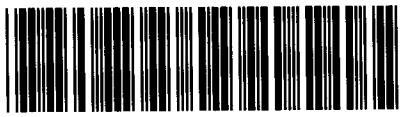

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Item Number: 1197

Addendum StartPage: 0

SOAH DOCKET NO. 473-13-5207

PUC DOCKET NO. 41606

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

DIRECT TESTIMONY OF RUDOLPH K. "RUDI" REINECKE ON BEHALF OF THE RHODES ALLIANCE

Intervenors Paramount Citrus II LLC; Paramount Citrus Packing Company LLC; Michael Rhodes; ML Rhodes, Ltd.; Rhodes Enterprises, Inc.; Jimmie and Barbara Steidinger; Anthony E. Gray; G and M Real Estates Co.; Durango Development, Inc.; Richard L. Gillett; Richard Gillett Family Trust; and Jean D. Strait Family LLC (collectively "Rhodes Alliance"), files this Direct Testimony of their expert, Rudi Reinecke which is hereto attached. Intervenors and Rudi Reinecke stipulate that this Direct Testimony can be treated by all parties as if the answers were filed under oath.

1197

Respectfully submitted,

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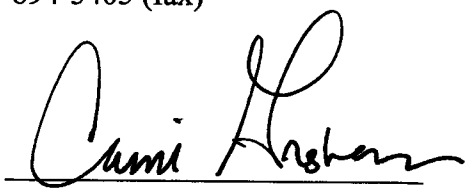
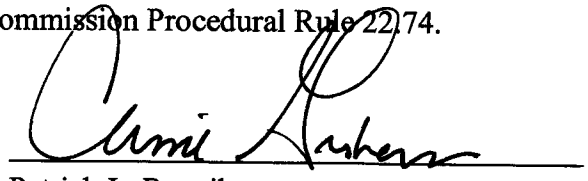
By: 

Patrick L. Reznik
State Bar No. 16806780
Cassie Gresham
State Bar No. 24045980

ATTORNEYS FOR THE RHODES ALLIANCE

CERTIFICATE OF SERVICE

I certify that a copy of this document will be served on all parties of record on November 8, 2013, in accordance with Public Utility Commission Procedural Rule 22.74.



Patrick L. Reznik
Cassie Gresham

QUESTION: PLEASE STATE YOUR NAME, CURRENT BUSINESS ADDRESS AND CURRENT EMPLOYMENT POSITION.

ANSWER: My name is Rudolph K. Reinecke. My business address is 2150 South Central Expressway; Suite 110, McKinney, Texas 75070. I am currently employed as Vice-President and Project Manager for Integrated Environmental Solutions, LLC ("IES").

QUESTION: ARE YOU THE SAME RUDOLPH K. REINECKE WHO PREVIOUSLY FILED ROUTE ADEQUACY TESTIMONY IN THIS PROCEEING?

ANSWER: Yes, I am.

QUESTION: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

ANSWER: At the request of the Rhodes Alliance, I was asked to compare the routing factors between Routes 2S and 3S and Powers top five ranked routes (PT5RR). I understood that this analysis was to be conducted in support of a proposed stipulated route that is under negotiation by parties in this proceeding.

QUESTION: WILL YOU PLEASE SUMMARIZE YOUR ASSESSMENT OF ROUTES 2S AND 3S?

ANSWER: As part of this assessment, I reviewed all of the routing factors presented in Tables 4-1 and 4-1s of the Environmental Assessment, key routing factors Power Engineering, Inc. (Power) used in their ranking of the alternative routes, and data obtained through Rhodes RFI 1. My assessment determined that Routes 2S and 3S had better routing factors than the Powers top five ranked routes (PT5RR), with the exception of the quantity of habitable structures within 500 feet of the centerline. Through my review of the links that comprise Routes 2S and 3S, I determined that there is a high density of habitable structures located on Link 169. I further surmised that there were approximately 293 mobile homes and recreational vehicles located in three or four mobile home/recreational vehicle parks. These structures do meet the definition of a habitable structure; however, the occupants and or structures are in most cases temporary. In addition to this elevated structure count found along Link 169, I found that all 42 filed routes not only have higher numbers of structure counts, but there is a high degree of variability of structure

counts. Routes 2S and 3S have less habitable structures than the majority of the filed routes. Therefore, even though there are more habitable structures found on Routes 2S and 3S than the Powers Recommended Route (i.e., Route 32), it is my opinion that Routes 2S and 3S compare favorably to the PT5RR.

