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# EXHIBIT 3

#### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION RECEIVED

MAY 2 2 2007

In the Matter of:

PUBLIC SERVICE COMMISSION

THE APPLICATION OF EAST KENTUCKY)POWER COOPERATIVE, INC. FOR A CERTIFICATE)OF PUBLIC CONVENIENCE AND NECESSITY FOR)FOR THE CONSTRUCTION OF A 345 kV ELECTRIC)TRANSMISSION PROJECT IN CLARK, MADISON,)AND GARRARD COUNTIES, KENTUCKY)

CASE NO 2006-00463

# PREPARED TESTIMONY OF MARY JANE WARNER ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

- 1. Please state your name and address.
- A. Mary Jane Warner, 4775 Lexington Road, Winchester, KY 40391.
- 2. By whom are you employed and in what position?
- A. I am employed by East Kentucky Power as Manager of Power Delivery Expansion.
- 3. As background for your testimony, please briefly describe your educational background and work experience?
- A. I am a graduate of the University of Kentucky with a Bachelor's of Science in Civil Engineering and I am a Licensed Professional Engineer in the Commonwealth of Kentucky. I have 27 years of experience in Power Delivery related to the planning, design and construction of transmission lines and electrical substations.
- 4. What are your duties and responsibilities as manager of EKPC's Power Delivery Expansion Department?

- A. I supervise and am responsible for all routing, design and construction of additions and improvements to the EKPC transmission system.
- 5. Was the routing and design activity for the Clark, Madison, and Garrard Counties, Kentucky 345kV Transmission Project that is the subject of this Case No. 2006-00463 performed under your direction and supervision?
- A. Yes
- 6. What is the purpose of your testimony?
- A. The purpose of my testimony is to provide information related to the need and the physical alternatives considered for facilities EKPC has proposed for construction in Clark, Madison, and Garrard Counties that are the subject of this case.
- 7. When does that transmission path have to be in place?
- A. The transmission project is needed for two new Combustion Turbines at the J.K. Smith site which are scheduled to be online in the spring of 2009. The transmission project target completion date is December 2009.
- 8. Has a System Impact Study been performed by EKPC for the proposed project?
- A. Yes by Darrin Adams, Supervisor of Transmission Planning at EKPC.
- 9. What were the conclusions of EKPC's SIS study?
- A. Mr. Adams concluded that a new transmission outlet is needed from the J.K. Smith Generating Site because the existing transmission system is not adequate to reliably deliver planned generation additions at the site to native load customers. The construction of two new combustion turbines on the site, pursuant to Commission Order dated May 11, 2007 in PSC Case No. 2006-00564, will create the need for 35.6 miles of new 345 kV transmission line. This line will connect these two CT's

as well as the Smith 1 CFB Unit, also approved in the above Order, to the existing transmission grid in Southern Kentucky. In conjunction with this line, there will also be a new West Garrard 345kV switching station to provide the interconnection with E.On's existing 345kV Brown – Pineville line, a new 345kV substation on EKPC's existing J.K. Smith site, and upgrades on nine other existing facilities.

- 10. Has Mr. Adams prepared a final written report on the justification of the project?
- A. Yes it is attached to his testimony as Adams Exhibit I.
- 11. Realizing that Mr. Adams has submitted prepared testimony as part of this application, which describes in detail the justification for this project and the electrical alternatives considered, please give the Commission a general overview of how this project was selected?
- A. A System Impact Study (SIS) was performed to determine the EKPC and interconnected transmission system impacts caused by the addition of the planned future generation at J.K. Smith. Neighboring transmission owners and operators were involved in the study to provide input and comment. Transmission overloads and constraints were identified and electrical alternatives were developed to address them. Viable alternatives were analyzed and compared on the basis of cost, performance, future capability, local area support, power flow impacts, etc. and a proposed alternative was selected.
- 12. Do you have an opinion as to whether the selected project is the best alternative to deliver power from the new generators to EKPC's native load?
- A Yes
- 13. What is that opinion?

- A. It is my opinion that the new 345kV Smith West Garrard transmission line and associated upgrades is the best alternative for EKPC to provide adequate and reliable delivery of power from the J.K. Smith generators to native load customers.
- 14. With respect to the routing and design of this type project, explain the processEKPC undertakes before determining a final route and design.
- For lines of this type, EKPC follows the EPRI-GTC Transmission Line Routing A. Methodology with some augmentation to add the long time practice by EKPC of hosting property owner open houses to gather area specific input prior to the selection of the Preferred Route. EKPC employs an outside firm to collect data and provide mapping and computer modeling services, etc. This process entails the collection of data through aerial survey, available photography and geographical databases along with ground reconnaissance for land use and feature confirmation. The information is compiled and a statistical model developed by EPRI-GTC is used to identify Macro Corridors based on land use information and stakeholder input. The Macro Corridors are then evaluated and compared based on the Built Environment (man-made features and structures), Natural Environment, and Engineering Concerns. Macro Corridors and Alternative Corridors are then taken to an RUS Environmental Scoping Open House to solicit comments from the public. Viable Alternative Route Corridors are developed within the Alternative Corridors. These Alternative Route Corridors are then taken to an EKPC Open House to solicit further public comment and comment from land owners most likely to be affected by the project centerline. Route Alternatives are then defined within the Alternative Route Corridors using information gathered from surveys, comments, and the Open

House event(s). The Route Alternatives are scored using a standardized system the lowest scoring routes represent the best balance of impacts to cost, effectiveness, local communities and the environment, as represented in the three scoring categories listed above (Built, Environmental, Engineering). The Route Alternatives are then screened using an approach called "Expert Judgment" that allows a more refined examination of the similarities and differences between the alternatives. The Preferred Route is selected as a result of the "Expert Judgment" phase of the EPRI-GTC Methodology.

- 15. How did EKPC follow this process specifically regarding the Project?
- A. EKPC employed Photo Science Geospatial Solutions (Photo Science) of Lexington, Kentucky to perform land use and aerial data collection, and some segments of field reconnaissance. Photo Science also provided modeling to establish the project study area, help develop the Macro-Corridors and Alternative Corridors, and perform the statistical comparison of Alternative Routes. EKPC designers were responsible for all qualitative decisions and judgments made during the route development and analysis. Land use and environmental data for an area of approximately 174,917 acres was evaluated by computer modeling to develop Macro Corridors and to refine them to Alternative Corridors as outlined by EKPC in the June 2006 report titled "Macro-Corridor Study: Smith – W. Garrard 345kV Transmission Project" attached as Warner Exhibit 1. As part of EKPC's required compliance with NEPA, RUS conducted a Scoping Meeting in Richmond, Kentucky on July 11, 2006. Information about the project was published in the local newspapers of record, placed on the National Register, and distributed at the

open house to solicit public comment and input about the proposed Alternative Corridors and the project. EKPC Designers then selected Alternative Route Corridor Centerlines within the Alternative Corridors. These centerlines were the basis for the formation of the Alternative Route Corridors which are 1/2 mile wide for potential greenfield sections and 1000 ft. wide for potential rebuild or colocation sections. Persons owning property touched by the Alternative Route Corridors, as listed in the local Property Valuation Administrators (PVA) records in Madison and Garrard Counties, were sent personal invitations to one of two public open houses sponsored by EKPC to solicit further information and comment about the potential routes, and to provide a forum for the community to learn more about the project. There were no property owners affected in Clark County because the Alternative Route Corridors crossed only EKPC's property in Clark County. The open house events were also advertised in local newspapers. EKPC Designers then compiled all information and comments gathered at the Open Houses and used them to refine centerline Route Alternatives within the Alternative Route Corridors. Those Route Alternatives were statistically compared using "EPRI-GTC Route Evaluation Model". The results from that modeling effort were used to select the best few Route Alternative options to take on to the "Expert Judgment" phase of the EPRI-GTC Methodology. At the conclusion of Expert Judgment, a final preferred route, "Hr" was selected which includes 11.8 mi. of rebuild of existing line, 14.8 miles of co-location with existing lines, and 9 miles of greenfield construction. This process and the results are outlined by EKPC in a December 2006 report titled "Selection of Preferred Route: Smith – W. Garrard 345kV Transmission Project", attached as Warner Exhibit 2.

