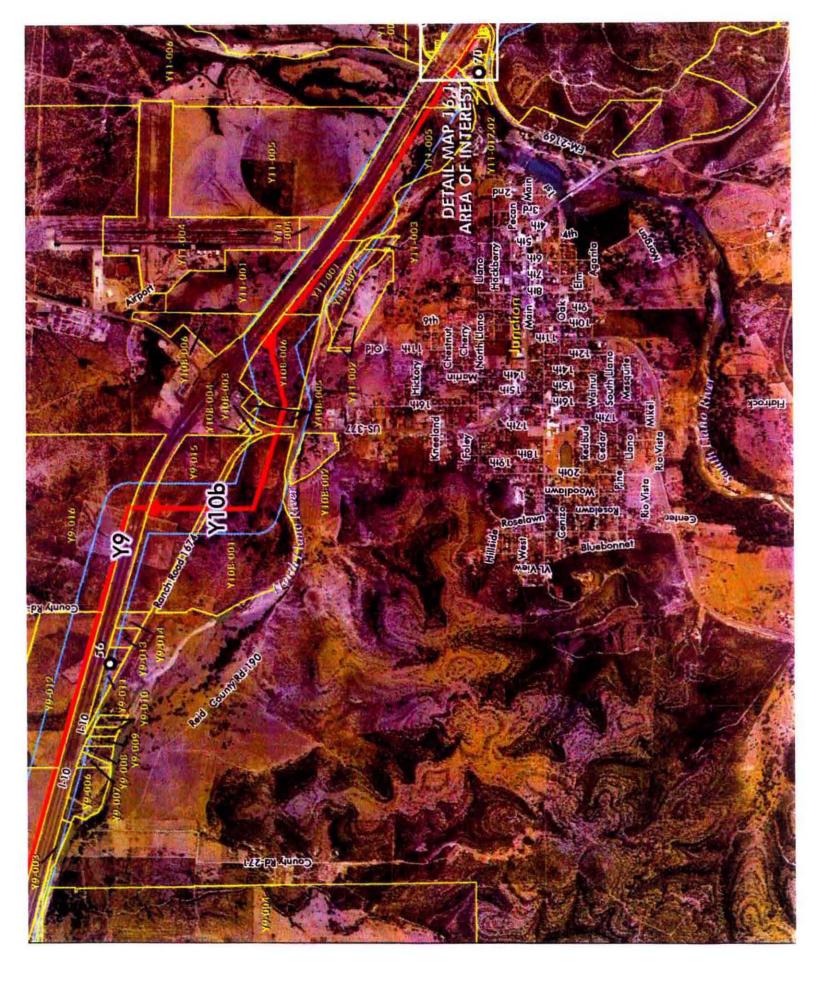
#### Aesthetics

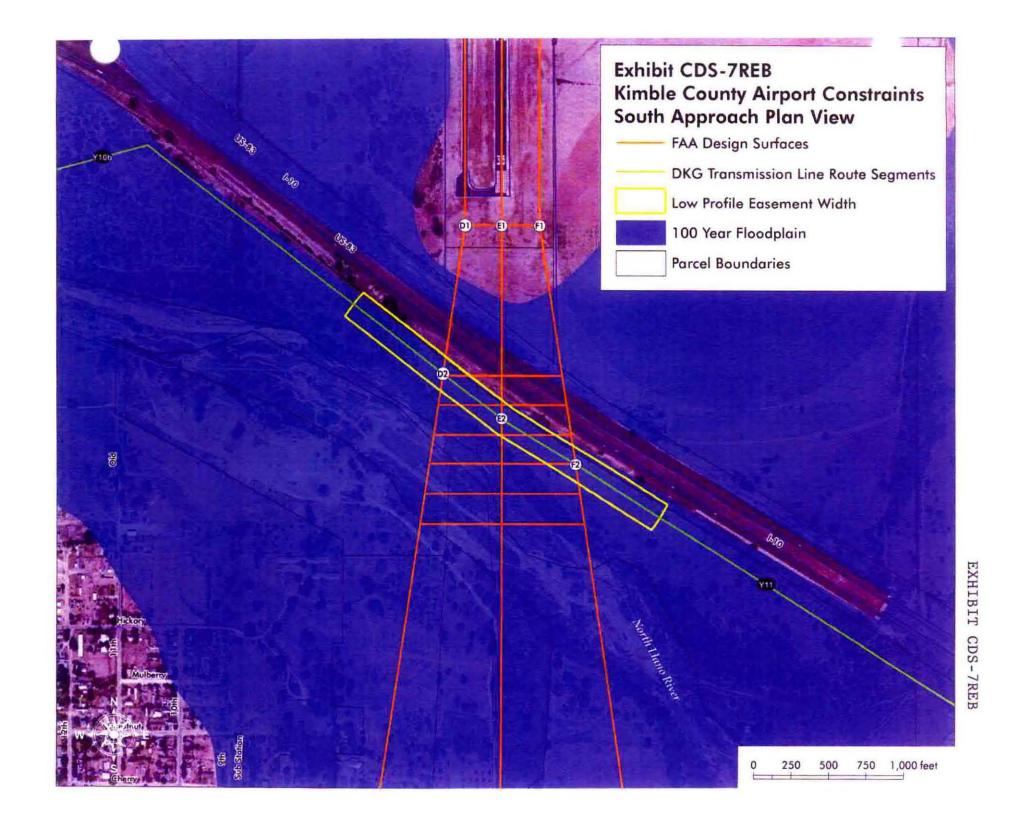
- "51. The central project area contains large tracts of relatively unfragmented and undeveloped land. The natural beauty of this part of the project area includes scenic vistas, meadows, and oak-lined creeks and rivers." (Emphasis added.)
- "52. 1-10 is a means of transportation across the state, where aesthetically pleasing views are incidental. Travelers and anyone in the proximity of 1-10 in the project area will see commercial development including gas stations, convenience stores, chain and fast-food restaurants, strip malls, traffic including heavy tractor-trailers, car lots, power