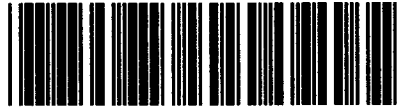


Control Number: 38290



Item Number: 526

Addendum StartPage: 0

**SOAH DOCKET NO. 473-10-4790
PUC DOCKET NO. 38290**

**APPLICATION OF SHARYLAND § BEFORE THE STATE OFFICE
UTILITIES, L.P. TO AMEND ITS §
CERTIFICATE OF CONVENIENCE §
AND NECESSITY FOR THE §
PROPOSED HEREFORD TO WHITE § OF
DEER 345 KV CREZ TRANSMISSION §
LINE IN ARMSTRONG, CARSON, §
DEAF SMITH, OLDHAM, POTTER, §
AND RANDALL COUNTIES, TEXAS § ADMINISTRATIVE HEARINGS**

**REBUTTAL TESTIMONY
OF
MARK D. MEYER
FOR
SHARYLAND UTILITIES, L.P.**

SEP 14 2010
11:30 AM
PUC CLERK
ED

SEPTEMBER 14, 2010

**SOAH DOCKET NO. 473-10-4790
PUC DOCKET NO. 38290**

<p>APPLICATION OF SHARYLAND UTILITIES, L.P. TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE PROPOSED HEREFORD TO WHITE DEER 345 KV CREZ TRANSMISSION LINE IN ARMSTRONG, CARSON, DEAF SMITH, OLDHAM, POTTER, AND RANDALL COUNTIES, TEXAS</p>	<p>§ § § § § § § § § §</p>	<p>BEFORE THE STATE OFFICE</p> <p>OF</p> <p>ADMINISTRATIVE HEARINGS</p>
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REBUTTAL TESTIMONY OF MARK D. MEYER

1

I. INTRODUCTION

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Mark D. Meyer. My business address is 1900 N. Akard Street,
4 Dallas, Texas 75201.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am employed by Sharyland Utilities, L.P. ("Sharyland") as a Project Manager.

7 **Q. ARE YOU THE SAME MARK MEYER WHO SUBMITTED DIRECT**
8 **TESTIMONY AND EXHIBITS IN THIS PROCEEDING ON JUNE 16,**
9 **2010 ON BEHALF OF SHARYLAND?**

10 A. Yes, I am.

11 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**
12 **PROCEEDING?**

13 A. The purpose of my rebuttal testimony is to respond to the Direct Testimony of
14 several intervenors relating to (1) cost estimates of the proposed transmission
15 project and (2) construction of the proposed transmission line near proposed wind
16 farm facilities currently being developed by Cielo Wind Services, Inc. ("Cielo").

17

II. COST ESTIMATES

18 **Q. SOME OF THE INTERVENOR WITNESSES HUGHES, J. CURRIE,**
19 **WHITE, D. ROGERS, GREEN, MECHLER, CORRIGAN, T. CURRIE, S.**
20 **ROGERS, SWEATMAN) CRITICIZE VARIOUS ASPECTS OF**
21 **SHARYLAND'S COST ESTIMATES FOR THE PROPOSED**
22 **TRANSMISSION PROJECT. HOW DO YOU RESPOND?**

23 A. The Commission designated Sharyland to construct the proposed transmission
24 line as part of a competitive selection process in Docket No. 36556 (now Docket
25 No. 37902) based upon Sharyland's demonstrated strengths and merits. One of

1 the core strengths described by Sharyland in its application in Docket No. 37902
2 was its management team and third-party vendors, including Black & Veatch
3 Corporation (“B&V”) and Coates Field Services, Inc. The techniques used by
4 Sharyland for estimating costs of the transmission project are well understood and
5 consistent with how these costs are typically estimated in CCN applications. The
6 intervenors’ criticisms are unfounded. I will address them individually.

