COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

APPLICATION OF EAST KENTUCKY	)
POWER COOPERATIVE FOR A	)
CERTIFICATE OF PUBLIC CONVENIENCE	)DOCKET NO.
AND NECESSITY FOR CONSTRUCTION	)2005-00207
OF TRANSMISSION FACILITIES IN	)
BARREN, WARREN, BUTLER, AND	)
OHIO COUNTIES, KENTUCKY	)

PROPOSED ORDER OF INTERVENORS CARROLL AND DORIS TICHENOR, JOHN COLLIVER, AND H.H. BARLOW

I. Introduction

This matter is before the Commission pursuant to KRS 278.020 on the application of East Kentucky Power Cooperative, Inc., for a Certificate of Public Convenience and Necessity for a proposed 97.55-mile 161 kV transmission line. The line is proposed to be constructed in four segments running through Barren, Warren, Butler, and Ohio Counties, Kentucky. These segments are 1) Barren County – Oakland – Magna, 28.29 miles; 2) General Motors – Memphis Junction, 14.96 miles); 3) Memphis Junction – Aberdeen, 23.48 miles; and 4) Aberdeen – Wilson, 26.79 miles. Because the Applicant has failed to satisfy this Commission's requirements for certification, the application is denied.

II. Procedural Background

A. Application

East Kentucky Power filed its application on July 1, 2005. The proposed project has 47.62 miles of new rights-of-way, 7.83 miles of parallel line construction, and 38.07 miles of rebuilds of existing lines. Application, p. 2. The application contained information relating to

engineering, system impact, interconnection, and facility studies, but did not provide detailed routing studies.

B. Public Hearing

At the September 6, 2005 Public Hearing on this matter, approximately 170 people presented comments in opposition to the proposed line. Several additional citizens who opposed the proposal were in attendance. The following highlights several concerns that were brought to the attention of the Applicant.

According to testimony presented at the Public Hearing, within the proposed route are several unique features that may present obstacles to the Applicant's route selection. For example, the Applicant's proposed project will affect several properties listed on the National Register of Historic Places. Intervenors and Movants Mr. and Mrs. Carroll Tichenor's property alone contains several well-documented historical and archaeological sites. Annis Ferry Farm, the Tichenor's property, which is located in the Big Bend/Logansport community in Butler County, is home to the Annis Mound and Village Archaeological Sites—an area of nine acres—which are significant examples of early Mississippian culture spanning AD 1000-1300. In 1985, the Annis Mound and Village were nominated for the National Register of Historic Places. The nomination stated that "[t]he significance of the Annis site is derived from its historical involvement in the development of archaeology in Kentucky . . . the scientific data which it contains and the relevance of this information to Mississippian period research." Inventory—Nomination Form, Annis Mound and Village Site, Archaeological Sites 15 BT-2, 15 BT-20 and 15 BT-21, Butler County, Kentucky, National Register of Historic Places. The sites were added to the National Register on December 21, 1985. The sites currently are the subject of study by a

Pennsylvania State University archaeology team, and the sites are modeled in the Kentucky History Museum.

The Annis Ferry Farm also contains the historic site known as "Carson's Landing." In 1988, the Carson's Landing site, encompassing 2.2 acres, was listed on the National Register of Historic Places. The nomination described Carson's Landing as "one of the few sites in Butler County that represents the commerce and transportation along the Green River and is a material reminder of the importance of the Green River as an artery for transportation, commerce, and communication for Logansport, Butler County, and Kentucky." The nomination stated, "Because the location, setting, materials, and workmanship have been maintained, Carson's Landing still evokes a sense of past time and place . . . The nominated property has contributed to the development of a larger rural historic landscape and reflects the tradition of the river and culture." Registration Form, Carson's Landing, Annis Ferry Farm/BT-1, National Register of Historic Places.

The proposed transmission line will affect historic property in Warren County as well. On Keystone Farm, the Applicant proposes to route the line directly through prime timber and open fields that provide a home to wild turkeys, deer, and other wildlife. Keystone Farm contains an historic home and log barn, which have been located on that property since Warren County's earliest days. The historic Keystone Quarry, which provided the limestone used in many of Bowling Green's public buildings, as well as the United States Treasury building in Washington, D.C., is in the path of the proposed route. The Farm also contains a cave which, in light of past findings of Native American artifacts in the area, could have archaeological interest. All of these sites are eligible for listing on the National Register of Historic Places.

Furthermore, the proposed route runs through the Green River Watershed, which is the most biologically diverse and rich branch of the Ohio River system. The greatest aquatic diversity occurs in a 100-mile section of unhindered river that flows from the Green River Reservoir dam through Mammoth Cave National Park in south central Kentucky. This section of the Green River Watershed includes over 917,000 acres in the counties of Adair, Barren, Edmonson, Green, Hart, Metcalfe, Russell, and Taylor. Testimony of John Colliver, at 2.

C. Consultant's Report

On August 15, 2005, the Commission's Staff Consultant, ICF Resources, L.L.C., filed its Technical Appraisal of the proposed project. The Appraisal discusses the Applicant's process in choosing the proposed route and concludes that the proposed route is not supported by sufficient consideration of existing rights-of-way.

According to the Appraisal, to determine routing options for the project the Applicant hired Photo Science Geospatial Solutions. Photo Science supposedly used the Electric Power Research Institute ("EPRI") overhead electric transmission line siting methodology, which generates a general macro transmission corridor and, applying multiple parameters, chooses possible routes within the corridor according to key factors. Some of the factors considered are proximity to residences, commercial and industrial buildings, forests, wetlands, and line length co-location opportunities with roads and existing transmission lines. The approach then assigns weights to each of these factors and ranks the various routing options to select the best option. Based supposedly on this approach, discussed in more detail below, the Applicant selected a final route, which, the Applicant states, is subject to modification in light of local input and detailed data. Technical Appraisal, Prepared by ICF Resources, LLC (Aug. 15, 2005), at 17.