lines, roadways including feeder roads, and all of the development associated with small towns, larger municipalities, and cities like San Antonio. It is far more likely that a 345-kV line will be lost in the visual foreground along 1-10 than if it were run along a central or northern route through what is undoubtedly the aesthetically pleasing and relatively undeveloped Texas Hill Country." (Emphasis added.)
- "52a. The Commission finds that in this study area, following 1-10 along MK63 is a more compatible right-of-way for paralleling purposes than the alternative paralleling opportunities available."

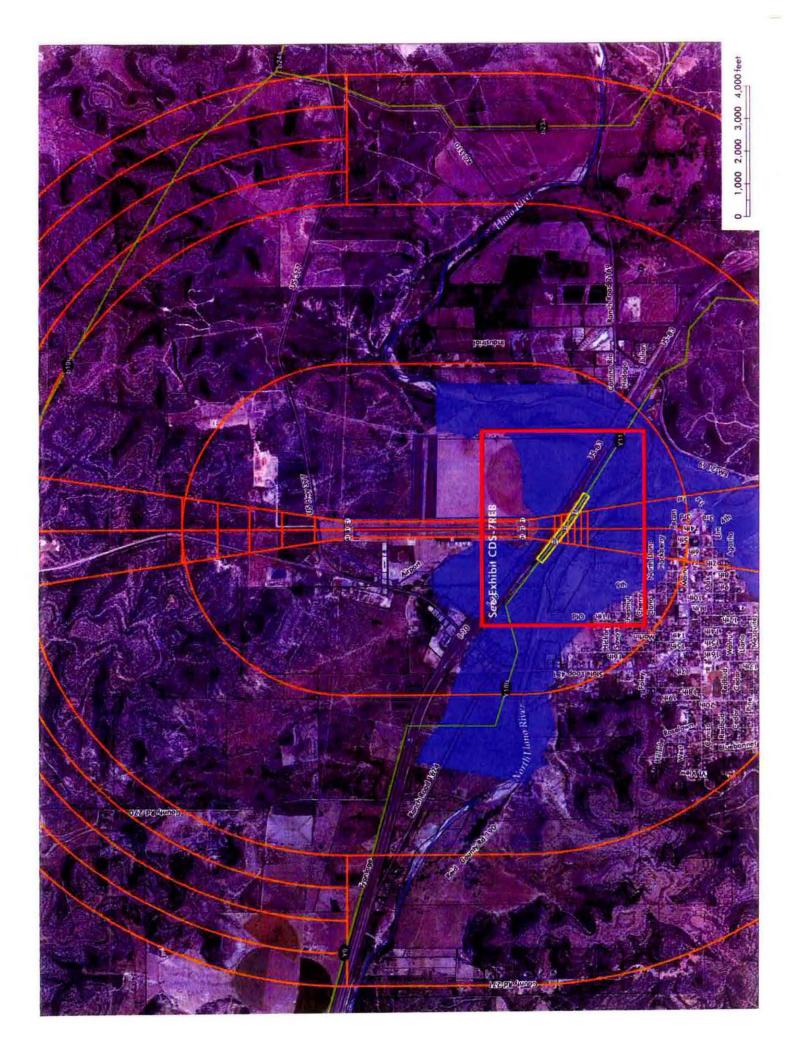
### Archeological and Cultural Resources