QUESTION: WHAT IS YOUR UNDERSTANDING OF THE FACTORS POWER USED TO DEVELOP THEIR RANKINGS OF THE DIFFERENT SPECIALISTS?

ANSWER: Although there were numerous routing factors provided in Table 4-1 and 4-1s, Power placed emphasis in their individual and consensus rankings. The following are quotes from pages 5-2 and 5-3 of the Environmental Assessment:

> Land Use Specialist: "The land use evaluation placed the greatest importance on the number of habitable structures located within 500 feet of the proposed ROW centerline, overall length of the route, length paralleling existing transmission lines, length paralleling existing ROW, and length paralleling apparent property lines."

> Ecology Specialist Criteria: "The ecology evaluation was based primarily on potential impacts to upland woodlands, bottomland/riparian woodlands, and mapped National Wetland Inventory (NWI) wetlands. The number of stream crossings and length of ROW across open waters were secondary considerations."

> Cultural Resource Specialist Criteria: "The cultural resources evaluation was based primarily on the number of National Registry of Historic Places (NRHP) - listed properties crossed by the alternative routes and within 1,000 feet of the proposed routes. The number of recorded archeological sites crossed by and within 1,000 feet of the ROW was also a factor in the ranking of the alternative routes, followed by the amount of High Probability Area (HPA) crossed by the alternative routes."

Project Manager Criteria: "proximity to habitable structures, paralleling of existing ROW/apparent property lines, the overall length of the alternative route, as well as the length of ROW across woodlands/brushland were considered key factors."

Consensus Criteria: "number of habitable structures located within 500 feet of the proposed ROW centerline, overall length of the route, and route lengths crossing upland woodlands/brushlands would be the primary factors in their decision selection of the recommended route and ranking of the remaining alternative routes. Secondary factors included route lengths crossing United States Fish and Wildlife Service's (USFWS) National Wildlife Refuges and proximity of routes to the Palo Alto Battlefield."

QUESTION: WHAT WAS POWER'S CONSENSUS RANKING OF THE 32 ORIGINALLY FILED ROUTES?

ANSWER: According to Table 5-1 in the Environmental Assessment, Powers provided only a ranking for their top five routes. The Powers top five ranked routes (PT5RR) are, in order: Routes 32, 10, 17, 31, and 16.

QUESTION: BASED ON THE ENVIRONMENTAL ASSESSMENT TABLE 5-1, WHAT WAS YOUR OPINION ON THE CONSENSUS RANKING?

ANSWER: It appears that the consensus ranking primarily focused on the Land Use Specialist and the Project Manager ranking and had little emphasis from the Ecology and Cultural Resources specialists. With one exception, the independent rankings for the Land Use Specialist and Project Manager had the PT5RR within their top five rankings. The Ecology and Cultural Resource specialists ranking did not correlate to the consensus ranking; none of their top performing routes' independent rankings made it within the top five consensus routes. All that can be said is that the Ecology and Cultural Resources rankings for these top five consensus rankings are mediocre routes.

QUESTION: WHAT ARE YOUR FACTORS THAT YOU USED TO COMPARE ROUTES 2S AND 3S TO THE POWERS TOP FIVE RANKED ROUTES?

ANSWER: I used all of the criteria established by the individual specialists and the consensus identified on pages 5-2 and 5-3 of the Environmental Assessment. These routing factors include: length; habitable structures; ROW paralleling existing transmission lines, other existing ROW and apparent property lines; length through upland woodlands, bottomland/riparian woodlands, NWI mapped wetlands, open water; number of stream crossings; number of recorded cultural resources sites crossed by ROW, recorded cultural resource sites within 1,000 feet; length of ROW across areas of high archeological site potential; length of ROW through USFWS National Wildlife Refuge; and proximity to the Palo Alto Battlefield.