- 16. Is the location and routing of the Project, in your opinion, the best balance of cost, effectiveness, and environmental impact while minimizing the impact to the local community as a whole?
- A. Yes, it is.
- 17. Does this conclude your testimony?
- A. Yes, it does.

### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF EAST KENTUCKY)POWER COOPERATIVE, INC. FOR A CERTIFICATE)OF PUBLIC CONVENIENCE AND NECESSITY FOR)FOR THE CONSTRUCTION OF A 345 kV ELECTRIC)TRANSMISSION PROJECT IN CLARK, MADISON,)AND GARRARD COUNTIES, KENTUCKY)

CASE NO 2006-00463

#### AFFIDAVIT

#### STATE OF KENTUCKY ) ) COUNTY OF CLARK )

Mary Jane Warner, being duly sworn, states that she has read the foregoing prepared testimony and that she would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of her knowledge, information and belief.

Mary Jane W /arı

Subscribed and sworn before me on this  $\frac{\partial 2^{h}}{\partial d}$  day of <u>May</u> 2007.

Asaacs (Combs,

Notary Public My Commission expires:  $\frac{12}{20}/08$ 

WARNER EXHIBIT 1

**Macro-Corridor Study** 

# Smith to West Garrard 345-kV Transmission Project

East Kentucky Power Cooperative

June 2006

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# **PART I: INTRODUCTION**

East Kentucky Power Cooperative (EKPC) is a generation and transmission electric cooperative based in Winchester, Ky. EKPC serves 16 member distribution cooperatives, which, in turn, serve nearly 500,000 homes, farms and businesses in Kentucky. Founded in 1941, EKPC operates power plants located in Mason, Clark and Pulaski counties of Kentucky, and renewable energy plants in Boone, Laurel, Greenup and Hardin counties, along with gas peaking units, hydro power and more than 2,800 miles of transmission lines.

To finance the electric transmission line project described in this report, East Kentucky Power Cooperative (EKPC) is applying for loan funding from the Rural Utilities Service, which administers the U.S. Department of Agriculture's Rural Development Utilities Programs, including making direct loans and loan guarantees to electric utilities to serve customers in rural areas. The loans and loan guarantees finance the construction of electric distribution, transmission, and generation facilities, including system improvements and replacement required to furnish and improve electric service in rural areas, as well as demand side management, energy conservation programs, and ongrid and off-grid renewable energy systems.

This project must comply with the National Environmental Policy Act (NEPA), which requires federal agencies to integrate environmental values into their decisionmaking processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To comply with the standards of NEPA and related regulations, EKPC has developed this Macro-Corridor Study, which defines the project study area and shows the end points. Alternative corridor routes were developed based on environmental, engineering, economic, land use and permitting constraints.

# **PART II: PROJECT DESCRIPTION**

To accommodate load growth among its member cooperatives, EKPC plans to construct generating units at its J.K. Smith Power Station, located in the community of Trapp, Ky., in Clark County. The site currently contains seven combustion turbine (CT) units with a total generating capacity of 826 MW at winter capacity. Four existing 138-kilovolt transmission lines currently are connected to the J.K. Smith Substation. These lines are insufficient to accommodate delivery of any additional generation at an expanded J.K. Smith Power Station.

EKPC has proposed to construct five additional CT's at J.K. Smith. The first of these units is scheduled to become operational in March of 2008. The addition of this generation has created the necessity for additional transmission outlets from the facility. The Smith-West Garrard transmission line will provide the outlet necessary for the addition of the five combustion turbines proposed for construction at J.K. Smith Station.

J.K. Smith Station has been the subject of two environmental impact statements (EIS) and three environmental assessments throughout the facility's history. Typically, the addition of CTs on an existing generation site has required the preparation of an environmental assessment with scoping requirements per USDA Rural Development regulations (7 CFR 1794). Due to the high level of environmental work that has been conducted on the J.K. Smith Station site and the amount of disturbance that has occurred on the site, USDA Rural Development has waived the scoping requirements associated with the preparation of an environmental assessment for the CTs (per 7 CFR 1794).

The Smith – West Garrard transmission line project is being evaluated in a separate environmental assessment with scoping requirements than the CTs. USDA Rural Development allowed this classification of the project since the J.K. Smith site has already been studied extensively and the level of environmental review remains at the same level. USDA Rural Development has not waived the scoping requirements for this project.

Therefore, EKPC has prepared a Macro-Corridor Study of route alternatives and conducted an Alternative Evaluation Study. This Macro-Corridor Study was conducted to develop options for transmission line routing and to assess potential environmental, social and cultural impacts. The Electrical Alternative Evaluation Study examines the various transmission expansion options needed to support the total expected output of the expanded J.K. Smith site through 2010.

The Electrical Alternative Evaluation Study resulted in plans for a 345-kV transmission line extending from J.K. Smith Power Station that taps into the existing Brown-to-Pineville doublecircuit 345-kV line owned by Kentucky Utilities. At the junction of the two lines, EKPC plans to construct the West Garrard Substation. (As a result, this project is named the Smith-West Garrard transmission line project.)

Once constructed, the Smith – West Garrard 345kV transmission line will provide sufficient capacity for the CT units proposed for the J.K. Smith Power Station. In fact, construction of these transmission facilities will provide EKPC enough capacity to handle the addition of a coal-fired power plant that has also been proposed for construction at J.K. Smith Station.

# **PART III: STUDY AREA DESCRIPTION**

# 1. Study Area Location

The Smith-West Garrard 345-kV transmission line project Study Area is located in Central Kentucky, approximately 20 to 30 miles south of the Lexington urban area. (See map of Study Area in Figure 1 on Page 4.) The Study Area includes 174,917 total acres. Notable features within or adjacent to the Study Area include the Kentucky River, Interstate 75, the city of Richmond and the city of Lancaster. The Study Area includes parts of five Kentucky counties: Clark, Fayette, Garrard, Jessamine and Madison. The primary impacts are in Madison and Garrard counties.

TABLE 1: Analysis of Study Area Acres by County									
County	Total Acres	Acres of Study Area	% of County in Study Area						
Clark	163,305	10,278	6.29%						
Fayette	182,743	1,142	0.62%						
Garrard	149,744	51,394	34.32%						
Jessamine	111,704	4,648	4.16%						
Madison	283,711	107,454	37.87%						
TOTAL	891,207	174,917							

Source: Aerial, GIS information





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In addition, the Study Area impacts a number of unincorporated rural towns, including:

- Arlington, Madison County
- Baldwin, Madison County
- Bloomingdale, Clark County
- Bourne, Garrard County
- Bryantsville, Garrard County
- Buckeye, Garrard County
- Cottonburg, Madison County
- Crow Valley, Madison County
- Doylesville, Madison County
- Edenton, Madison County
- Ford, Clark County
- Hackley, Jessamine County
- Judson, Garrard County

- Marksbury, Garrard County
- McCreary, Garrard County
- Million, Madison County
- Newby, Madison County
- Nina, Jessamine County
- Redhouse, Madison County
- Round Hill, Madison County
- Ruthton, Madison County
- Stone, Garrard County
- Stringtown, Madison County
- Teatersville, Garrard County
- Three Forks, Garrard County
- Toddville, Garrard County



FIGURE 2: Rural Towns in Study Area

# 2. Study Area Characteristics

#### Physiography

The project area lies within the Inner Blue Grass and Outer Blue Grass Physiographic Regions of Kentucky. The Inner Blue Grass is characterized by gently rolling hills and rich, fertile soils. The hills are caused by the weathering of relatively rick-bedded limestone that characterize the Ordovician strata of central Kentucky that has been pushed up along the crest of the Cincinnati Arch. Weathering of the limestones produces sink holes, sinking streams, springs, caves and soils. The soils are fertile because the Ordovician limestones contain phosphate minerals (e.g., apatite), which are natural fertilizers. An interesting feature situated in the project area is the Kentucky River Palisades. The palisades consist of the cliffs in the gorge or canyon along the Kentucky River where it cuts through resistant massive limestones and dolostones. These massive limestones and dolostones are the oldest strata exposed at the surface in Kentucky. The Outer Bluegrass is characterized by deeper valleys, with little flat land, because the bedrock in this area is mostly composed of interbedded Ordovician limestones and shales that are more easily eroded than the limestones of the Inner Bluegrass. (University of Kentucky, Kentucky Geological Survey, http://www.uky.edu/KGS/geoky/pages/regionbluegrass.html)

The Kentucky River and Paint Lick Creek are the primary waterways that occur in the project area. The average annual rainfall for the area is around 45 inches. Winters tend to be long, damp, and cold while the summers tend to be warm with periods of 80 - 90° weather.