ICF concluded that the EPRI model failed to collect sufficient data regarding the opportunities for co-location. It suggested that an assessment of a line routing alternative that adds the goal of minimizing the need for new rights-of-way to the extent possible should be considered. "Such an analysis," ICF stated, "would provide valuable insights as to the costs and benefits of avoiding the need for new rights-of-way if compared to the current proposed plan." *Id.* at 22. Without that analysis, ICF found insufficient information available to examine the Applicant's selection of route. *Id.* at 22-23.

D. Data Requests

Intervenors Doris and Carroll Tichenor made two sets of Data Requests of the Applicant. In response to 19 out of Intervenors' 33 total requests, the Applicant objected to the request and refused to provide information. The Applicant refused to respond to 12 of the 20 requests submitted in Intervenors' First Set of Data Requests. Specifically, Intervenors' objected to Item 1 (requesting route studies), Item 2 (requesting environmental impact studies), Item 4 (requesting historical impact studies), Item 5 (requesting identification of sites on National Register of Historic Places), Item 6 (requesting studies concerning the Applicant's obligations under Section 106 of the National Historic Preservation Act), Item 9 (requesting studies on the Peabody Wildlife Management Area), Item 10 (requesting correspondence concerning the Peabody Wildlife Management Area), Item 11 (requesting documents related to proposed rights-of-way), Item 12 (requesting information concerning the Tennessee Valley Authority's refusal to provide interconnection), Item 15 (requesting information on the Applicant's herbicides and pesticides), and Item 19 (requesting information concerning assistance from the Rural Utilities Service). The Applicant objected to 7 of the 13 requests submitted in Intervenors' Second Set of Data Requests, including Item 3 (requesting explanation of how routes were determined to be

"viable"), Item 4 (requesting explanation of how the Applicant chose the macro-corridor), Item 5 (requesting identification of the factors considered in determining the most favorable line route), Item 6 (requesting all documents relating to the sample routes), Item 7 (requesting documents relating to the Applicant's selection of the "best option" route), Item 8 (requesting documentation of local input and data by which the Applicant says it will make refinements and enhancements to the proposed route), Item 9 (requesting identification of all existing rights-of-way proposed for use and not proposed for use, and, for those not proposed for use, an explanation of why they will not be used), and Item 10 (requesting explanation of why the fourth segment use significantly more new rights-of-way). The Applicant objected to the requests as irrelevant, and refused to provide any information. Intervenors then filed a Motion to Compel Responses to Data Requests on September 8, 2005

At the start of the evidentiary hearing on September 13, 2005, this Commission heard arguments on Intervenors' Motion to Compel. Specifically, the Commission heard arguments as to the relevance of each data request to which the Applicant objected. The Commission also heard arguments from Intervenors and the Applicant concerning the applicable standards for discovery in these proceedings.

With regard to the applicable standards, the Commission ruled as follows:

> [T]he proceedings of this Commission, with respect to discovery and a lot of other matters, are, at the very least, subject to the Kentucky Rules of Civil Procedure and, because we are an administrative body, are entitled to be even more liberal with respect to both evidentiary and discovery matters. It is axiomatic in circuit court, for instance, that, with respect to interrogatories, any evidence or any information that not only leads to admissible or relevant evidence but could . . . reasonably lead to the discovery of admissible evidence is appropriate for purposes of discovery.

Tr. at 73. With those standards in mind, the Commission then made specific rulings as to each data request to which the Applicant objected. In sum, the Commission required the Applicant to

produce documents relating to all but six of Intervenors' data requests. Because this ruling required the Applicant to produce several volumes of documents, the Commission continued the proceeding until September 20, 2005. Before adjourning the proceedings, the Commission heard testimony on behalf of the Applicant from three designers of the EPRI model. The proceedings were then continued.

E. Evidentiary Hearing

On September 20, 2005, this Commission reconvened the evidentiary hearing, where the parties provided testimony on the issues of "need" and "duplication of services." Specifically, the Applicant presented an exhaustive disposition on the EPRI-GTC Overhead Electric Transmission Line Siting Methodology ("EPRI methodology"), which Photo Science used to identify the preferred route in this case ("Photo Science model"). To explain the EPRI methodology, the Applicant presented the testimony of Christine M. Johnson, an Environmental Regulatory Compliance Coordinator with Georgia Transmission Corporation and a designer of the EPRI methodology; Steven P. French, a Professor of City and Regional Planning at the Georgia Institute of Technology and a designer of the EPRI methodology; and R. Steven Richardson, an attorney and designer of the EPRI methodology. To explain the Photo Science model and the determination of a preferred route, the Applicant presented the testimony of Mary Jane Warner, an engineer employed by the Applicant; Paul C. Atchison, an employee of the Applicant; and Thad Mumm, a Senior Engineer in the Applicant's transmission line group.

The Applicant presented the Photo Science model as its "comprehensive study" in an effort to show that it had satisfied this Commission's standards for certification. Its argument, basically, is that any route that is the product of the EPRI methodology satisfies *per se* the Commission's standards of certification. Although this methodology has not yet been

finalized—it currently exists only in draft form—its principles have been applied by each applicant seeking certification from this Commission for power line construction over the last six months. Because this and other applicants have so completely relied on it, the methodology and the model applied in this case warrant this Commission's evaluation, which is provided below.

Testimony of Intervenors included Leslie Barras, Associate Director of River Fields, Inc., who discussed the regulatory requirements of Section 106 of the National Historic Preservation Act and the National Environmental Policy Act; John C. Colliver, a resident of Barren County who testified as to the proposed line's effects on the Green River Watershed and Barren County's cattle industry; Emily Perkins, whose family owns a farm in Warren County that contains nationally significant sites that will be adversely affected by the proposed line; Doris and Carroll Tichenor, property owners near Morgantown whose farm contains a historic site and several archaeological sites on the National Register of Historic Places; and George R. Milner, Ph.D., a Professor of Anthropology at Pennsylvania State University, who testified to the national, historical, and cultural significance of the archaeological sites on the Tichenors' property.