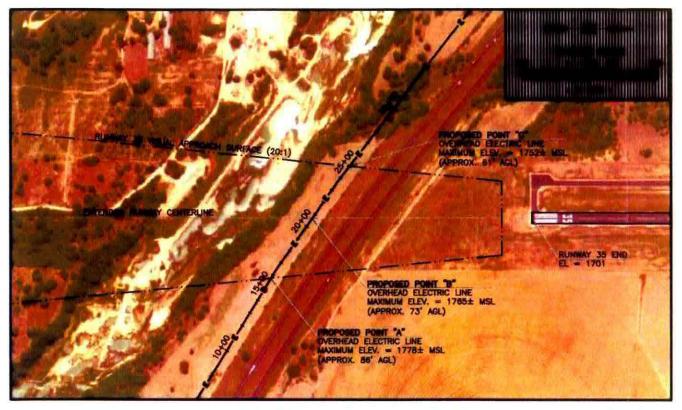
- "53. Much of the study area has a high probability of containing previously unrecorded cultural resource sites. PBS&J's cultural resources evaluation was based on known data regarding sites in the area, the density of the sites, and the National Register of Historic Places (NRHP) and State Archaeological Landmark potential for the sites."
- "60. Routes parallel to 1-10 include commercial and residential development normally associated with proximity to an interstate highway system. Historical and cultural sites in these areas are more likely to have been disturbed than those in the central and northern project areas."