#### Figure 3: Physographic Diagram of Kentucky

Source: Kentucky Geological Survey (http://www.uky.edu/KGS/geoky/pages/physiographic.html)

#### Land Use/Land Cover

The Study Area for the proposed project consists primarily of agricultural lands in the form of pastureland for livestock other than horses. Approximately 29 percent of the area is forested. The majority of forest lands occur in the northern half of the study area and are associated with the Kentucky River corridor and major tributaries. The pastureland occurs on the flat, broad ridgetops associated with the Bluegrass region. Row cropping is typically confined to the alluvial plains in the major tributaries of the Kentucky River.

The urban areas are concentrated in the south-central portion of the study area, and they are associated with the city of Richmond and points surrounding the Interstate 75 corridor. Urban areas also are prevalent along the western edge of the study corridor in conjunction with the city of Lancaster to the southwest and the U.S. 27 corridor. There are scattered rural communities throughout the study area. See Figure 4 on Page 8 for a detailed land use/land cover map.

TABLE 2: Land Use/Land Cover of Study Area							
Land Cover Type	Acres	% Of Area					
Apartment/High Density	195	0.11%					
Commercial/Industrial	499	0.29					
Forested	50,227	28.72					
Horse Farms	355	0.20					
Hydrography	2,030	1.16					
Other*	239	0.14					
Other Livestock	100,878	57.67					
Planted Pine	393	0.22					
Recreational	245	0.14					
Residential	8,479	4.85					
Road ROW	2,671	1.53					
Row Crop	6,522	3.73					
Transportation	1,310	0.75					
Utility R/W	873	0.50					
TOTAL	174,917	100.00%					

Source: Photo Science Inc.

\* land cover types with less that 0.01% of area, classified as Other



#### Socioeconomic Data

The populations of the counties included in the Study Area, like much of Central Kentucky, have seen moderate to considerable growth in recent years. (See Table 3 on Page 10 for a detailed look at socioeconomic statistics, by county).

On the eastern end of the Study Area, particularly around Richmond and the I-75 corridor, agriculture has been eclipsed in recent decades by the manufacturing and service industries as mainstays of the local economy, and residential development has begun replacing farmland. The western portion of the Study Area retains its agricultural character. Counties in the Study Area enjoy relatively low unemployment rates.

The Study Area impacts two incorporated cities, Richmond and Lancaster. Richmond, with a 2001 population of 29,080, is the county seat of Madison County and is the location of Eastern Kentucky University, with total 2005 enrollment of approximately 14,000 undergraduate and graduate students. Lancaster, with a 2001 population of 3,734, is the county seat of Garrard County.

The Study Area includes a small portion of Fayette County in the county's Rural Service Area, miles from the city proper. Fayette County features a combined city/county government, called urban county government. Lexington in Fayette County is a regional hub of commerce, industry and transportation. It is the location of the University of Kentucky.

Clark County	Favette County	Garrard County	Jessamine County	Madison County
	(			
33,144	260,512	14,792	39,041	70,872
806	610	6,032	613	23,983
2.43%	0.23%	40.78%	1.57%	33.84%
12.4%	15.6%	27.7%	28.0%	23.2%
13,015	108,288	5,741	13,867	27,152
299	222	2,220	208	9,772
2.30%	0.21%	38.67%	1.50%	35.99%
24.8%	21.3%	24.4%	26.4%	21.9%
12.4%	10.0%	13.0%	9.5%	9.8%
			-	
93.6%	81.0%	95.7%	94.4%	93.0%
4.8%	13.5%	3.1%	3.1%	4.4%
0.2%	0.2%	0.1%	0.2%	0.3%
1.2%	3.3%	1.3%	1.3%	1.0%
75.0%	85.8%	69.4%	79.1%	75.2%
15.6%	35.6%	10.5%	21.5%	21.8%
14,415	120,496	6,501	15,718	30,484
68.7%	55.3%	76.4%	67.1%	59.7%
\$93,700	\$110,800	\$81,300	\$102,100	\$93,500
\$39,946	\$39,813	\$34,284	\$40,096	\$32,861
\$19,170	\$23,109	\$16,915	\$18,842	\$16,790
10.6%	12.9%	14.7%	10.5%	16.8%
				-
5.5%	4.6%	6.1%	4.6%	4.8%
	ئى م <b>لا</b> ئىئىدە - 11	Chida Area		
	Clark County Clark County 33,144 806 2,43% 12.4% 12.4% 12.4% 12.4% 12.4% 12.4% 12.4% 230% 250%	Clark County Fayette County   Clark County Fayette County   33,144 260,512   806 610   243% 0.23%   12.43% 15.6%   13.015 108,288   13.015 108,288   299 0.21%   299 2.1.3%   12.4% 10.0%   13.5% 0.21%   12.4% 10.0%   12.4% 10.0%   12.4% 10.0%   12.4% 10.0%   23.3% 0.21%   12.4% 10.0%   35.6% 31.0%   5.5.3% 55.3%   5.5.3% 55.3%   5.5.% 4.6%	Clark County Fayette County Garrard   Clark County Fayette County County   33,144 260,512 14,792   33,144 50,512 14,792   806 610 6,032   243% 0.23% 40,78%   12,4% 15,6% 27,7%   13,015 108,288 5,741   299 2222 2,220   299 221,3% 38,67%   230% 0.21% 38,67%   13,015 10,0% 13,0%   12,4% 10,0% 13,0%   12,4% 10,0% 13,0%   12,4% 10,0% 13,0%   12,4% 10,0% 38,67%   12,4% 10,0% 38,67%   12,4% 10,0% 13,0%   12,4% 13,0% 13,0%   12,4% 12,4% 13,0%   12,4% 12,0% 13,0%   12,4% 12,0% 13,0%   12,6% 33,6%	Clark County Fayette County Carrard Jessamine   33,144 260,512 14,792 39,041   806 610 6.032 613   24% 15.6% 27,7% 28.0%   12.4% 15.6% 27,7% 28.0%   23.144 260,512 14,792 39,041   806 610 6.032 613   24% 15.6% 27,7% 28.0%   13,015 108,288 5,741 13,867   299 2222 2,220 208   230% 0.21% 1.56% 28.0%   21,3% 13.0% 9.57% 1.50%   21,4% 13.0% 9.5% 2.4%   21,4% 13.0% 9.5% 9.5%   230% 0.21% 38.67% 2.80%   24.8% 10.0% 9.5% 1.50%   24.8% 13.0% 9.5% 1.3.0%   24.8% 0.21% 2.1.4% 2.64%   12.4%

2 (a) Study Area-specific data based on Census blocks; some portions of some Census blocks may(b) Includes persons reporting only one race.(c) Hispanics may be of any race, so also are included in applicable race categories.

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#### Transportation

Significant transportation features in the Study Area consist of north-south highway corridors. These include:

- A portion of Interstate 75, a principal highway artery between the Midwest and Southeast United States. The Study Area encompasses a 10.72-mile section of I-75 from near the Kentucky River to the western edge of the city of Richmond.
- A portion of U.S. 25/421, which runs immediately parallel to I-75 through most of the Study Area then forms the northern portion of the Richmond Bypass.
- A portion of U.S. 27 north of Stanford.
- A portion of Ky. 627 from near the Kentucky River to I-75.

#### Water Resources

The Study Area encompasses nearly 175,000 acres, 1.16 percent of which is comprised of water. (See Table 4 below for a list of significant water resources.) The Kentucky River is the largest body of water in the Study Area. The Kentucky River system drains much of the central region of the state. Numerous perennial and intermittent streams associated with this watershed are found in the Study Area. Wetlands primarily are limited to the stream corridors due to the karst topography in the area. There are many unconsolidated ponds and lakes identified as wetlands through the U.S. Fish and Wildlife Service's National Wetland Inventory maps.