QUESTION: HOW DO ROUTES 2S AND 3S COMPARE TO POWER'S TOP RANKED ROUTES?

ANSWER: In summary, Routes 2S and 3S either outperform or are equal to Power's top ranked routes, with the exception of one category (Exhibits 1-3). PT5RR all had less habitable structures within 500 feet of the proposed centerline than Routes 2S and 3S.

QUESTION: WHY DO ROUTES 2S AND 3S HAVE SO MANY MORE HABITABLE STRUCTURES?

ANSWER: Both Routes 2S and 3S, among others, utilize Link 169 which traverses through a very populated portion of the City of Donna. Link 169, by itself, tallies 371 habitable structures. Through review of the data obtained from Rhodes RFI Nos. 1-3, 1-10, 1-11 1-13, and 1-19, I identified that approximately 293 of these habitable structures are located within three or four three mobile home/recreational vehicle parks. I do not testify that there would not be any impact to the residencies of these 293 recreational vehicles or mobile homes; however, it is important to note that these could be transient residents and that the proposed transmission line would not have permanent impacts to them.

QUESTION: DUE TO THE URBAN NATURE OF THIS PROJECT, DOES THE NUMBER OF HABITABLE STRUCTURES ALONG ROUTES 2S AND 3S CAUSE YOU ALARM?

ANSWER: No. There is a very high variability of the number of habitable structures between all of the 42 filed routes. The lowest number of habitable structures is 465 and the high is 1,818 within 500 feet of the centerline. The average number of habitable structures within 500 feet of the centerline for all 42 routes combined is 1,132. This means that the routes presented in this case all go through some fairly populated areas and still demonstrate that they all meet the Commission's policy of "Prudent Avoidance" as stipulated in Mr. Rob Reid's Direct Testimony on Pages 7 and 36. Although, Routes 2S and 3S do have higher number of habitable structures than the PT5RR, these routes still perform better in the average number of habitable structure count for all routes and better than the majority of the 42 filed routes. Specifically Route 3S is tied for 9th and Route 2S is ranked 12th for the lowest number of habitable structures within 500 feet of the proposed centerline. If you consider the fact that approximately 293 of the habitable structures are temporary structures (i.e., recreational vehicles and mobile homes) in four parks along Link 169, the level of this potential impact is reduced.

QUESTION: HAVE YOU TESTIFIED PREVIOUSLY IN THIS DOCKET REGARDING MODIFICATIONS TO LINK 169?

ANSWER: Yes, I testified regarding simple modifications to Link 169 in the Route Adequacy Hearing. These modifications would have significantly reduced the number of habitable structures within 500 feet of the centerline. I previously testified that this modification would have reduced the number of habitable structures within 500 feet of the centerline to 83. This reduction in habitable structures on this Modified Link 169 was made possible through routing around these mobile home/recreational vehicle parks. However, since these modifications would change the alignment of Link 169, these modifications would result in additional landowners that are not currently noticed in this case.

QUESTION: HAVE YOU TESTIFIED PREVIOUSLY IN THIS DOCKET REGARDING ADDITIONAL LINKS THAT COULD HAVE REDUCED THE NUMBER OF HABITABLE STRUCTURE COUNT?

ANSWER: Yes. I testified regarding a "Canal Link" in the Route Adequacy Hearing. This "Canal Link" provided a more direct path between North Edinburg and Loma Alta, resulting in shorter routing alternatives with few impacts to the region. I have previously testified that this link would significantly reduce the habitable structure count to any eastern route coming out of North Edinburg, as this link only has 151 habitable structures within 500 feet of the centerline along its 34.07-mile length. The Route Adequacy Testimony of Mr. James R. Dauphinais utilized this Canal Link in his Route BAI-5 and determined that it significantly outperforms the Joint Applicants' recommended Route 32 with respect to estimated cost, habitable structures, paralleling linear features, total length, and intervenors. Since this Canal Link was not presented in the Joint Applicants CCN, it is not a noticed link and cannot be used in developing more direct routes between North Edinburg and Loma Alta. Therefore, it is important to note, that the quantity of habitable structures along all 42 of these routes is a result of the routing provided by Power. If Power had developed links that took a more direct path between North Edinburg and Loma Alta, the PT5RR would be completely different.