III. Standard of Review

For the proposed route to be certified, the Applicant must show to the Commission's satisfaction that 1) there is a need for the proposed transmission facilities and 2) the proposed facilities will not result in a duplication of services. Order, Case Number 2005-00142, p. 5 (citing *Kentucky Utilities Company v. Public Service Commission*, 252 S.W.2d 885 (Ky. 1952)). In *Kentucky Utilities*, Kentucky's highest court defined "duplication of facilities" to mean that the Commission must examine proposed facilities "from the standpoints of excessive investment in relation to efficiency, and an unnecessary multiplicity of physical properties." 252 S.W.2d at

891. The Court remanded the case to the Commission to decide if the Applicant's proposed transmission lines would needlessly duplicate existing lines of other utilities. The Court stated:

> It is our opinion that the case should be remanded to the Public Service Commission for a further hearing addressed to the question of duplication from the standpoint of an excessive investment in relation to efficiency, and from the standpoint of inconvenience to the public generally, and economic loss through interference with normal uses of the land, that may result from multiple sets of rights-of-ways [sic], and a cluttering of the land with poles and wires.

Id. at 892.

In Case Number 2005-0089, the Commission cited this standard of review in denying East Kentucky Power's application. In that decision, the Commission recognized that unique land characteristics must be protected from "cluttering." In that case, East Kentucky Power's proposed route traversed a part of the Daniel Boone National Forest and the Sheltowee Trace Trail. "These unique characteristics [made] the Commission especially sensitive to the location of the proposed transmission line." Order, Case Number 2005-00089, p. 7. Finding that it "must balance all relevant factors, which in this case include the unique characteristics of the Forest, the availability of an alternative route, and the magnitude of the increased cost of that alternative route[,]" the Commission found that creating a new corridor through the Forest would result in a wasteful duplication of facilities. *Id.* From this point on, this Commission made clear, utilities must "comprehensively consider the use of existing corridors in planning future transmission." *Id.* at 9.

In executing its duty to guard against the "cluttering of the land with poles and lines," the Commission acknowledged that the degree to which "cluttering" will be acceptable depends in large part on what unique characteristics the land contains. *Id.* at 7. Where the proposed route runs along a highway, for example, the cluttering is relatively manageable. In that instance,

cluttering is a relatively weak factor in the evaluation of an application. It is, in part, for this reason that use of existing rights-of-way is highly encouraged. Where, on the other hand, the proposed route runs through a national forest, the cluttering is especially unreasonable. In those cases, as this Commission acknowledged in its Order, Case No. 2005-00089, certification is *especially* subject to the cluttering prohibition. *Id.* at 5 ("East Kentucky Power's proposed route would cut through a part of the forest that is not now host to any other lines. In addition . . . the proposed route would also cross the Sheltowee Trace Trail. These unique characteristics make the Commission *especially sensitive* to the location of the proposed transmission line.") (emphasis added). In Case number 2005-00089, because the Applicant could choose an alternative route that avoided cluttering the forest and trail with poles and lines, the Commission refused to certify the proposal. In this way, the Commission accounted for the unique characteristics of the land, and guarded against the "cluttering of the land with poles and wires." *See* Order, Case No. 2005-00089, p. 7 ("We must recognize the impact to the Forest that this application presents and weigh that impact against the minimally increased cost of an alternative line that would avoid all of most of the Forest and the Sheltowee Trace Trail.").

In Case Number 2005-00142, the Commission reaffirmed "the holding of Case Number 2005-00089 that the applicant must comprehensively consider existing corridors and utility lines when it applies for a transmission line CPCN. Without this information, the Commission cannot determine whether the standards set forth in *Kentucky Utilities* are satisfied." Order, Case Number 2005-00142, p. 9. The Commission found that the applicants' study of alternative routes in that case was not sufficiently comprehensive.

To satisfy the Commission's standard of review, then, the applicant must meet the following requirements, in the order presented: after establishing need for the project, the

applicant must 1) first identify all public rights-of-way that exist between the beginning and end points of its transmission project; 2) then evaluate each of those rights-of-way to determine whether it is an electrical possibility and, in doing so, document its evaluation; 3) analyze the various combinations of electrically possibly rights-of-way; and, finally, 4) applying an analysis tailored to the area and incorporative of unique land characteristics, identify one or more preferred routes.

Discussion

A. Need

In March 2003, the Board of Directors voted to terminate their 61-year relationship with the Tennessee Valley Authority. WRECC is an electric power distribution cooperative with headquarters in Bowling Green that serves approximately 55,000 customers in parts of eight counties in South Central Kentucky. Currently, WRECC obtains their power from TVA, serving these 55,000 customers reliably and cost-effectively. On May 27, 2004, the WRECC Board signed a "Wholesale Power Agreement" with the Applicant. In that agreement, which becomes effective on April 1, 2008, WRECC promised to use the Applicant as its sole power source provider.

Citing the "Wholesale Power Agreement" as its basis for "need," the Applicant filed this application. There in fact is no need for the transmission facilities for which the Applicant seeks certification. The proposed facilities will merely duplicate current TVA services, which the Applicant admits are reliable and which will provide no financial benefit to service customers. Moreover, these services will continue to be provided in the event that this Commission denies the application. The Applicant acknowledged this at the evidentiary hearing:

> Q. . . . [D]o you know what TVA is going to do with the transmission lines that---assuming this application is approved and you go forward and provide power to Warren, do you know what TVA will do with the transmission lines that they are currently using to deliver power to Warren?
>
> A. It's my belief that they'll remain in service to continue to serve the other parts of the grid, and then there are the interconnections to consider.
>
> Q. Okay. So they would wheel power through the lines?
>
> A. They have refused to do so.
>
> Q. Not to you but to others?
>
> A. I think there are some constraints, but I couldn't describe what those are to you right now.