# TAB G

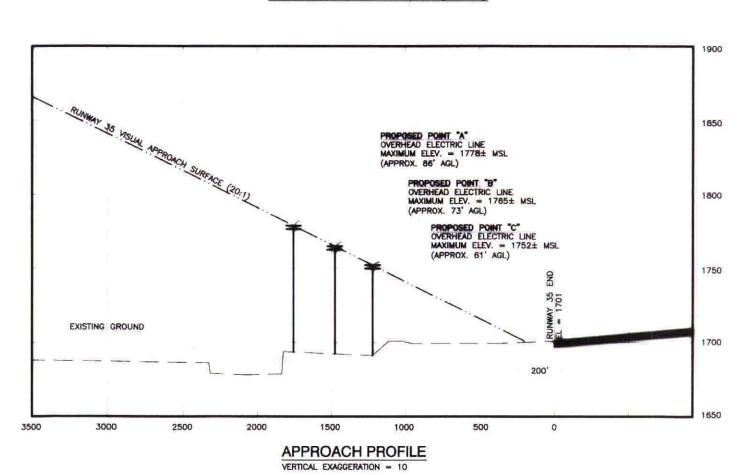




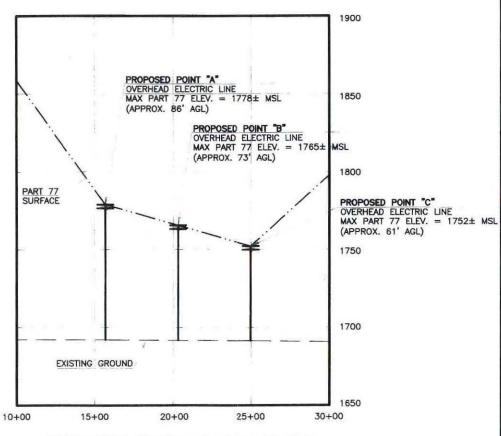




**RUNWAY 35 APPROACH (PLAN)** 







### OVERHEAD ELECTRIC LINE PROFILE

VERTICAL EXAGGERATION = 10

| KIMBLE COUNTY AIRPORT JUNCTION, TEXAS |  |
|---------------------------------------|--|
| OBSTRUCTION EVALUATION                |  |

RUNWAY 35 APPROACH

JOB NO.: 10081990 DATE: SEPT, 2010 DESIGNED BY:ATW DRAWN BY:ATW

BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"
IF NOT ONE INCH ON THIS SPEET, ADJUST

DRAWING NUMBER

**RW35** 

SHEET

## TAB H

### Excerpt from PUC Order, Docket No. 38354 Findings of Fact and Ordering Provisions regarding the Kimble County Airport

#### I. Discussion

"The Commission has modified MK63 in the vicinity immediately south of the Kimball County Airport by moving link Y11 as far south as safely and reliably possible using aboveground construction while still affecting only noticed landowners."

### II. Findings of Fact

- "110. The Kimble County Airport presents a significant engineering constraint when routing to the south."
- "113. Link Y11, as filed, is south of the airport, and is part of MK33. It would be located approximately 1,200 to 1,800 feet from the south end of the airport's runway."
- "114. Link Y11, as filed, would run through a flood plain north of the Llano River."
- "115. Link Y11 can be moved to the southern limit of noticed property owners."
- "116. LCRA cannot build a safe and reliable transmission line along link Y11 as filed using above-ground construction."
- "117. Because of the engineering constraints, link Y11 as filed would have to be built underground at the cost of \$54 million for one-half mile, and is prohibitively expensive."
- "118a. Link Y11, when moved to the southern limit of noticed property owners, can be built safely and reliably at a reasonable cost above-ground."
- "160. In the vicinity immediately south of the Kimball County Airport, it is appropriate for LCRA to move link Y11 as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners. It is not appropriate for this modification to Y11 to affect LCRA's ability to safely and reliably operate the line or the safe use of the Kimball County Airport."

### IV. Ordering Paragraphs

"2. LCRA shall, in the vicinity immediately south of the Kimball County Airport, move link Y11 as far south as safely and reliably possible using overhead construction while still affecting only noticed landowners. This modification to Y11 shall not affect LCRA's ability to safely and reliably operate the line, nor shall it affect the safe use of the Kimball County Airport."

## TAB I

### Excerpts from PUC Order, Docket No. 38354 Findings of fact regarding "prudent avoidance"

- "124. MK63 affects 134 habitable structures."
- "125. MK63 complies with the Commission's policy on prudent avoidance." (Emphasis added.)
- "126. LCRA's proposed alternative routes reflect reasonable investments of money and effort in order to limit exposure to electric and magnetic fields (EMF)." (Emphasis added.)
- "127. The project design incorporates, where technically feasible, optimal phasing arrangements and ground clearance heights that result in lower EMF levels, which is consistent with prudent avoidance from an engineering perspective."
- "128. The EMF levels from this project are within the range of the fields that people can experience every day in normal living and working environments and are substantially below the EMF exposure limits adopted by recognized international organizations."
- "129. Based on the current scientific research, there is no reliable scientific basis to conclude that exposure to power frequency EMF from the line will cause or contribute to adverse health effects in people or animals."