QUESTION: HOW SIGNIFICANT ARE PARALLELING OPPORTUNITIES IN COMPARING ROUTES?

ANSWER: I use the term "paralleling opportunities" to describe a location where the route utilizes some form of compatible corridor, such as existing transmission lines, roads/highways, pipelines, irrigation ditches, apparent property lines, etc. Paralleling opportunities or length of route not paralleling opportunities can provide an important measure of prudent avoidance for a variety of routing factors. Tables 4-1 and 4-1s provide a long list of routing factors that could be affected by each of the routes. For simplicity, one can simply compare each of the factors for each of the routes to determine a quantitative evaluation of how the routes compare. However, the degree of which each route's potential impact can be different depending upon whether the route is paralleling an already defined corridor, or opportunity. The degree of impact to a resource could be higher if the proposed route traverses through the middle of a resource versus if it parallels the boundary or edge of it. This degree of impact to resources, based on whether the route parallels opportunities, applies to nearly all of the routing factors identified by the Land Use Specialist, Ecology Specialist, and Cultural Resources Specialists.

QUESTION: HOW DO ROUTES 2S AND 3S PERFORM IN RELATION TO PARALLELING OPPORTUNITES COMPARED TO THE POWER'S TOP FIVE RANKED ROUTES?

Answer: Both Routes 2S and 3S have significantly better performance with regards to paralleling opportunities. In this assessment I combined all of the paralleling factors (i.e., existing transmission lines, existing ROW, and apparent property lines) to develop the overall length paralleling opportunity. Although the number of miles of paralleling opportunities does not appear to be different, ranging from 77.1 to 91.4 miles, when you consider the disparity of the overall lengths of the different routes, the difference becomes noticeable (Exhibit 4). Both Routes 2S and 3S have a little more than 18 miles of their routes not paralleling an opportunity versus all of the Power's top five routes had more than 27 miles not paralleling opportunities. Furthermore, Power's recommended route, Route 32, had the most with 30.5 miles not paralleling opportunities.

QUESTION: HOW DO ROUTES 2S AND 3S COMPARE TO POWER'S TOP FIVE RANKED ROUTES IN RELATION TO THE ECOLOGY SPECIALIST'S KEY FACTORS?

ANSWER: Routes 2S and 3S performed equal if not better than Power's top five routes on the Ecology Specialist's key factors (i.e., upland woodlands, bottomland/riparian woodlands, mapped NWI wetlands, stream crossings, and open waters). Both Routes 2S and 3S significantly outperformed the PT5RR in regards to length of ROW through upland woods (i.e., brushlands); Routes 2S and 3S had between 3.3 and 4.6 fewer miles, respectively, of impacts to upland woods than the PT5RR.

QUESTION: HOW DO ROUTES 2S AND 3S COMPARE TO POWER'S TOP FIVE RANKED ROUTES IN RELATION TO THE CULTURAL RESOURCES SPECIALIST'S KEY FACTORS?

ANSWER: Both Routes 2S and 3S performed better than PT5RR in all of the Cultural Resources Specialist's key factors (i.e., number of NRHP-listed properties crossed and within 1,000 feet of the route, number of sites crossed by and within 1,000 feet, and length of HPA crossed). Routes 2S and 3S do not cross (i.e., have direct impact to) any NHRP listed sites and

significantly fewer recorded cultural resources sites than the PT5RR. Additionally, the ROW of Routes 2S and 3S cross between 37.2 and 47.0 miles, respectively, less land that has High Archeological Site potential than the PT5RR.

QUESTION: DOES ROUTES 2S OR 3S CROSS ANY U.S. FISH AND WILDLIFE NATIONAL WILDLIFE REFUGES?