Tr. at 169-70. In fact, there are no electrical constraints to wheel power. Wheeling power, after all, is what TVA is doing right now to provide service to WRECC customers. The testimony continued:

> Q. Okay. TVA stated that their transmission service is bundled with their generation and that they would not separate the service, and they went on to say that, if East Kentucky failed to have transmission to Warren up and running, they would not let the lights go out and would instead provide power under a special contract with East Kentucky. Have I accurately represented what they said?
>
> A. . . . [Y]es.

Tr. at 170. As this exchange shows, WRECC customers currently receive power from TVA, and they will continue to receive power from TVA in the event that this application is denied. There is, therefore, no "need" to justify this application.

B. Duplication of Services

This Commission adopts the standard of review in this case that we have employed in the cases before it. This standard was first defined in *Kentucky Utilities*, in which the Court stated:

> It is our opinion that the case should be remanded to the Public Service Commission for a further hearing addressed to the question of duplication from the standpoint of an excessive investment in relation to efficiency, and from the standpoint of inconvenience to the public generally, and economic loss through interference with normal uses of the land, that may result from multiple sets of rights-of-ways [sic], and a cluttering of the land with poles and wires.

252 S.W.2d at 892. To satisfy the Commission's duplication of services standard, the Applicant must meet the following requirements, in the order presented: the applicant must 1) first identify all public rights-of-way that exist between the beginning and end points of its transmission project; 2) then evaluate each of those rights-of-way to determine whether it is an electrical possibility and, in doing so, document its evaluation; 3) analyze the various combinations of electrically possibly rights-of-way; and, finally, 4) applying an analysis tailored to the area and incorporative of unique land characteristics, identify one or more than one preferred route.

1. Identification of All Existing Rights-of-way

This Commission is not authorized to certify an application that has not sufficiently considered all existing rights-of-way within the proposed project area. Thus, as a threshold matter, we must determine whether the Applicant has sufficiently considered all existing rights-of-way between the proposed point of origin and the proposed point of termination.

The Commission's consultant, ICF, concluded that the Applicant failed to give sufficient consideration of existing rights-of-way. Appraisal, p. 22-23. We agree. At the evidentiary hearing, the Applicant presented an exhaustive disposition of the Photo Science model that it used to create its preferred, proposed route. The Applicant presumed that because of the time and energy invested in the model by its developers – EPRI and the Georgia Transmission Corporation – the model itself would stand as a sufficiently "comprehensive study." That is far

from true. The model may provide a framework, but neither the model itself nor the Applicant's application of the model in this case satisfies the Commission's standards.

In fact, as a result of the Applicant's presentation, the Commission is even more certain that existing rights-of-way were not considered. Consider the following testimony regarding the Wilson-Aberdeen-Morgantown segment of the route:

> Q. I would like to start with the Wilson-Aberdeen-Morgantown route. The question that was posed in Item No. 9 [of Intervenor's First Data Request] was . . . "Please identify all existing rights-of-way and transmission lines within the proposed macro-corridor. As to each of the . . . proposed transmission line segments, identify which rights-of-way and transmission lines are proposed to be used for the project. Identify which rights-of-way and transmission lines are not proposed to be used for the project, and explain why not." . . . You listed there 15 existing lines or segments of lines inside the Wilson-Aberdeen macro corridor; is that correct?
>
> A. Yes, that's correct.
>
> Q. And, of those 15 segments, Lines 2, 4, 5, 7, 8, 9, 13, 14, and 15 were not in the alternative corridors that were generated after the macro study; is that correct?
>
> A. They were not in the alternative corridors that were generated by the model.
>
> Q. So they were not considered for alternative routes?
>
> A. That's correct.
>
> Q. And, while there may be data in the macro study about them, there won't be the kind of detailed data that's available for the other alternatives that were included in the alternative routes?
>
> A. . . . [T]hey were not in the selected or the model-generated alternative corridors.
>
> . . .
>
> Q. And, if we wanted to see cost information on these, for instance, that wouldn't be available from the data that you've got available right now, these lines that were not selected for alternative routes?

A. Yes, the only cost information is for alternative route comparison.

Tr. at 109-10. In other words, when existing rights-of-way were not identified at the initial stages of modeling, they were not studied at all.

One significant right of way that was not studied is the William Natcher Parkway. The Parkway runs nearly parallel to the proposed route from Wilson to Morgantown, Exhibit 9-3, and it runs parallel to the proposed route from Memphis Junction to Natcher Parkway Junction, Exhibit 9-2.

Q. And I'm correct, again, that the . . . William Natcher Parkway . . . is completely outside of the alternative corridors?

A. For the most part. It crosses one small area.

Q. One small area. So, although it heads in the general direction of the lines, it wasn't considered for collocation [sic]?

A. I think that's correct.

Tr. at 143.

The Applicant failed to consider a significant right of way on the project segments as well. Interstate 65, connecting to Highway 70 along the Barren County-Oakland-Magna proposed route, was not considered whatsoever; no documentation or explanation was provided as to the omission of this important potential route. Exhibit 9-1, Applicant's Response to Intervenors' Second Data Request; Tr. at 131-32.

The Applicant failed at the outset to meet the Commission's requirements. First, it did not identify, much less consider, all existing rights-of-way within the project area. Second, in those cases where it did identify a right of way, it is more likely than not that the right of way was eliminated from the model at the initial stages; thus, even if it was identified, it was not

considered. These failures made it impossible for the Applicant to demonstrate sufficient consideration of existing rights-of-way, as this Commission requires.