TABLE 4: Water Resources
Within Study Area
Major Rivers/Streams
Kentucky River
Paint Lick Creek
Sugar Creek
Tate Creek
Silver Creek
East Fork Otter Creek
Scotch Fork
West Creek
Otter Creek
Shallow Ford Creek
West Fork
Boone Creek
Jackson Branch
Long Branch
Hicks Branch
West Fork Creek
Middle Fork
Jacks Creek

Source: USGS National Hydrography Dataset

#### **Recreation Resources**

Recreational resources in the Study Area include city parks and Arlington Country Club in Richmond, and other scattered small parks associated with the rural communities within the Study Area.

#### **Cultural Resources**

The study area is rich in cultural historic resources. Six historic districts, several listed sites, as well as numerous eligible and potentially eligible sites for listing on the National Register of Historic Places exist in the study area.

#### **Federal and State Lands**

State lands in the Study Area include White Hall State Historic Site and a portion of the Tom Dorman Kentucky River Palisades.

#### **Sensitive Wildlife Resources**

There are three federally listed species—one plant and two bats—that occur or may occur in the proposed Study Area that could be impacted by the proposed project. The project area also is host to several species of birds, mammals, and plants that are monitored by the Kentucky State Nature Preserve Commission (KSNPC).

Running Buffalo Clover (*Trifolium stoloniferum*) is a federally endangered species of plant that occurs in flood plains, streambanks, lawns, grazed bottomlands, mesic woodlands, old trails, traces, roads,



Running Buffalo Clover (Trifolium stoloniferum)

(Photo courtesy of Kentucky State Nature Preserve Commission Staff)

shoals, cemeteries with native vegetation, prairies, and well-drained mesic soils. The plant needs filtered to partial light, and it is usually found where some disturbance occurs such as mowing, trampling, or grazing, and in areas underlain with calcareous bedrock such as limestone. Trees commonly associated with running buffalo clover include: box elder, sugar maple, white ash, black walnut, and American elm. Running buffalo clover usually produces erect flowering stems 10-30 cm (4-12") tall. The petals are usually

white tinged with purple, and it flowers from April – June and fruits between May and July. There are two documented records for this species in the Study Area.

There are two federally endangered species of bats, the Indiana bat (*Myotis sodalis*) and the Gray bat (*Myotis grisescens*) that may occur in the proposed study corridor. Indiana bats live beneath the bark of dead or live trees during the summer and caves in the winter. Gray bats occupy caves year round. Potential winter and/or summer habitat for these two species may exist in the area.

Through Kentucky's natural heritage program, the KSNPC monitors species of concern as well as exemplary ecological communities throughout the state.



Documented locations within Study Area of Running Buffalo Clover (*Trifolium stoloniferum*)

There are five occurrences of species of concern and one example of an exemplary

ecological community within the Study Area. All are on the fringes of the area. The species of concern and exemplary ecological communities that occur in the Study Area are listed in Table 5 below. This information was obtained from the Natural Heritage Program database maintained by the KSNPC.



Documented occurrences of species of concern, exemplary communities

TABLE 5: Species of Concern, Exemplary Communities					
Scientific Name	Common Name				
Aimophila aestivalis	Bachman's Sparrow				
Viburnum rafinesquianum var. rafinesquianum	Downy Arrowwood				
Elodea nuttallii	Western Waterweed				
Elymus svensonii	Svenson's Wildrye				
Mustela nivalis	Least Weasel				
Limestone slope glade	Limestone slope glade				

Source: Kentucky State Nature Preserves Commission

# **PART IV: OVERVIEW OF SUITABILITY ANALYSIS**

# 1. EPRI-GTC Methodology

For projects of this scope, EKPC incorporates a computer-based methodology that was developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC). EKPC uses the EPRI-GTC methodology as a tool to evaluate the suitability of individual land tracts, or "grid cells," for locating transmission facilities. Based on analysis of a large area between and in the vicinity of the endpoints for the line, a Macro-Corridor and Study Area are developed. Then, using more-detailed information about the grid cells within the Study Area, Alternate Corridors are developed for further evaluation.

Among its advantages, the EPRI-GTC methodology is objective, comprehensive and consistent. Employing increasingly detailed data, it allows the utility to take into consideration vast amounts of information and to quantitatively consider stakeholder input in developing Alternative Corridors by using the Kentucky Siting Model discussed in the next section. Figure 5 below represents the EPRI-GTC methodology.



#### FIGURE 5: EPRI-GTC Siting Methodology

The EPRI-GTC methodology approaches corridor development by considering three broad perspectives or "environments":

- **Built Environment**, which is concerned with minimizing the impact on people places and cultural resources;
- **Natural Environment**, which is concerned with protecting water resources, plants and animals; and
- Engineering Environment, which is concerned with maximizing co-location and considering physical restraints.

Features within each of these environments are identified and evaluated to map the suitability of grid cells in each environment and develop Alternative Corridors for each. And simple average Alternative Corridors are developed to account for all three environments at once. These processes are discussed in detail in following sections.

# 2. About the Kentucky Siting Model

In order to calibrate the EPRI-GTC methodology for use in Kentucky, a siting model was developed using data collected from a group of Kentucky stakeholders during a workshop conducted in February 2006. The workshop was conducted and the model developed and tested by a project team of independent experts. Stakeholders at the workshop represented a range of interests from around the state, such as environmental concerns, historic preservation, homeowners associations, agricultural groups and government agencies, as well as EKPC personnel and representatives of other utilities. The resulting model (see Figure 6 on Page 18) includes data layers, features, layer weights and suitability values that are specific to Kentucky.

Based on the interest he or she represented, each stakeholder was assigned to a breakout group for each of the three environments—Built, Natural or Engineering. Guided by an independent expert from the project team, each of these groups developed a set of data layers (in green on Figure 6) with component features (in yellow), as well as avoidance areas (in red). For example, one of the data layers in the Built Environment is floodplains, which has two component features: background and 100-year floodplain.

For each feature, the stakeholders then used consensus-building techniques to develop a relative suitability value. Numbers between 1 and 9 were used to represent degrees of suitability, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line. These values are described in the EPRI-GTC Project Report (2006) as follows:

<u>Areas that have High Suitability for an Overhead Electric</u> <u>Transmission Line (1, 2, 3)</u> - These are areas that do not contain known sensitive resources or physical constraints, and therefore should be considered as suitable areas for the development of corridors.

#### Moderate Suitability for an Overhead Electric Transmission Line

(4, 5, 6) - These are areas that contain resources or land uses that are moderately sensitive to disturbance or that present a moderate physical constraint to overhead electric transmission line construction and operation. Resource conflicts or physical constraints in these areas can generally be reduced or avoided using standard mitigation measures.

#### Low Suitability for an Overhead Electric Transmission Line (7, 8, 9)

- These are areas that contain resources or land uses that present a potential for significant impacts that cannot be readily mitigated. Locating a transmission line in these areas would require careful siting or special design measures. Note that these areas can be crossed but it is not desirable to do so if other alternatives are available.

After assigning suitability values to features, stakeholders then weighted each data layer based on their view of its relative importance in the siting process. This was accomplished by conducting pair-wise comparisons. The result is a percentage weighting for each data layer within each environment, totaling 100 percent within each environment.

The EPRI-GTC methodology recognizes it is prohibitive to locate overhead transmission lines on or around some features, because, for example, of physical constraints or permitting delays. These areas are termed "avoidance areas" because the methodology seeks to avoid entering them, if possible. Features that constitute avoidance areas were determined by the stakeholder groups and are listed in red in Figure 6. One of the first steps in implementing the EPRI-GTC methodology is identifying avoidance areas on the Study Area surface to avoid locating transmission in those areas, if possible.

A final note—in each data layer where "background" appears, this feature represents areas that are not the location of any of the other features in that layer. For example, in the Floodplain data layer of the Natural Environment, all areas that are not within a 100-year floodplain are considered background.