7 **A. RIGHT OF WAY/LAND ACQUISITION COST ESTIMATES**

8 **Q. MR. HUGHES (PAGE 50, LINES 8-14) CRITICIZES THE METHOD**
9 **USED BY SHARYLAND TO ESTIMATE RIGHT-OF-WAY AND LAND**
10 **ACQUISITION COSTS. PLEASE EXPLAIN SHARYLAND’S APPROACH**
11 **TO PREPARING THESE COST ESTIMATES.**

12 A. Sharyland estimated right-of-way (“ROW”) and land acquisition costs for each
13 alternative route by summing the estimated ROW cost and the estimated cost of
14 professional services required to acquire the ROW for each proposed route. The
15 cost of ROW was estimated by multiplying the length of each alternative route by
16 the nominal ROW width, and then multiplying that product by Sharyland’s
17 estimated average land cost, in dollars per acre. The cost of professional services
18 for each alternative route was estimated by multiplying the length of each
19 alternative route by an average unit cost in dollars per mile (based on an assumed
20 length approximately equal to the average length of Sharyland’s proposed twelve
21 alternative routes).

22 **Q. PLEASE EXPLAIN THE BASIS FOR THE ESTIMATED LAND COST.**

23 A. For all land affected by the alternative routes, Sharyland used an estimated
24 average land cost in dollars per acre that was based on Sharyland’s general
25 knowledge of land costs in the study area. While this estimate may vary from the

1 actual land costs located near any specific link or route segment, the estimate is a
2 reasonable and appropriate average for the entire project study area. Like any
3 estimate, in some instances the estimated cost will be lower than the actual cost of
4 the land and in other instances it will be higher than the actual cost.

5 **Q. HOW DID SHARYLAND ACQUIRE ITS GENERAL KNOWLEDGE OF**
6 **LAND COSTS IN THE STUDY AREA?**

7 A. Sharyland has been actively engaged in studying opportunities to construct
8 transmission facilities in the Panhandle and South Plains regions since late 2006.
9 As part of that effort, it has gained a general understanding of land values by such
10 means as reading local newspapers and talking to local residents and other
11 individuals about land values in the area. In addition, Sharyland has (1) had
12 property in the area appraised for the purpose of acquiring land for substations for
13 CREZ transmission projects, (2) discussed land values in the area with Coates
14 Field Services, Inc. – an experienced right-of-way and land acquisition company,
15 and (3) discussed land values generally with representatives of B&V, Sharyland’s
16 Owner’s Engineer, including reviewing publications relating to rural land values
17 in the area. Based on these activities, Sharyland obtained a general knowledge of
18 the range of land values in the area of the proposed project and used this
19 knowledge to estimate the ROW costs in its application.

20 **Q. INTERVENOR WITNESSES (J. CURRIE PAGE 12, LINE 6 THROUGH**
21 **PAGE 13, LINE 10; WHITE, PAGE 11, LINES 1-9; D. ROGERS, PAGE 12,**
22 **LINE 14 THROUGH PAGE 15, LINE 2; GREEN, PAGE 12, LINES 14-23;**
23 **MECHLER, PAGE 9, LINES 1-13; CORRIGAN, PAGE 9, LINES 8-15; T.**
24 **CURRIE, PAGE 19; LINE 7 THROUGH PAGE 20, LINE 4; S. ROGERS,**
25 **PAGE 29, LINE 7 THROUGH PAGE 30, LINE 10) MAINTAIN THAT**
26 **SHARYLAND HAS FAILED TO INCLUDE “DAMAGES TO THE**
27 **REMAINDER” AS PART OF ITS ESTIMATE OF RIGHT-OF-WAY AND**
28 **EASEMENT ACQUISITION COSTS. HAS SHARYLAND INCLUDED**

1 **“DAMAGES TO THE REMAINDER” AS PART OF ITS COST**
2 **ESTIMATES?**

3 A. No. Inclusion of potential damages, including damages to the remainder is not
4 routinely considered when estimating ROW and land acquisition costs for CCN
5 applications.