ANSWER: No, which is similar to all of PT5RRs except for Route 31. Route 31 crosses 0.8 miles of a National Wildlife Refuge.

QUESTION: HOW CLOSE ARE ROUTES 2S AND 3S TO THE PALO ALTO BATTLEFIELD?

ANSWER: The closest link along Routes 2S and 3S to the Palo Alto Battlefield is Link 327, which is 3.4 miles away from the boundary of the Palo Alto Battlefield National Historic Park. This is in contrast to the PT5RR: Routes 32 and 10 uses Link 313 which is 0.32 miles, Route 31 uses Link 317 which is 0.30 miles, Route 16 uses Link 326 which is 4 miles, and Route 17 uses Link 327 which is 3.4 miles from the boundary of the Palo Alto Battlefield National Historic Park.

QUESTION: DID YOU EVALUATE ANY OTHER ROUTING FACTORS WHEN COMPARING ROUTES 2S AND 3S TO THE POWER'S TOP FIVE RANKED ROUTES?

ANSWER: Yes, I reviewed all of the routing factors presented in Tables 4-1 and 4-1s. All of these remaining routing factors presented in these tables provide either consistent results between all of the routes or some degree of variability that is difficult to present as a value or a fault for a particular route. The following routing factors have consistent factors that demonstrate Routes 2S and 3S are better or worse than the PT5RR:

- Agricultural land (i.e., pasture and cropland) - Routes 2S and 3S have less than PT5RR
- Pipeline crossings - Routes 2S and 3S have more than PT5RR
- Transmission line crossings - Routes 2S and 3S have less than PT5RR
- U.S. and State Highway crossings - Routes 2S and 3S more less than PT5RR
- Farm-to-Market road crossings - Routes 2S and 3S have less than PT5RR

- Number of FAA registered airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline - Routes 2S and 3S have less than PT5RR
- Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline - Routes 2S and 3S have more than PT5RR
- Estimated length of ROW within foreground visual zone of Farm-to-Market Roads and parks/recreational areas - Routes 2S and 3S have less than PT5RR
- Number of irrigation/drainage canal crossings - Routes 2S and 3S have more than PT5RR
- Length crossing 100-year floodplains - Routes 2S and 3S have less than PT5RR

QUESTION: ARE YOU FAMILIAR WITH THE POSSIBLE MODIFICATION BEING PROPOSED TO ROUTE 3S?

ANSWER: Yes. I understand that it changes Route 3S through replacing Link 137a with Links 135, 136b, and 355. There are also some minor modifications to Links 135 and 136b.

QUESTION: WOULD THIS MODIFICATION TO ROUTE 3S SIGNIFICANTLY CHANGE THE ROUTING FACTORS FOR ROUTE 3S?

ANSWER: No. However there would be some slight differences between the Route 3S and Modified Route 3S. These slight differences are that this modification increases the length of Route 3S by approximately 0.2 miles. The modified Route 3S has a net increase of six habitable structures within 500 feet of the centerline than compared to Route 3S.

QUESTION: DOES THIS POSSIBLE MODIFICATION BEING PROPOSED TO ROUTE 3S CHANGE YOUR TESTIMONY?

ANSWER: No.

QUESTION: WOULD YOU PLEASE SUMMARIZE YOUR ASSESSMENT OF ROUTES 2S AND 3S?

ANSWER: Routes 2S and 3S simply outperform PT5RRs on all of Power's Specialists key factors except one. The only factor in which Routes 2S and 3S perform lower than the PT5RRs is the number of habitable structures within 500 feet of the centerline. However, the number of

habitable structures within 500 feet of Routes 2S and 3S are lower than both the average and median of all of the routes. Additionally, when you consider that approximately 293 of the habitable structures on Routes 2S and 3S are associated with mobile homes and recreational vehicles located in three or four parks, the degree of potential impact associated with habitable structures is lessened on these routes. Finally, Mr. Rob Reid has even testified that, despite the quantity of habitable structures, these routes (i.e., Routes 2S and 3S) demonstrate the Commission's policy of "Prudent Avoidance" (See Direct Testimony of Rob Reid on Pages 7 and 36). Therefore, it is my testimony that Routes 2S and 3S compare favorably to those presented as PT5RR.