# FIGURE 6: Kentucky Siting Model

Co-location / Engineering		Natural Environment		Built Environment	
Linear Infrastructure	36.2%	Floodplain	448%	Proximity to Buildings	46.8%
Parallel Existing Transmission Lines	1	Background	1	Background	1
Rebuild Existing Transmission Lines (good)	2.2	100 Year Floodplain	9	900-1200	3.4
Background	4.4	Streams/Wetlands	129.44	600-900	5.7
Parallel Interstates ROW	4.7	Background	1	300-600	8
Parallel Roads ROW	5.4	Streams < 5cfs+ Regulatory Buffer	6.2	0-300	9
Parallel Pipelines	5.6	Rivers/Streams > 5cfs+ Regulatory Buffer	7.1	Building Density	8/4%
Future DOT Plans	5.6	Wetlands + 30' Buffer	8.7	0 - 0.05 Buildings/Acre	1
Parallel Railway ROW	6.1	Outstanding State Resource Waters	9	0.05 - 0.2 Buildings/Acre	3
Road ROW	7.2	Public Lands	107.75%	0.2 - 1 Buildings/Acre	5,6
Rebuild Existing Transmission Lines (bad)	8.6	Background	1	1 - 4 Buildings/Acre	8.5
Scenic Highways ROW	9	WMA - Not State Owned	5.1	> 4 Buildings/Acre	9
Slope	1169862	USFS (proclamation area)	6.2	Proposed Development	3.5%
Slope 0-15%	1	Other Conservation Land	7.8	Background	1
Slope 15-30%	4	USFS (adually owned)	9	Proposed Development	9
Slope 30-40%	6.7	State Owned Conservation Land	9	Spannable Lakes and Ponds	4:0%
Slope >40%	9	Land Cover	19/87/	Background	1
AVOIDANCE AREAS		Developed Land	1	Spannable Lakes and Ponds	9
Non-Spannable Waterbodies		Agriculture	4.6	Land Use	35.9%
Mines and Quarries (Active)		Forests	9	Commercial/Industrial	1
Buildings		Wildlife Habitat	28.7%	Agriculture (crops)	3.5
Airports		Background	1	Agriculture (other livestock)	4.6
Military Facilities		Species of Concern Habitat	9	Silviculture	6
Center Pivot Irrigation		AVOIDANCE AREAS		Other (forest)	6.7
		EPA Superfund Sites		Agriculture (horse farms)	8
		State and National Parks	_	Residential	9
		USFS Wilderness Area		Preximity to Eligible Historic and Archeological Sites	39.0%
		Wild/Scenic Rivers	1	Background	1
		Wildlife Refuge		900-1200	4.6
		State Nature Preserves	_]	600-900	7.9
		Designated Critical Habitat	7	0-300	8.6
				300-600	9
				AVOIDANCE AREAS	
				Listed Archaeology Sites & Dist.	]
				Listed NRHP Districts and Buildings	
				City and County Parks	
				Day Care Parcels	
				Cemetery Parcel s	
				School Parcels (K-12)	
				Church Parcels	]

- **Data layers (green cells):** Percentages represent relative importance, or weighting, of each layer in the siting process, as determined by stakeholders.
- Features (yellow cells): Numbers between 1 and 9 represent degrees of suitability, as determined by stakeholders, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line.
- Avoidance Areas (red cells): Features to avoid siting transmission lines, if possible, as determined by stakeholders.

# 3. Suitability Mapping

The methodology begins with two endpoints as the basis for creating transmission line corridors. For this project, the endpoints are Smith Substation at J.K. Smith Station and the site of the planned West Garrard Substation near Lancaster. A large area in the vicinity of and between the endpoints is divided into grid cells.

Data from aerial photography, geographic information systems, publicly available datasets and other sources are used to identify features within each grid cell. Based on these features and the values and data layer weights determined in the Kentucky Siting Model, the methodology then assigns a suitability value to each cell. More-detailed data is employed by the methodology as corridor locations are narrowed down more precisely

Because cells deemed to have lower suitability for locating a transmission line are assigned higher values, the methodology employs an algorithm that seeks to minimize the sum of values as it works its way from one endpoint to the other. The resulting corridor is referred to the "least-cost path." In this sense, "least cost" refers not to economic costs, but to the fact that low values indicate greater suitability for locating transmission facilities.

Figures 7-9 on Pages 20 and 21 demonstrate the development of a sample "least-cost path" using information from a hypothetical situation.

Figure 7 displays an example area that has four features: an existing transmission line through the center of the area, surrounded by agricultural land with an area of steep slopes to the northwest and a floodplain to the southeast.



FIGURE 7: Feature Map of Example Area

In Figure 8, grid cells are overlain and assigned suitability values based on the features. (The suitability values used in this example do not necessarily correspond to the Kentucky Siting Model.) The area of the existing line is considered highly suitable. Agricultural land is moderately suitable. Steep slopes and floodplains have low suitability values.



#### FIGURE 8: Grid Cell Map of Example Area, With Suitability Values

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Finally, Figure 9 shows in green the most suitable corridor through the area for locating a transmission line. Light green areas are moderately suitable. The orange area has a low suitability value and the red area is highly unsuitable. The most suitable corridor from east to west in this example is the one that follows the existing transmission line.

7	7	7	7	7	7	4	4	4	4
7	7	7	7	7	7	4	4	4	1
7	7	7	7	7	4	4	1	1	1
7	7	7	7	7	4	1	1	1	1
7	7	7	7	1	1	1	1	1	1
4	4	4	1	1	1	1	1	1	4
4	1	1	1	1	1	1	4	4	4
1	1	1	1	1	1	9	9	9	9
1	1	1	1	4	4	9	9	9	a)
1	1	1	4	4	4	9	9	9	9

FIGURE 9: Suitability Map of Example Area

# 4. Developing Macro-Corridors and Alternative Corridors

Beginning with a large area around and between the endpoints, the EPRI-GTC methodology analyzes land tracts, or "grid cells," within that area to develop a Macro-Corridor. This initial analysis is based on satellite and GIS information that is readily available from public sources. Using a minimum ground resolution of 30 meters, this information, the resulting corridor is referred to as the Macro-Corridor, which represents the top 3 percent most suitable routes of all possible routes in the initial area. (See Figure 10 on Page 23 for a map of the Macro-Corridor for the Smith-West Garrard project.)

The Macro-Corridor then is widened slightly to fully account for possible significant features on the fringes. The result is the Study Area. (See Figure 11 on Page 24 for a map of the Study Area for the Smith-West Garrard project.) A second round of analysis, based on more-detailed data with a minimum ground resolution of 15 meters, is used to develop Alternative Corridors. These corridors represent the top 3 percent—that is, the most suitable 3 percent—of possible corridors within the Study Area.

Alternative Corridors are generated for each of the three environments. It should be noted that, when generating Alternative Corridors for each environment, data layers from the other two environments are taken into account. While the target environment is weighted much more heavily, values and weights from the other environments can affect Alternative Corridors generated for that respective environment.

The final step in generating Alternative Corridors is to average the three environments and generate a Simple Average Alternative Corridor. Figure 12 on Page 25 displays the Alternative Corridors generated for each environment, as well as the Simple Average Alternative Corridor.

The following sections of this report provide information about features that were found within the Study Area based on available information, and about the Alternative Corridors that were generated.



Macro-Corridor Study: Smith-West Garrard

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# PART V: ENGINEERING ENVIRONMENT

## 1. Avoidance Areas

## **Avoidance Area: Buildings**

Buildings are designated as Avoidance Areas within the Engineering Environment. In the Study Area, there are numerous existing structures, with notable concentrations near the I-75 corridor, around Richmond and near U.S. 27 in Garrard County. This information was developed from aerial photography conducted by Photo Science Inc.



## **Other Avoidance Areas**

In the available datasets, there were <u>no</u> records of the following features in the Study Area:

- Non-spannable water bodies;
- Active mines or quarries;
- Airports;
- Military facilities; or
- Center-pivot irrigation.

## 2. Linear Infrastructure Features

The available datasets indicated no scenic highways in the Study Area.

## High Suitability (1.0): Parallel Existing Transmission Lines

In the Engineering Environment, the model gives high suitability to paralleling existing transmission lines. Several existing transmission lines traverse the Study Area. (See Figure 13 on Page 28 for a map of existing lines. Below is a list of EKPC's lines and voltages within the Study Area.