2. Identification of Electrically Possible Rights-of-way

Satisfaction of this requirement was handicapped by the Applicant's failure at the outset to make the proper identifications of rights-of-way. As stated above, the Applicant failed to identify all of the existing rights-of-way within the project area. And of those that it did identify, it failed to evaluate the electrical possibility of several. It provided no documentation to explain these omissions.

3. Analysis of the Various Combinations of Electrically Possibly Rights-of-way

To reach this step, the Applicant should have analyzed all of the rights-of-way within the project area and, based on that analysis, it should have compiled a list of all electrically possible rights-of-way. Only after doing so can Applicant satisfactorily evaluate combinations of those rights-of-way in an effort to narrow the options for a preferred route.

4. Tailored Analysis, Incorporative of Public Input and Unique Land Characteristics, to Identify a Preferred Route

The Applicant failed to properly document its choice of the proposed route in light of all of the available route alternatives. Also, the Applicant failed to tailor its decisionmaking to incorporate the unique land characteristics of the project area. As a result, the Applicant failed to satisfy the final requirement for certification.

a. The Applicant's proposed route is not based on a comprehensive study.

Despite the inherent flaws in the methodology, there was still a chance that it could produce a certifiable result. And, in fact, it may have: in some cases, the model's computations selected preferred routes that did take advantage of existing rights-of-way. Those routes,

however, were not selected. Instead, the Applicant, applying the subjective evaluations and personal opinions of the siting team, disregarded the results of the comprehensive study and made its own selection, which, on a scale measuring use of existing rights-of-way, earned the worst score. Although the Applicant insisted at the evidentiary hearing that the model was used to select the "best route," it did not choose the "best route" that the model selected.

The decisionmaking underlying this selection is undocumented; the only thing the Commission knows is that the route chosen by the Applicant takes advantage of far fewer existing rights-of-way and has a greater impact than the route selected by the model. The following testimony of Mary Jane Warner explains:

> Q. Now, in terms of the scores for these top routes based on the weighting and the data, am I correct in seeing that Route F was the most suitable route according to the scoring because it's listed as number 1?
>
> A. Route F ranked number 1.
>
> Q. And then followed by Route G as number 2?
>
> A. Yes. Yes.
>
> Q. And Route E is number 3?
>
> A. Correct.
>
> Q. And Route D is number 4?
>
> A. Yes.
>
> Q. And then Route C is number 5?
>
> A. That's correct.
>
> Q. . . . [A]nd Route C was selected for the proposed corridor?
>
> A. That's correct.
>
> Q. The reason it was selected to be the proposed route, although it is number 5 in the data ranking, is because of the application of the Expert Judgment formulas on that?

A. Yes, that's true.

. . .

Q. Route F received low impact scores due to collocation [sic] of existing transmission lines, right?

A. That's correct.. . .

. . .

Q. . . . [W]as collocation [sic] one of the reasons that Route F scored higher than Route C. . . ?

A. In terms of this view, yes.

Tr. at 116-17; 119. As this testimony demonstrates, the model selected Route F as the best route. This was because Route F took advantage of co-location opportunities. The Applicant, however, chose Route C as its preferred route. Yet when co-location is the measure, Route C scored worst. The undocumented decision violates the Applicant's obligation to avoid wasteful duplication.

b. The Applicant failed to consider the unique land characteristics of the project area.

In no way did the Applicant give proper consideration to landscape of the project area. In fact, as far as the Applicant was concerned, the project area might as well have been in Georgia. Consider the following testimony:

Q. . . . Did the consultants at Photo Science modify the Georgia Transmission Delphi calibrations for Kentucky?

A. No. To the extent that those features weren't in Kentucky, they were left null on the chart which is following the methodology.

Q. So there was no consideration, that, in Kentucky, there might be definition of intense agriculture other than pecan orchards or center pivot agriculture?

The Applicant did not respond directly to this question. Tr. at 95. So counsel for Intervenors asked again:

> Q. Now, the question I started with was whether there was any change for Kentucky, and I believe the answer to that was no. You used the Georgia Transmission model; is that right?
>
> A. That's correct.
>
> Q. Okay, and the Georgia Transmission model was developed basically for Georgia Transmission for people in Georgia where they have pecan orchards; is that right?
>
> A. Yes.
>
> Q. Now, you heard testimony in the public hearing that Barren County, Kentucky has the largest population of cattle in any state east of the Mississippi River; do you recall that?
>
> A. I do.
>
> Q. Do you think, if you went to Barren County, Kentucky, and did a Delphi calibration, that people in Barren County might consider dairy farming, for instance, to be intense agriculture?
>
> A. You might. . . .

Tr. at 91-94. The identified "stakeholders"—persons asked to participate in choosing the factors to be considered and the weights assigned to each factors—did not include anyone from Barren County; the model does not incorporate Kentucky-based concerns. Tr. at 95.

Furthermore, the Applicant did not consider public input before selecting its preferred route. In fact, the public was only given a chance to comment on the proposed route after the route had been selected and after the proposed route was filed with this Commission. At that point, the Applicant cannot meaningfully respond to public concerns about the route; once an application is filed and affected property owners are notified, the Applicant has the ability only to move the route within the property on which the proposed route runs. It may not move the

route off any property if such movement requires the route to be placed on another property whose owner was not properly notified of these proceedings.

Finally, the Applicant insufficiently considered the unique land characteristics of the project area. This was the case even though the EPRI model intends for the utility to take such characteristics into account by identifying "Avoidance Areas." Essentially, by identifying "Avoidance Areas" at the outset, the model is intended to avoid the kinds of "unique characteristics of the land" whose use in the Rowan County case required this Commission's denial. One of the model's designers, S. French, explained:

> We decided, earlier on, there's certain kinds of areas where you wouldn't want to have the transmission go and we'd take those off the table in most situations. Sometimes you can have a specific case where you might need to make an exception, but basically avoidance areas which are off limits and the model is not allowed to route a line through those. So you see we have the avoidance areas that we take off the table first, the areas that we're sure we would never want to route a line, through, say, a historic district. So we take those out of play at the beginning.