QUESTION: DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

ANSWER: Yes, it does.

Table 1. Condensed Routing Factor Data as Identified By Powers Ranking and for Route 2S and 3S and Powers Top Ranked Routes.

Evaluation Criteria	Route 2S	Route 3S	Route 10	Route 16	Route 17	Route 31	Route 32
Length of alternative route	92.6	95.9	113.6	119.0	116.4	108.2	117.5
Number of habitable structures[1] within 500 feet of ROW centerline	939	879	718	794	800	674	465
Length of ROW parallel to existing transmission line ROW	25.1	26.6	26.7	25.8	36.9	28.4	24.8
Length of ROW parallel to other existing ROW (highways, pipelines, railways, canals, etc.)	33.6	35.7	41.8	43.4	30.2	37.9	44.0
Length of ROW parallel to apparent property lines[2]	15.2	14.7	16.9	22.2	21.2	14.5	18.3
Length of ROW through USFWS National Wildlife Refuges	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Length of ROW through upland woodlands	0.5	0.5	4.8	3.9	4.8	5.2	5.0
Length of ROW through bottomland/riparian woodlands	1.5	1.6	1.5	2.1	1.9	1.8	1.8
Length of ROW across mapped NWI wetlands	2.3	2.2	2.5	2.3	2.3	1.0	2.5
Length of ROW across open water (lakes, ponds)	0.7	0.7	0.9	0.8	1.2	1.0	0.9
Number of stream crossings	3	5	4	6	8	9	4
Number of recorded cultural resource sites crossed by ROW	2	2	5	4	6	5	5
Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	2	3	11	10	12	10	11
Number of National Register listed sites crossed by ROW centerline	0	0	1	1	1	2	1
Number of additional National Register listed sites within 1,000 feet of ROW centerline	0	0	2	0	0	0	1
Length of ROW across areas of high archeological site potential	36.8	39.7	83.8	76.9	78.2	82.1	77.7

[1]Single-family and multi-family dwellings, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 500 feet of the centerline of a transmission project of 230 kV or more.

[2]Apparent property lines created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to property lines criteria.

Note: All length measurements are shown in miles unless noted otherwise.

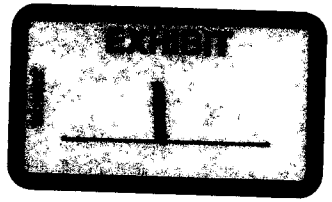


Table 2. Comparison of Route 2S to Powers Top Ranked Routes

Evaluation Criteria	Route 10	Route 16	Route 17	Route 31	Route 32
Length of alternative route	(21.0)	(26.4)	(23.8)	(15.6)	(24.9)
Number of habitable structures[1] within 500 feet of ROW centerline	221.0	145.0	139.0	265.0	474.0
Length of ROW parallel to existing transmission line ROW	(1.6)	(0.7)	(11.8)	(3.3)	0.4
Length of ROW parallel to other existing ROW (highways, pipelines, railways, canals, etc.)	(8.2)	(9.7)	3.4	(4.3)	(10.4)
Length of ROW parallel to apparent property lines[3]	(1.7)	(7.0)	(6.0)	0.7	(3.0)
Length of ROW through USFWS National Wildlife Refuges	0.0	0.0	0.0	(0.8)	0.0
Length of ROW through upland woodlands	(4.3)	(3.3)	(4.2)	(4.6)	(4.4)
Length of ROW through bottomland/riparian woodlands	0.0	(0.6)	(0.4)	(0.3)	(0.3)
Length of ROW across mapped NWI wetlands	(0.3)	(0.0)	(0.0)	1.3	(0.3)
Length of ROW across open water (lakes, ponds)	(0.1)	(0.1)	(0.4)	(0.2)	(0.1)
Number of stream crossings	(1)	(3)	(5)	(6)	(1)
Number of recorded cultural resource sites crossed by ROW	(3)	(2)	(4)	(3)	(3)
Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	(9)	(8)	(10)	(8)	(9)
Number of National Register listed sites crossed by ROW centerline	(1)	(1)	(1)	(2)	(1)
Number of additional National Register listed sites within 1,000 feet of ROW centerline	(2)	0	0	0	(1)
Length of ROW across areas of high archeological site potential	(47.0)	(40.1)	(41.4)	(45.3)	(40.9)

[1]Single-family and multi-family dwellings, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 500 feet of the centerline of a transmission project of 230 kV or more.