6 **Q. PLEASE EXPLAIN.**

7 A. Sharyland has not quantified and included such costs in its CCN application for
8 three reasons. First, consideration of such costs in order to establish property
9 values for condemnation or to determine economic damages resulting from a
10 proposed transmission line falls outside the scope of this CCN proceeding as
11 stated in the Preliminary Order in this proceeding and based on the Commission’s
12 consistent treatment of this issue (*i.e.*, such testimony is only useful as illustrating
13 a landowners’ beliefs regarding the impact of the transmission line on one aspect
14 of their property, value). Second, Sharyland’s policy is to work with affected
15 landowners and it may be able to implement route adjustments to help mitigate
16 adverse effects on the affected property. It would be premature and speculative to
17 assume that there will be a diminution in property value to a particular route
18 before any route has been approved and before specific discussions with
19 landowners have taken place. Third, if Sharyland were to include a generic
20 diminution in property value “cost” for any route or route segment, it would have
21 to do so for every alternative route under consideration by the Commission. Not
22 only would this require Sharyland to incur unnecessary expenses too early in the
23 process, but also the actual costs used for each route would likely not significantly

1 change the relative costs of the alternative routes and would not, therefore,
2 provide a meaningful basis to evaluate the alternative routes.

3 **B. CONSTRUCTION COST ESTIMATES**

4 **Q. SEVERAL INTERVENOR WITNESSES, (SWEATMAN, PAGE 9, LINES**
5 **6-10; J. CURRIE, PAGE 11, LINE 12 THROUGH PAGE 12, LINE 5; D.**
6 **ROGERS, PAGE 11, LINE 17 THROUGH PAGE 12, LINE 13; S.**
7 **ROGERS, PAGE 28 LINE 8 THROUGH PAGE 29, LINE 6) QUESTION**
8 **WHETHER SHARYLAND'S CONSTRUCTION COST ESTIMATES**
9 **PROPERLY REFLECT CONSTRUCTION COSTS ASSOCIATED WITH**
10 **CROSSING PALO DURO CANYON. PLEASE EXPLAIN HOW**
11 **SHARYLAND PREPARED ITS INITIAL COST ESTIMATES.**

12 A. The cost estimates used for Sharyland's alternative route analysis were prepared
13 on a consistent basis across all routes and provide a reasonable means of
14 comparing the costs of the proposed alternative routes. Since final costs will not
15 be known until after the project is constructed, and numerous factors could result
16 in actual construction costs varying from the estimates, Sharyland has not
17 established precise cost estimates at this stage of the process.

18 Sharyland worked with B&V and Coates Field Services to establish the
19 methodology to prepare the cost estimates in a manner that would provide
20 Sharyland with budgetary cost estimates sufficient to evaluate the preferred and
21 alternative routes. By leveraging the experience of industry experts (B&V and
22 Coates) and their proprietary databases – which incorporate the actual financial,
23 construction and cost attributes of numerous comparable projects and practical
24 experience – Sharyland was able to prudently establish reasonable estimates for
25 the licensing phase of the project.

26 In preparing its cost estimates, Sharyland did not calculate precise costs
27 for each individual link or segment within each proposed route. However,

1 Sharyland recognized that any portion of any route or link which would span Palo
2 Duro Canyon would be more costly than a comparable portion on flat terrain.
3 Accordingly, in the case of Alternative Routes 4, 5, 8, 9, and 11 – which contain
4 either Link V or Link AA – Sharyland applied a 20 percent construction cost
5 premium to the estimated span of the portion of the route within the general
6 vicinity of the canyon. Sharyland did not, however, calculate specific costs for
7 Link V or Link AA. The 20 percent construction cost premium is a general
8 assumption based on reasonable engineering judgment of the cost associated with
9 crossing difficult or irregular terrain in the general vicinity of the canyon.
10 Estimating those costs with more specificity would be premature and speculative
11 and largely unhelpful in evaluating the route alternatives. For example, the
12 average total cost of the five routes that include either Link V or Link AA is
13 approximately \$167 million. Of that cost, approximately \$1.9 million, or 1.1
14 percent of the total cost, is associated with the construction cost premium for the
15 transmission line in the general vicinity of Palo Duro Canyon. Even if the 20
16 percent construction premium were understated (and I do not believe that it is),
17 the effect on the relative costs of the alternative routes is not significant in terms
18 of the overall cost of the project.