- Dale Hunt (2 circuits), 69kv
- Dale Newby (2 circuits), 69kv
- Fawkes Hickory Plains, 69kv
- Hunt Stanton 69kv
- Lancaster Highland, 69kv
- Newby Lancaster, 69kv
- Newby Perryville, 69kv
- Dale Fawkes, 138kv
- Dale Smith, 138kv
- Fawkes West Berea, 138kv
- Smith Fawkes 138kv
- Smith KU Lake Reba Tap, 138kv
- Three Fork Tap, 138kv

In addition, Kentucky Utilities (KU) has several transmission lines in the Study Area. These include:

- Brown-Pineville (2 circuits), 345 kV
- Fawkes-Brown, 138 kV
- Fawkes-Clark County, 138 kV
- Fawkes-Lake Reba Tap, 138 kV
- Fawkes-Higby Mill, 69 kV
- Fawkes-Okonite, 69 kV
- Fawkes-Red House, 69 kV
- Fawkes-Richmond, 69 kV
- Lancaster-Danville East, 69 kV
- Lancaster-Dix Dam, 69 kV
- Richmond-Lake Reba, 69 kV



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## High Suitability (2.2): Rebuild Existing Transmission Lines (Good)

The Kentucky Siting Model recognizes that it is often desirable to rebuild an existing transmission line rather than creating a new corridor where one does not already exist. Nevertheless, the model distinguishes between "good" and "bad" rebuild opportunities based on the significance of the disruption and/or cost that would result from an extended outage during rebuilding. EKPC personnel evaluated the cooperative's transmission lines. Lines designated as "good" rebuild opportunities in the Study Area include:

- Dale-Newby 69-kV double-circuit
- Hunt-Stanton 69-kV
- Lancaster-Highland 69-kV
- Newby-Lancaster 69-kV
- Newby-Perryville 69-kV

## Moderate Suitability (4.7): Parallel Interstate Rights of Way

Paralleling interstate highways is deemed moderately suitable in the Engineering Environment of the Kentucky Siting Model. Because Interstate 75 bisects the Study Area from north to south, and the Study Area runs generally east to west, there is little opportunity for paralleling. The Study Area encompasses a 10.72-mile section of I-75 from near the Kentucky River to the western edge of the city of Richmond. Data was obtained from records on file with county Property Valuation Administrators and from commercially available datasets.



## Moderate Suitability (5.4): Parallel Road Rights of Way

The Engineering Environment model assigns moderate suitability to paralleling existing roads. Existing roadways in the Study Area tend to run northsouth rather than east-west. Data was obtained from records on file with county Property Valuation Administrators.



#### Moderate Suitability (5.6): Parallel Pipelines

Locating parallel to existing pipelines is given a moderate suitability in the Engineering Environment. There are a number of natural gas pipelines in the Study Area. These include lines owned by Tennessee Gas, Columbia Gas and Texas Eastern. Data was obtained from the U.S. Geological Survey.



#### Moderate Suitability (5.6): Future Department Of Transportation Plans

Locating on the site of future planned road projects is moderately suitable in the Engineering Environment. According to information received from Transportation officials, several future road projects are planned in the Study Area, but these tend to be on the fringes of the Study Area. Data was obtained from the Kentucky Department of Transportation.



## Moderate Suitability (6.1): Parallel Railway Rights of Way

Locating transmission lines parallel to railroads is deemed to be moderately suitable in the Engineering Environment of the Kentucky Siting Model. A significant portion of a railroad owned by CSX Corp. exists in the Study Area. But, because it runs generally north to south, there is little opportunity to parallel. Data was obtained from records on file with county Property Valuation Administrators and from commercially available datasets.



## Low Suitability (7.2): Road Rights of Way

The Engineering Environment of the model gives low suitability to locating a transmission line on road rights of way. There are numerous roads in the Study Area, although they tend to run north to south. Data was obtained from records on file with county Property Valuation Administrators.



## Low Suitability (8.6): Rebuild Existing Transmission Lines (Bad)

As noted above, the Kentucky Siting Model distinguishes between "good" and "bad" rebuild opportunities based on the significance of the disruption and/or cost that would result from an extended outage during rebuilding. The following EKPC lines were designated as "bad" rebuild opportunities based on an evaluation by EKPC personnel:

- Dale-Hunt 69-kV double circuit
- Fawkes-Hickory Plains 69-kV
- Dale-Fawkes 138-kV
- Dale-Smith 138-kV
- Fawkes-West Berea 138-kV
- Smith-Fawkes 138-kV
- Smith-KU Lake Reba Tap 138-kV
- Three Forks Tap 138 kV

# **3. Slope Features**

Recognizing the challenges of constructing a transmission line on steep slopes, the Engineering Environment of the Kentucky Siting Model categorizes slopes, and slopes become less suitable as they become steeper. Table 5 below summarizes the suitability of slope categories in the model.

TABLE 6: Categories, Suitability Values of Slopes				
Angle of Slope	Suitability Value from Model	Suitability		
Slope 0-15%	1.0	High		
Slope 15-30%	4.0	Moderate		
Slope 30-40%	6.7	Moderate		
Slope >40%	9.0	Low		

Figure 14 below displays categories of slopes as they occur in the Study Area, according to the available data. Slopes of 0-15% and 15-30% dominate the Study Area, with the latter concentrated in the western portion. Slope information was obtained from the U.S. Geological Survey.





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# 4. Engineering Environment Data Layer Weights

The Engineering Environment data layers and their relative weights are summarized in Table 6 below.

TABLE 7: Engineering EnvironmentData Layers and Relative Weights	
Layer	Weight
Linear Infrastructure	86.2%
Slope	13.8%

## 5. Engineering Alternative Corridors

When the feature suitability values and data layer weightings were combined and the least-cost path algorithm was applied to the available datasets, the result was the Engineering Alternative Corridors displayed in Figure 15 below. The Engineering Environment of the Kentucky Siting Model is heavily weighted toward co-location. As a result, it is not surprising that the Engineering corridors primarily are located along the paths of existing transmission lines.

Beginning at Smith Station to the east, the corridor follows EKPC's 138-kV Smith-Fawkes line west to Richmond. It then forks into two options:

- Co-locate along the existing Fawkes-Higby Mill 69-kV transmission line owned by Kentucky Utilities (KU) and head north to EKPC's Dale-Newby 69-kV line. Then co-locate along that line to Newby Substation. From there, co-locate along EKPC's Newby-Lancaster line to just east of Lancaster where a new transmission line would be built to the West Garrard substation.
- The second option differs in its path to Newby Substation. It would take a southerly corridor along KU's Fawkes-Brown 138-kV line, to reach the substation, then pick up the same path as described above.



#### FIGURE 15: Engineering Environment Alternative Corridors

# PART VI: NATURAL ENVIRONMENT

## 1. Avoidance Areas

In the available datasets, there were <u>no</u> records of the following features within the Study Area. These features are deemed avoidance areas in the Natural Environment of the Kentucky Siting Model:

- EPA Superfund Sites;
- USFS Wilderness Areas;
- Wild/scenic rivers;
- Wildlife refuges; or
- Designated critical habitats.

## Avoidance Areas: State & National Parks and State Nature Preserves

White Hall State Historic Site is located along the I-75 corridor near the northern edge of the Study Area. A portion of the Tom Dorman Kentucky River Palisades State Nature Preserve is located on the northwestern edge. Data obtained from Kentucky GAP Land Stewardship.



## 2. Floodplains

#### Low Suitability (9.0): 100-Year Floodplain

The Natural Environment of the Kentucky Siting Model gives very low suitability to locating transmission lines in the 100-year floodplain. The corridors of several waterways include areas that are included in the 100-year floodplain, notably areas along the Kentucky River, Paint Lick Creek, Sugar Creek, Tate Creek, Silver Creek, Otter Creek, Fourmile Creek, Dry Fork Creek and Muddy Creek. Data was obtained from the Federal Emergency Management Agency and the U.S. Geological Survey.



## 3. Streams/Wetlands

Available datasets indicate no Outstanding State Resource Waters in the Study Area.