Tr. at 117. In contrast to this Commission's "sensitivity" to unique land characteristics and in contrast to the model's intention to identify and eliminate "avoidance areas" from potential route selection, the Applicant provided insufficient consideration of unique land characteristics and in fact targeted Avoidance Areas.

Avoidance Areas are the kinds of unique characteristics of the land, like the Daniel Boone National Forest in Rowan County, to which this Commission is sensitive. "'Avoidance Areas" include locations where routes are prohibited either by physical barriers, administrative regulations, or where there would be significant permitting delays." Exhibit 25, p. 8. "Avoidance Areas" include sites listed on the National Register of Historic Places. *Id.* Several nationally-registered sites exist along the Applicant's proposed route. The Applicant explained that it was aware of Annis Ferry Farm and its significant nationally-registered sites.

Q. Your testimony is that you knew that Annis Ferry Farm was a National Register site at the macro level?

A. Yes. It was in the GIS Landsat's data.

Tr. at 74. Despite its awareness of this significant and unique land characteristic, the Applicant chose a preferred route that runs directly through Annis Ferry Farm.

Q. Does the proposed transmission line affect these sites?

A. Part of the Carson's Landing site is within the selected corridor and all of it is within 1500 feet of the probable right of way. All of the archaeological sites are within the presently selected power line corridor.

Testimony, Doris and Carroll Tichenor, at 3.

The other segments also contain nationally significant historic sites which should be given consideration sufficient to ease the Commission's sensitivity and, at the very least, avoided pursuant to the model's definition of "Avoidance Areas."

D. The Applicant Failed to Consider Public Input, in Contradiction of KRS 278.020.

1. Legislative Intent

Issuance of a Certificate of Public Convenience and Necessity is now governed by the requirements of Senate Bill 246, which was enacted by the 2004 General Assembly to provide a forum for the consideration of the environmental impacts of proposed transmission line facilities and to empower local communities and landowners that might be affected by the location of proposed transmission lines. Pursuant to Senate Bill 246, now KRS 278.020(2) and (8) ("the 2004 Amendments"), the construction of transmission lines carrying 138 or more kVs for more than 1 mile in length, formerly matters of extension that were considered to be "in the usual course of business," became matters requiring a Certificate of Public Convenience and Necessity. The clear intent of the statute was to allow for public scrutiny of such line

constructions and to require the Applicant and this Commission to consider the resulting impacts on private and public landowners in the corridors.

The 2004 Amendments created three new elements of review: the requirement that a Certificate of Public Convenience and Necessity be issued for the construction of this class of transmission lines, the public's right to a hearing on all issues related to a proposed project, and a corresponding obligation of the utility-applicant to justify its proposal. Where formerly the Commission confined itself to issues of electrical necessity and duplication of services, the 2004 Amendments reflect a clear legislative intent that the concerns of landowners and other interested parties regarding the adverse effects of the routing and construction of these lines be evaluated in determining whether and under what conditions to certify an application. To ensure that electrical cooperatives adequately considered the impacts and alternatives, the 2004 Kentucky General Assembly created a new process for issuance of a Certificate of Public Convenience and Necessity. In the event that an applicant fails to sufficiently consider public input in selecting a preferred route, the applicant violates legislative intent.

This Applicant failed to sufficiently consider public input. It acknowledges as much.

> Q. Is my understanding correct that . . . the public has no input into the routing decisions until have you have completed the selection of the preferred alternative?
>
> A. I think . . .
>
> Q. Just answer yes or no, and then you can explain.
>
> A. I think not . . .
>
> Q. Wouldn't public comment on a proposed macro corridor that included information about historic properties be data that could be used . . . and to the extent that it were data, it would be useful in the working of the methodology, wouldn't it?

> A. No, I don't think so. If I tell somebody there is a particular thing on my property and the person asking says, "Well, what are the GIS coordinates?" I don't know that, and the quality of the data has to be verified, and the whole point is that that information can come in later when site-specific detail is necessary, but, in following – we would have had to have diverged from the methodology to have incorporated or solicited public comment on a macro corridor.
>
> Q. . . . Is my understanding of your testimony correct that, even at the macro stage, if the Tichenors had given you information about their property, you would have essentially ignored it because, at that point, you weren't interested in any data they had?
>
> A. The difficulty with that concept is, if we only had information from the Tichenors and not everybody else, you wouldn't have the same quality of data, the same accuracy, and the same level of detail. . .

Tr. at 140-42. So, in the Applicant's view, having no data is better than having some data.

As a final insult to legislative intent, once the Applicant finally receives public input, it can only make minor adjustments within the affected property. The testimony explains:

> Q. So, again, my understanding is correct that the public is only given a chance to comment on the proposed route after the route has been selected, and, at that point, you're limited, as indicated in Exhibit 1, to basically small movements within the same property as an adjustment to problems that occur?
>
> A. The preferred route is the product of methodology without prior public involvement unless it's in the stakeholder participation in the weightings and East Kentucky Power puts our process on the end of it with a preferred route as a center of a corridor taken to the open house where then we try to apply local input after that point in time.

Tr. at 142. This process is unacceptable. The Applicant is required to develop its preferred route by incorporating public input. Incorporating public input only for the adjustment of a preferred route's centerline simply is not satisfactory.

E. Conclusion

The Applicant has failed to establish that any need exists to justify this project. Service is being provided to WRECC customers, and it will continue to be provided if this application is denied. The Applicant seeks to duplicate existing services. It has failed to sufficiently identify and evaluate existing rights-of-way within its project area. In selecting its preferred route, it incorporated absolutely no public input from property owners within the project area. As a result of these significant deficiencies, the application must be denied. Substantial and meaningful study is required. Once the Applicant has satisfied this Commission's standards for certification, it may resubmit its application.