19 **Q. PLEASE EXPLAIN HOW SHARYLAND INTENDS TO APPROACH**
20 **CONSTRUCTION COST ESTIMATES ONCE A FINAL ROUTE IS**
21 **SELECTED.**

22 A. Once a final route is approved by the Commission, Sharyland will conduct the
23 necessary survey, geotechnical investigations, soil analysis, ROW and land
24 acquisition, and specific design and construction analysis for the individual links

1 comprising the approved route. These activities will allow Sharyland to calculate
2 more precise cost estimates based on the design of the final approved route.
3 Further, Sharyland is currently soliciting the market for various procurement
4 packages including tower steel and other components to further refine project
5 costs.

6 **Q. MR. HUGHES (PAGE 50, LINES 5-14) QUESTIONS THE ACCURACY**
7 **OF SHARYLAND'S COST ESTIMATES BECAUSE SHARYLAND'S**
8 **PREFERRED ROUTE COULD BE 40 PERCENT LONGER THAN THE**
9 **SHORTEST ALTERNATIVE YET ONLY 22 PERCENT MORE**
10 **EXPENSIVE THAN THE LEAST-COST ROUTE. HOW DO YOU**
11 **RESPOND TO MR. HUGHES' CONCERN?**

12 A. Mr. Hughes' analysis is flawed, because it includes the costs of both the Hereford
13 and the White Deer Collection Stations. Regardless of the route ultimately
14 selected by the Commission, the costs of each station will remain relatively
15 constant. By including these station costs in his analysis, Mr. Hughes has
16 distorted the comparison of alternative route transmission line costs. To properly
17 compare transmission line costs for the various alternative routes based solely on
18 the length of the route, the costs of the stations should be eliminated. If the costs
19 of the stations are removed, Sharyland's Preferred Route, while still 40 percent
20 longer than the shortest route, is 39 percent more costly. In other words, on a cost
21 per mile basis, the Preferred Route is approximately the same as the shortest route
22 (\$1.356 million vs. \$1.337 million, or about a 1.5 percent difference).

23 Mr. Hughes' analysis also ignores additional factors that have an effect on
24 the cost of a transmission project like the one proposed by Sharyland. That is to
25 say that there is not necessarily a one-to-one relationship between length and cost.
26 Longer routes can be less costly than shorter routes because the construction cost

1 for any particular route depends not only on the length of the route but also on,
2 among other things, the number and types of structures used to support the
3 conductor. Sharyland's cost estimates for each alternative route include and are
4 based on a preliminary design of the transmission line which takes into account
5 routing constraints for each route. These constraints affect the type and number
6 of structures that may be required to construct the transmission line. The
7 estimated costs of the structures for Sharyland's alternative routes range from
8 \$130,000 for a tangent structure to \$640,000 for a heavy deadend structure (other
9 structures used in the preliminary design are long span tangent, \$160,000; light
10 angle, \$185,000; heavy angle, \$245,000; light deadend, \$475,000). Because of
11 the variance in costs of these structures, one would reasonably expect the
12 estimated costs of a transmission line to vary based on the number and types of
13 structures needed for a particular route (among other things) and not solely on the
14 length of the route itself.

15 **C. OPERATION AND MAINTENANCE COSTS**

16 **Q. SIMILAR TO MR. HUGHES' CONCERN ABOUT THE RELATIONSHIP**
17 **BETWEEN THE LENGTH OF THE PREFERRED ROUTE AND ITS**
18 **RELATIVE COST, MR. HUGHES MAINTAINS THAT A LONGER**
19 **TRANSMISSION LINE WILL INCUR GREATER OPERATION COSTS**
20 **DUE TO INCREASED LINE LOSSES (PAGE 42, LINE 27 THROUGH**
21 **PAGE 43, LINE 4) AND GREATER MAINTENANCE COSTS DUE TO**
22 **ITS LENGTH (PAGE 43, LINES 5-13). DO YOU AGREE WITH MR.**
23 **HUGHES?**

24 **A.** No. Mr. Hughes' concerns with costs associated with line losses are overstated.
25 The amount of line losses attributable to a 20 or 30 mile increase in the length of a
26 345 kV line would not be significant. Tellingly, Mr. Hughes has not attempted to
27 quantify those costs. Generally, line losses, which result from a conductor's

1 resistance against the flow of electricity, are a function of many variables,
2 including line length. Other contributing factors, such as conductor size and type,
3 ambient weather conditions and most importantly line loading (the amount of
4 energy flowing through the line at any point in time), contribute significantly to
5 the electrical losses in any transmission line. For example, heavily loaded short
6 lines using smaller conductor in hot weather can have significantly greater losses
7 than lightly loaded long lines with larger conductor in cooler weather.