[2]Apparent property lines created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to property lines criteria.

Note: All length measurements are shown in miles unless noted otherwise.

Table 3. Comparison of Route 3S to Powers Top Ranked Routes

Evaluation Criteria	Route 10	Route 16	Route 17	Route 31	Route 32
Length of alternative route	(17.6)	(23.1)	(20.4)	(12.2)	(21.6)
Number of habitable structures[1] within 500 feet of ROW centerline	161	85	79	205	414
Length of ROW parallel to existing transmission line ROW	(0.1)	0.8	(10.3)	(1.8)	1.9
Length of ROW parallel to other existing ROW (highways, pipelines, railways, canals, etc.)	(6.1)	(7.6)	5.5	(2.2)	(8.3)
Length of ROW parallel to apparent property lines[3]	(2.2)	(7.5)	(6.4)	0.2	(3.5)
Length of ROW through USFWS National Wildlife Refuges	0.0	0.0	0.0	(0.8)	0.0
Length of ROW through upland woodlands	(4.3)	(3.3)	(4.2)	(4.6)	(4.4)
Length of ROW through bottomland/riparian woodlands	0.2	(0.5)	(0.3)	(0.2)	(0.2)
Length of ROW across mapped NWI wetlands	(0.4)	(0.1)	(0.2)	1.2	(0.4)
Length of ROW across open water (lakes, ponds)	(0.1)	(0.1)	(0.4)	(0.2)	(0.1)
Number of stream crossings	1	(1)	(3)	(4)	1
Number of recorded cultural resource sites crossed by ROW	(3)	(2)	(4)	(3)	(3)
Number of additional recorded cultural resource sites within 1,000 feet of ROW centerline	(8)	(7)	(9)	(7)	(8)
Number of National Register listed sites crossed by ROW centerline	(1)	(1)	(1)	(2)	(1)
Number of additional National Register listed sites within 1,000 feet of ROW centerline	(2)	0	0	0	(1)
Length of ROW across areas of high archeological site potential	(44.1)	(37.2)	(38.5)	(42.4)	(38.0)

[1]Single-family and multi-family dwellings, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 500 feet of the centerline of a transmission project of 230 kV or more.

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Note: All length measurements are shown in miles unless noted otherwise.

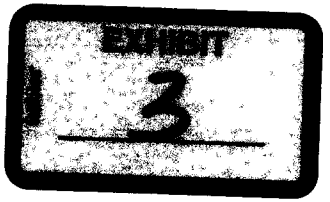

Table 4. Summary of Paralleling Opportunities for Routes 2S and 3S Compared to Powers top Five routes.

Paralleling Criteria	Route 2S	Route 3S	Route 10	Route 16	Route 17	Route 31	Route 32
Length of alternative route	92.6	95.9	113.6	119.0	116.4	108.2	117.5
Length of ROW parallel to existing transmission line ROW	25.1	26.6	26.7	25.8	36.9	28.4	24.8
Length of ROW parallel to other existing ROW (highways, pipelines, railways, canals, etc.)	33.6	35.7	41.8	43.4	30.2	37.9	44.0
Length of ROW parallel to apparent property lines[1]	15.2	14.7	16.9	22.2	21.2	14.5	18.3
Length of ROW Paralleling Features	74.0	77.1	85.4	91.4	88.3	80.9	87.0
Length of ROW not Paralleling Features	18.6	18.9	28.1	27.6	28.1	27.3	30.5

[1]Apparent property lines created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to property lines criteria.

Note: All length measurements are shown in miles unless noted otherwise.