#### Moderate to Low Suitability (6.2 & 7.1): Streams & Rivers

The Natural Environment categorizes streams as those that flow with either less than or more than 5 cubic feet of water per second (cfs). It is moderately suitable (6.2) to locate a transmission line in the regulatory buffer of a stream that flows with less than 5 cfs. The model gives low suitability (7.1) to locating a line in the regulatory buffer of a stream or river that flows with greater than 5 cfs. There are numerous streams throughout the study area. Information was obtained from the U.S. Geological Survey.



## Low Suitability (8.7): Wetlands

Wetlands have a low suitability value for locating transmission lines in the Natural Environment of the Kentucky Siting Model. There are numerous wetlands areas throughout the Study Area. Information was obtained from the U.S. Geological Survey.



# 4. Public Lands

Available datasets have no records of the following features in the Study Area:

- Wildlife Management Areas (not state-owned);
- U.S. Forest Service (proclamation area);
- Other conservation land;
- U.S. Forest Service (actually owned); and
- State-owned conservation land.

# 5. Land Cover

Figure 16 below shows land cover in the Study Area.

# FIGURE 16: Land Cover in Study Area



#### High Suitability (1.0): Developed Land

In the Natural Environment, which is concerned with protecting water resources, plants and animals, the Kentucky Siting Model finds developed land to be highly suitable for transmission lines. It should be noted that this value is offset to a certain degree by some of the feature suitability values in the Built Environment, which is concerned with protecting people places. Developed lands in Figure 16 on Page 37 include apartment/high-density, commercial/industrial, residential, etc. Most developed land is concentrated along the I-75 corridor in the Study Area, particularly in the vicinity of Richmond on the southern edge. Residential land makes up just under 5 percent of the Study Area acreage. This information was obtained from aerial photography analysis conducted by Photo Science Inc.

#### Moderate Suitability (4.6): Agriculture

In the Natural Environment of the Kentucky Siting Model, agricultural land is deemed moderately suitable for transmission lines. There is a significant amount of agricultural land in the Study Area. Agricultural land in Figure 15 includes horse farms, other livestock and row crops. Agricultural land for livestock constitutes most of the land within the Study Area, nearly 58 percent. It is particularly concentrated in the central portion of the Study Area on both sides of the I-75 corridor. This information was obtained from aerial photography analysis conducted by Photo Science Inc.

#### Low Suitability (9.0): Forests

In the Natural Environment, forested land is considered unsuitable for locating transmission lines. There is a significant amount of forested land in the Study Area with particular concentrations in the eastern tip and along the northwestern edge. Forested land makes up approximately 29 percent of the Study Area. This information was obtained from aerial photography analysis conducted by Photo Science Inc.

# 6. Wildlife Habitats

## Low Suitability (9.0): Species of Concern

In the Natural Environment of the Kentucky Siting Model, habitats for species of concern have low suitability for locating transmission lines. Such habitats encompass a large portion of the Study Area. Data was obtained from Kentucky GAP Analysis.



# 7. Natural Environment Data Layer Weights

The Natural Environment data layers and their relative weights are summarized in Table 8 below.

TABLE 8: Natural EnvironmentData Layers and Relative Weights		
Layer	Weight	
Floodplain	4.6%	
Streams/Wetlands	29.2%	
Public Lands	17.7%	
Land Cover	19.8%	
Wildlife Habitat	28.7%	

## 8. Natural Environment Alternative Corridors

When the "least-cost path" algorithm was applied to the available datasets in the Natural Environment, the result was the Natural Environment Alternative Corridors displayed in Figure 17 below. The corridor follows the same general path as the Engineering Alternative Corridor, with some exceptions. On the eastern end, coming out of Smith Substation, there are two options following separate existing transmission lines. The southern option follows the Smith-Fawkes corridor. The northern options follows an existing line west for a short distance, then breaks away to cross the Kentucky River and join the Smith-Fawkes corridor. In the area north of Richmond and east of I-75, the corridor splits into two options that are fairly close together, and those join together again in the vicinity of Fawkes Substation. West of I-75, there is a southern option that splits from the main corridor at Richmond and does not follow an existing transmission line corridor. It appears this option was generated because of forested land that is located in the center of the study area close to the co-location corridor to the north. (The Natural Environment model gives forested land the lowest suitability value of 9.)



#### **FIGURE 17: Natural Environment Alternative Corridors**

# **PART VII: BUILT ENVIRONMENT**

## 1. Avoidance Areas

#### Avoidance Area: Listed Archaeology Sites and Districts

There are 40 listed archaeological sites within the Study Area. A map of these sites is not presented here because of disclosure concerns. Nevertheless, this information was considered as part of the mapping process. Information about the sites was obtained from the Kentucky State Historic Preservation Office.

#### Avoidance Area: Listed National Register of Historic Places Districts

There are two historic districts in the Study Area that are listed on the National Register of Historic Places. They are Fort Boonesboro Townsite, located on the northeastern edge of the Study Area and West Richmond Historic District located on the southeastern edge. Information was obtained from the Kentucky State Historic Preservation Office.



#### Avoidance Area: Listed National Register of Historic Places Sites

There are 47 sites in the Study Area that are listed on the National Register. For a full list of sites, see Page 42. Information was obtained from the Kentucky State Historic Preservation Office.



Sites listed on the National Register of Historic Places that are in the Smith-West Garrard Study Area include:

- Andrew Bogie House
- Arlington/Hanger-Arnold House
- Barlow House
- Blair Park/Singleton P. Walters House
- Bonta-Owsley House
- Brock House
- Brutus & Pattie Field Clay House
- Bryantsville Bank & Post Office
- Bryantsville Methodist Church
- Burnamwood/William Embry House
- Chenault House
- Dozier-Guess House
- Dunn--Watkins House
- Gulley Farm
- Hawkins/Stone/Hagen/Curtis House
- Homelands (Samuel Bennett House)
- Isaac Newland House
- James Bogie House (ruins)
- James Smith Tanyard
- John Floyd House
- John Hutcherson House
- John Leavell House (Spring Garden)
- John Leavell Quarters (Spring Garden)
- Mount Pleasant Christian Church
- Nathan Hawkins House
- Paris Teater House
- Parke-Moore House
- Ray House
- Rolling Meadows
- Samuel Karr House
- Sebastian Log House
- Smith Thompson Log House
- Stapp Homelace

- Stephen Murphy House
- Stephenson House
- Tates Creek Baptist Church
- Taylor House
- Tevis House (Sleepy Hollow)
- Thomas Bogie House & Mill Site (ruins)
- Turner / Fitzpatrick House
- Turner House
- Walden Place
- Walker House
- White Hall
- Whitney Cobb Place
- William Parks House
- William Teater House

## Avoidance Areas: City/County Parks, Day Care, Cemetery, School and Church Parcels

City & county parks, day cares, cemeteries, schools and churches are all considered avoidance areas in the Built Environment. There are records of approximately 100 such parcels in the available datasets. Information was developed by Photo Science Inc. from data available from public sources and from analysis of aerial photography.



## 2. Proximity to Buildings

In the Built Environment of the Kentucky Siting Model, it is considered more suitable to locate transmission lines farther away from buildings. The model has five categories for proximity to buildings. These are listed below in Table 9, along with their respective suitability values. Background constitutes all areas that are farther than 1,200 feet from a building. Structure locations are presented in the map at right. Buildings are particularly concentrated along the I-75 corridor and around Richmond. This information was developed by Photo Science Inc. from analysis of aerial photography.



TABLE 9: Suitability, Proximity to Building			
	Suitability Value		
Distance from building	from Model	Suitability	
0-300 feet	9.0	Low	
300-600 feet	8.0	Low	
600-900 feet	5.7	Moderate	
900-1,200 feet	3.4	High	
Background	1.0	High	

# 3. Building Density

In the Built Environment of the Kentucky Siting Model, transmission lines are more suitable in areas of lower building density. The model features five categories of building density, summarized in Table 10 below. Figure 18 shows building density categories mapped within the Study Area. Areas of higher density tend to occur around Richmond and near the I-75 corridor. This information was developed by Photo Science Inc. from analysis of aerial photography.