IV. The EPRI Methodology

At the evidentiary hearing, the Applicant presented an exhaustive disposition on the EPRI methodology, which Photo Science used to identify the preferred route in this case. The Applicant presented the Photo Science model, based on the EPRI methodology, as its "comprehensive study" in an effort to show that it had satisfied this Commission's standards for certification. Its argument, basically, is that any route that is the product of the EPRI methodology satisfies *per se* the Commission's standards of certification. This methodology has not yet been finalized—it currently exists only in draft form. Nonetheless, its principles have been applied by each utility seeking certification for power line construction over the last six months. Because this and other applicants have so completely relied on it, the methodology and the way that it was applied in this case warrant this Commission's evaluation.

1. The EPRI Methodology

A frequent criticism of electric utilities is that their siting processes fail to engage the perspectives of diverse communities at a point in the process where public input makes a

meaningful difference. Also, routing of transmission lines "has become increasingly difficult as environmental regulations have become more stringent and advocacy groups with divergent priorities have become more active." Exhibit 25 at 1. The EPRI methodology is an attempt to resolve this criticism and the regulatory difficulties by making public input a meaningful factor in route selection decisionmaking and broadening the scope and accuracy of data underlying the route selection process. Tr. at 31. In developing this tool, the EPRI designers sought "to ensure that all aspects of . . . siting . . . were addressed in a systematic, impartial manner" by making sure that "all information and assumptions used in choosing a preferred route and avoiding less suitable alternatives are available and . . . the decision is well documented and reproducible." Exhibit 25, at 1, 3.

The methodology created three major phases of route selection. In Phase 1, land cover data is derived from GIS resources. This data is used to identify existing roads and overhead electric transmission lines. Exhibit 25 at 4. It is also used to identify "Avoidance Areas," which, upon identification, are to be removed from the study area. The initial data is then used to generate a macro corridor; the outside limits of the macro corridor are the boundaries of the project study area. *Id.*

In Phase 2, alternative corridors are developed within the macro corridor using more detailed digital data about such things as wetlands, floodplains, and land use/land cover. In Phase 3, a siting team is supposed to identify a set of Alternative Routes. "Each route is then scored using a standard set of evaluation criteria and compared. The preferred route is selected on the basis of this comparison." *Id.*

EPRI created this "standard set of evaluation criteria" at the model-development stage. In developing the model, EPRI solicited input from "stakeholders," which were said to include

representatives from federal and state agencies, elected officials, citizen groups, natural resource land conservation groups, and other electrical utility companies. Tr. at 108. EPRI held a workshop, in which the stakeholders voiced their interests concerning route selection and then, together, the stakeholders ranked those concerns and interests in relative priority. These priorities are considered when the utility selects its alternative routes.

Once the EPRI designers identified and prioritized the factors relevant to route selection decisionmaking, they then developed the procedural chronology, i.e, Phase 1-3 discussed above. By incorporating "stakeholder" input and dissecting the route selection processes into a series of phases, the EPRI methodology sought to provide the comprehensive framework for route selection that was previously missing.

Despite the designers' laudable effort, the EPRI methodology has several fatal shortcomings. As it is currently designed, the model cannot be used to segregate existing rights-of-way. There is no way to simply group data on existing rights-of-way exclusively, and identify route pathways from that information. Tr. at 65. This would be extremely helpful information – it would enable a utility to satisfy the first, second, and third steps of this Commission's requirements: identify all rights-of-way, determine which are electrical possibilities, and, of those, evaluate all possible combinations. A model that does not allow for this analysis is handicapped in its ability to produce a satisfactory result.

Also, the EPRI methodology focused exclusively on the concerns and interests of stakeholders in Georgia. For example, significant criteria in weighting a potential alternative route include the frequency of pecan orchards and center pivot agriculture along that route. *Id.* at 23. Obviously, not every project study area will contain pecan orchards or center pivot agriculture. Certainly there are no such features in Kentucky. The methodology simply cannot

be applied without significant adjustment to route selection in landscapes outside of Georgia. Thus, success of the methodology depends on a utility's substitution of Georgia-based concerns and interests with the concerns and interests within the utility's locality. When a utility fails to make the necessary adjustments, as in this case, the methodology produces an anomalous and unrealistic result.

Also, although the methodology's designers emphasized that its stakeholders represented the spectrum of concerns and interests affected by transmission line siting, in reality the stakeholders were overwhelmingly industry-based. When the methodology incorporates public input only by the input of its stakeholders, and those stakeholders primarily represent one interest, then public input is not truly incorporated. The weight of industry input in this methodology skews the prioritizing of interests in favor of industry preferences and produces a biased scale on which to identify and compare alternative routes.

Moreover, the methodology allows for specific, local public input only after a preferred route has been selected. At that point, the Applicant cannot meaningfully respond to public concerns about the route, because it has little to no flexibility, barring starting the process over again, to move the route. Especially if the Applicant has already filed its application with the Commission for certification of the preferred route, the Applicant only has flexibility to move the route within the property on which the proposed route runs. It may not move the route off any property if such movement requires the route to be placed on another property whose owner was not properly notified of these proceedings. The allowance for public input only after the preferred route has been selected undermines the very purpose of public input.

Finally, to the extent that the methodology could be considered objective and capable of producing consistent results, such objectivity is neutralized at the subjective Expert Judgment

stage. At this stage, all of the GIS data, objective identification of alternative routes, and stakeholder input can be arbitrarily cast aside. Testimony at the evidentiary hearing explains:

> Q. . . . [T]he EPRI report, on page 46 . . . talks about expert judgment and the percentage applied to visual concerns, community concerns, etc., and I believe you [said] that stakeholders were responsible for assigning those percentages; is that correct?
>
> A. No, sir. In the "Expert Judgment," those would be internal staff, the routing team, would be responsible for those.