8 Similarly, the difference in maintenance costs for a 20 to 30 mile variance
9 in line length is not significant enough to warrant a distinction among the
10 alternative routes. Thus, while Mr. Hughes is generally correct, all other things
11 being equal – that operation and maintenance costs for a 345 kV transmission line
12 similar to the one proposed by Sharyland would generally increase as the length
13 of the line increases – that point is irrelevant to route selection. As Mark Caskey
14 testified in Docket 35665,¹ Sharyland estimates that the maintenance cost of the
15 proposed transmission line will be approximately \$1,190 per mile (with some
16 variance due to factors other than length). Thus, the maintenance cost of
17 Sharyland's Preferred Line, estimated at \$108,000, is approximately \$31,000
18 more than the shortest alternative. This variance represents 0.025 percent of the
19 cost of the transmission facilities for the Preferred Route.

¹ Joint CREZ Transmission Plan; Docket 35665 at Bates 650

1 **III. CONSTRUCTION NEAR WIND FARM FACILITIES**

2 **Q. SEVERAL INTERVENOR WITNESSES (MILLER, PAGE 6, LINES 5-15;**
3 **HUGHES, PAGE 14, LINE 16 THROUGH PAGE 15, LINE 2) SUGGEST**
4 **THAT CONSTRUCTING SHARYLAND'S TRANSMISSION LINE**
5 **THROUGH CIELO'S WILDORADO TWO WIND FARM COULD**
6 **DAMAGE EXISTING WIND TURBINES OR OTHER**
7 **INFRASTRUCTURE ON THE WIND FARM. PLEASE DESCRIBE HOW**
8 **SHARYLAND WOULD APPROACH CONSTRUCTION OF ITS**
9 **TRANSMISSION LINE ACROSS THE WILDORADO TWO WIND**
10 **FARM.**

11 **A.** Sharyland's policy is to work closely with wind developers in siting CREZ
12 transmission lines to avoid disruption of any wind generation projects and to
13 mitigate any potential adverse effects on the generators' use of the property. In
14 this respect, I note that two other wind developers filing Direct Testimony, Pattern
15 Energy Renewables, L.P. and Fremantle Energy, LLC, both indicated that they
16 expect to coordinate with Sharyland with respect to the routing of the Sharyland
17 Transmission Line through their wind farms and did not anticipate any problems.
18 Based on the information known to Sharyland about the location of Cielo's
19 Wildorado Two wind generation project and the planned location of FAA-
20 permitted wind turbines, Sharyland can construct the proposed transmission line
21 with sufficient horizontal spacing between the line and proposed wind generation
22 towers in order to minimize the possibility that a falling tower could interfere with
23 the transmission line. The exact spacing distance will depend on the type of wind
24 turbines involved and engineering requirements associated with constructing the
25 transmission line. Sharyland's intent is to coordinate with Cielo, and make minor
26 route deviations if necessary, to avoid interference with support facilities (*e.g.*,

1 generation collection lines, buildings and structures, roads, *etc.*) located at the
2 wind farm.

3 **Q. HAVE YOU REVIEWED THE MAP ATTACHED TO THE DIRECT**
4 **TESTIMONY OF CIELO WITNESS, MELISSA MILLER?**

5 A. Yes. Ms. Miller describes the map as showing the general location of the
6 Wildorado Two wind generation project, as well as the location of some of the
7 existing infrastructure, the proposed location of a portion of Sharyland's Preferred
8 Route, and the planned location of the wind turbines. The map also reflects a
9 buffer radius of 500 feet around each turbine location illustrating the approximate
10 clearance proposed between Sharyland's transmission line and planned wind
11 turbines.