Tr. at 63. The routing team, then, in the Expert Judgment phase of route selection, can apply any personal opinion or preference to select a route in complete disregard of the model's route selection, which was calculated according to GIS data and broader stakeholder preferences. As the case at hand demonstrates, the route, ultimately, is selected by the utility according to its siting team's personal opinions and preferences.

2. Photo Science's Model – the EPRI Methodology as Applied

As envisioned, the EPRI methodology could, with significant improvements, provide a strong tool to utilities in selecting their transmission line routes. However, as this case demonstrates, even well-intended methodology can be misapplied and produce the wrong result.

The methodology directs the utility to identify "Avoidance Areas," which must be eliminated from the study area. Avoidance Areas are significant barriers to constructing an overhead electric transmission line and are to be avoided during transmission line siting. These areas include locations where routes are prohibited by physical barriers, administrative regulations, or significant permitting delays. *Id.* at 8. "These areas include National Register of Historic Places, historic or archeological districts, airports, EPA Superfund Sites, military bases, National and State Parks, non-spannable water bodies, United States Forest Service Wilderness Areas, National Wildlife Refuges, mines and quarries, Wild and Scenic Rivers, and Sites of

Ritual Importance." *Id.* In contradiction of the methodology, the Applicant did not eliminate significant avoidance areas from transmission line siting. In fact, it knowingly selected a proposed route that unavoidably crosses a historic site and three archaeological sites that are all listed on the National Register.

In fact, despite the clear directions of the EPRI methodology, the Applicant testified that Avoidance Areas *are not* areas that it avoided or even though it should avoid. The testimony shows:

> Q. Okay. Now, looking at Page 8 again, this says, quote, middle of the page, "Macro Corridor Avoidance Areas: The first step in the Macro Corridor development process is to remove all the Avoidance Areas from the Macro Corridor database." Did I read that right?
>
> A. Yes.
>
> . . .
>
> Q. . . [T]he data was available that [the nationally registered historic site] Carson's Landing was in the macro corridor?
>
> A. The data point was there.
>
> Q. But it was not removed from the corridor at the macro point?
>
> A. At the macro point – the area around it had been identified and the appropriate radius had been established to – when you say "remove," I don't think you take it out altogether. I think you leave it there, but you observe it with a different level of impact.
>
> Q. . . . [D]oesn't it say at Page 8, "The first step in the Macro Corridor development process is to remove all the Avoidance Areas from the Macro Corridor database?" That's what it says?
>
> A. That's what it says.
>
> Q. Okay.
>
> A. I don't know that that means delete.
>
> . . .

> Q. Okay. Now, on Page 20, it says, quote, "The first step in the Alternative Corridor Generation Phase is to remove all Avoidance Areas from the Alternative Corridor database. Removing these sensitive areas from consideration protects them during the Alternative Corridor site selection process," and, once again, Carson's Landing was not removed from the database at that point either; was it?
>
> A. I don't know that "removed" means "deleted" other than buffered.
>
> Q. Where, the word I used was "removed." It was not removed, was it?
>
> A. As far as I know, the database was kept intact. It was observed.
>
> Q. And the reason these things are removed is, first of all, to protect them because they're sensitive, which it says there, but, in addition, wouldn't you agree with me that it says, quote, ". . . Avoidance Areas are not suitable for location overhead electric transmission lines"?
>
> A. I don't agree that the avoidance areas are there to protect specific features. They're there in the comparison to make it a less desirable place unless there's further site specific information available. . . .

Tr. at 76-79. As this testimony indicates, the Applicant's application of the model is not credible. The Applicant presents its model as a comprehensive study that is *per se* sufficient to satisfy this Commission's certification standards. Yet, the Applicant failed to follow the directions of the methodology.

Also, although the EPRI methodology nobly attempts to create objective, consistent, reproducible results, at the Expert Judgment phase the model disintegrates into something arbitrary and utterly subjective. The Applicant acknowledges its substitution of the preferred routes selected according to the model's data and criteria with routes selected by the Applicant's siting team based on their personal opinions and preferences. The decisionmaking underlying this selection is undocumented; the only thing the Commission knows is that the route chosen by

the Applicant takes advantage of far fewer existing rights-of-way and has a greater impact than the route selected by the model. Mary Jane Warner testified that Route F was chosen by the model as the preferred route; it was selected in particular because of the extent that it took advantage of co-location opportunities. The Applicant dismissed Route F, however, and selected Route C. Route C received the lowest score in the model for use of co-location opportunities. Route C used existing rights-of-way far less than Route F, or any other route, used them. Still, the Applicant chose Route C, and it did so without any explanation or documented evaluation. Tr. at 116-17; 119.

3. Conclusion

Despite its designers' effort to create a workable model, the EPRI methodology has fatal flaws. Moreover, as this case demonstrates, even the best model can be incorrectly applied and produce inaccurate, unrealistic results. Given its shortcomings, the Applicant was in no position to present the model as evidence of its per se satisfaction of this Commission's standards.

V. Conclusion

The Applicant failed to properly identify existing rights-of-way, and it failed to sufficiently study those rights-of-way to determine what possible combinations could be utilitized to avoid duplication of services. Most significantly, the Applicant failed to meaningfully incorporate public input – receiving the public's concerns only after a preferred route has been selected and filed with this Commission defeats the very purpose of KRS 278.020. Finally, the Applicant has failed to show any need for this project—power is supplied and will continue to be supplied notwithstanding this Commission's ruling.

It is THEREFORE ORDERED that East Kentucky Power's application is DENIED.

Done at Frankfort, Kentucky, this 31st day of October, 2005.

BY THE COMMISSION

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing was duly served by mailing, first class postage prepaid to the following:

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This the 18th day of October, 2005.

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