12 **Q. GIVEN THE INFORMATION SHOWN ON THIS MAP, DO YOU**
13 **BELIEVE SHARYLAND CAN SAFELY CONSTRUCT ITS**
14 **TRANSMISSION LINE ALONG THE PREFERRED ROUTE,**
15 **INCLUDING RESPECTING THE 500 FEET BUFFER ZONES?**

16 A. Yes. Sharyland could safely construct and operate its proposed transmission line
17 through the Wildorado Two wind generation project without apparent interference
18 with Cielo's planned wind turbines or other identified supporting facilities.
19 Sharyland would work closely with Cielo and, if necessary, could make minor
20 route deviations to avoid any potential issues. Based on the scale included on the
21 right portion of the legend, it appears the indicated width of the proposed
22 Sharyland ROW is significantly larger than that actually needed for this Project.
23 However, a review of Ms. Miller's map indicates several minor route
24 modifications which would alleviate virtually all alleged interference concerns,
25 even with the exaggerated ROW width as shown. By way of example, I have

1 taken Ms. Miller's map and adjusted the route in a manner which would appear to
2 safely avoid all planned wind turbines and identified supporting facilities. This
3 example is provided to illustrate only one possible route modification that could
4 be made to alleviate Cielo's concerns. There are likely others. A copy of the map
5 illustrating this potential solution (depicted by the yellow line) is attached as
6 Exhibit MDM-1R.

7 I would also note that the map appears to indicate several instances in
8 which an existing transmission line is located within the 500 foot buffer zones for
9 FAA-permitted turbine locations shown on the map. Ms. Miller confirmed this in
10 Cielo's response to an RFI from Sharyland. A copy of this response is attached in
11 Exhibit MDM-2R.

12 **IV. CONCLUSION**

13 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

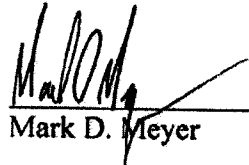
14 **A.** Yes, it does.

AFFIDAVIT OF MARK D. MEYER

THE STATE OF TEXAS)
COUNTY OF DALLAS)


This day, Mark D. Meyer, the affiant, appeared in person before me, a notary public, who knows the affiant to be the person whose signature appears below. The affiant stated under oath:

My name is Mark D. Meyer. I am of legal age and a resident of the State of Texas. The foregoing testimony offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.



Mark D. Meyer

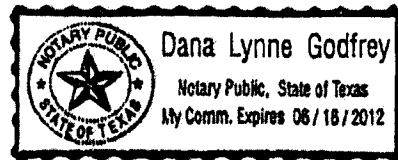
SUBSCRIBED AND SWORN TO BEFORE ME, notary public, on this 14th day of September, 2010.



Notary Public, State of Texas

My Commission Expires:

6-16-12



**OVERSIZED MAP IS AVAILABLE FOR VIEWING
AT THE PUBLIC UTILITY COMMISSION OF
TEXAS AT THE FOLLOWING ADDRESS:**

**PUBLIC UTILITY COMMISSION OF TEXAS
CENTRAL RECORDS
1701 NORTH CONGRESS AVENUE
AUSTIN, TEXAS 78711**

**Cielo's Response to Sharyland
Second RFI SU-Cielo 2-9
September 10, 2010**

SU-Cielo 2-9:

Please state the shortest distance between any of the turbine locations shown on the map attached to Ms. Miller's testimony and the existing 69 kV and 230 kV transmission lines on the Wildorado Two Wind Project.

Cielo's Response to SU-Cielo 2-9:

As Ms. Miller said in her testimony (p.3), the map attached to her testimony should be used for illustrative purposes, since its scale is too small to be as precise as may be necessary. Having said that, the shortest distance between a wind turbine and the existing 69 kV transmission line is about 270 feet from the base of the turbine and 105 feet from the end of the blade. The shortest distance between a wind turbine and the existing 230 kV transmission line is about 405 feet from the base of the turbine and 240 feet from the end of the blade.

Preparer: Lawrence S. Smith
Witness: Melissa Miller