TABLE 10: Suitability, Building Density		
	Suitability Value	
Building Density	from Model	Suitability
0-0.05 buildings/acre	1	High
0.05-0.2 buildings/acre	3	High
0.2-1.0 building/acre	5.6	Moderate
1-4 buildings/acre	8.5	Low
>4 buildings/acre	9	Low

## FIGURE 18: Building Density in Study Area



# 4. Proposed Development

## Low Suitability (9.0): Proposed Development

According to the Kentucky Siting Model, areas of proposed development are deemed in the have low suitability for locating transmission lines. In the Study Area, these locations tend to be concentrated near the I-75 corridor. Data was obtained from local planning/zoning officials and from aerial photography.



# 5. Spannable Lakes and Ponds

## Low Suitability (9.0): Spannable Lakes and Ponds

The Built Environment of the model considers spannable lakes and ponds unsuitable for locating transmission lines. There are numerous lakes and ponds dotted throughout the Study Area. This information was obtained from the U.S. Geological Survey National Hydrography Dataset.



## 6. Land Use

Compared to other land uses, the Built Environment of the Kentucky Siting Model considers commercial/industrial tracts and cropland most suitable for locating transmission lines. Residential areas and horse farms are least suitable in the Built Environment of the model. See Table 11 below for a summary of land-use suitability values as determined in the model.

TABLE 11: Suitability, Land Uses		
	Suitability Value	
Land Use	from Model	Suitability
Commercial/Industrial	1.0	High
Agriculture (crops)	3.5	High
Agriculture (other livestock)	4.6	Moderate
Silviculture	6.0	Moderate
Other (forest)	6.7	Moderate
Agriculture (horse farms)	8.0	Low
Residential	9.0	Low

Figure 19 on Page 47 shows land uses in the Study Area. Commercial/industrial tracts are concentrated for the most part in a small area near I-75 in the vicinity of Richmond. Cropland is scattered throughout the Study Area, occurring with greater frequency in the western half. Residential tracts tend to be concentrated near I-75 and Richmond. The most common land use in the Study Area is agriculture (other livestock). Forested land also is common. This information was developed by Photo Science Inc. from analysis of aerial photography, and from other public sources.



# FIGURE 19: Land Use in Study Area

## 7. Proximity to Eligible Historic and Archaeological Sites

The Built Environment of the model considers the proximity of a transmission line to sites that are eligible to be listed on the National Register of Historic Places. Generally, the closer the line would be to the site, the less suitable it is considered. The model features four proximity categories, plus background, which is considered any feature outside of the four proximity categories. Table 12 below summarizes the categories and their suitability values. Because of disclosure concerns, the map at right does <u>not</u> include archaeological sites. Nevertheless, those locations were included as part of the suitability surface mapping process



that produced the alternative corridors for the Built Environment. This information was obtained from the Kentucky State Historic Preservation Office.

TABLE 12: Suitability, Proximity to Eligible and ArchaeologicalSites		
Distance from site	Suitability Value from Model	Suitability
Background	1.0	High
900-1,200	4.6	Moderate
600-900	7.9	Low
300-600	9.0	Low
0-300	8.6	Low

# 8. Built Environment Data Layer Weights

The Built Environment data layers and their relative weights are summarized in Table 13 below. There were no proposed developments as defined in the model within the available datasets for this Study Area.

TABLE 13: Built Environment		
Data Layers and Relative Weights		
Layer	Weight	
Proximity to Buildings	16.8%	
Building Density	8.4%	
Proposed Development 3.9%		
Spannable Lakes & Ponds 4.0%		
Land Use 35.9%		
Proximity to Eligible 31.0%		
Historic and Arch. Sites		

# 9. Built Environment Alternative Corridors

Figure 20 below displays the Built Environment Alternative Corridors. Beginning at Smith Station in the east, the "least-cost path" alternative corridors for the Built Environment generally follow the corridor of the existing Smith-Fawkes 138-kV line to a point near I-75 north of Richmond. From there, the Built Environment corridor widens and goes "over land" to a KU 138-kV line, then to EKPC's Newby-Lancaster 69-kV line. From a point several miles northeast of Lancaster, the Built Environment Alternative Corridor offers numerous alternatives for splitting from the Newby-Lancaster corridor and traveling to the West Garrard Substation site.



**FIGURE 20: Built Environment Alternative Corridors** 

# PART VIII: AVERAGE ALTERNATIVE CORRIDOR

# 1. Suitability Surface Map

After generating an Alternative Corridor for each environment, an average corridor is generated. This is accomplished by applying the "least-cost path" algorithm and averaging the suitability values and data layer weights to develop a suitability score for each grid cell on the surface of the Study Area, with a minimum ground resolution of 15 meters. The resulting suitability surface map is displayed below in Figure 21. Areas displayed in red are least suitable, while areas displayed in green are most suitable.



FIGURE 21: Suitability Surface Map, Smith-West Garrard Study Area

## 2. Description of Simple Average Alternative Corridor

By taking the top (or most suitable) 3 percent of possible routes across this suitability surface from one endpoint to the other, an average Alternative Corridor is produced. This is the final Alternative Corridor. It is displayed in Figure 22 below. This Alternative Corridor begins at Smith Substation on the eastern end of the Study Area and follows the existing EKPC 138-kV Smith-Fawkes line to the west. At Richmond, near I-75, the corridor leaves the existing transmission line corridor, widens and goes southwest to join 138-kV transmission line owned by Kentucky Utilities. The corridor follows that line to the Newby Substation, then pick up the corridor of EKPC's existing Newby-Lancaster transmission line, which runs southwest to just east of Lancaster. From there, the corridor again widens and heads west to the site of the West Garrard substation.

Table 14 on Page 53 details land uses within each environment's Alternative Corridor and within the simple average Alternative Corridor.



#### FIGURE 22: Simple Average Alternative Corridor

<b>TABLE 14: Land-Use A</b>	cres, Envii	ronment	& Average	Alternat	ive Corrid	ors		
Land Use	Average Aci	Corridor res	Built Corr	idor Acres	Engin Corrido	eering 17 Acres	Natural ( Ac	Corridor res
Apartment/High Density	0.04	0.00%	0.03	0.00%	0.35	0.00%	0.57	0.01%
Commercial/Industrial	0.87	0.01%	0.03	0.00%	1.06	0.01%	32.11	0.33%
Forested	1,434.53	18.71%	2,088.86	19.96%	1,948.54	21.44%	1,553.39	16.20%
Hydrography	42.06	0.55%	57.22	0.55%	55.98	0.62%	68.95	0.72%
Other	4.55	0.06%	16.19	0.15%	6.04	0.07%	11.16	0.12%
Other Livestock	5,286.55	68.97%	7,383.32	70.56%	6,014.21	66.17%	6,822.54	71.15%
Planted Pine	25.30	0.33%	26.51	0.25%	30.84	0.34%	24.97	0.26%
Recreational	0.81	0.01%	0.00	0.00%	1.02	0.01%	0.00	0.00%
Residential	85.37	1.11%	106.58	1.02%	102.13	1.12%	209.60	2.29%
Road ROW	58.71	0.77%	78.57	0.75%	79.04	0.87%	112.03	1.17%
Row Crop	474.05	6.18%	439.85	4.20%	558.58	6.15%	472.66	4.93%
Transportation	40.22	0.52%	43.57	0.42%	50.06	0.55%	78.83	0.82%
Utility R/W	212.08	2.77%	223.61	2.14%	240.86	2.65%	201.97	2.11%
TOTAL	7,665.13		10,464.33		9,088.68		9,588.78	

BLE 14: Land-Use Acres. Environment & Average Alternative Corridors

# **PART IX: REFERENCES**

- "EPRI-GTC Overhead Electric Transmission Line Siting Methodology," Electric Power Research Institute & Georgia Transmission Corp., February 2006
- "Kentucky Transmission Line Siting Model," draft report, Photo Science Inc., April 2006.

# **Selection of Preferred Route**

# Smith to West Garrard 345-kV Transmission Project

East Kentucky Power Cooperative

December 2006

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# APPENDICES

Appendix A: Public Comments from RUS Scoping Appendix B: Questionnaire responses from Open House Appendix C: Summary of Open House comments and EKPC response

# **PART I: INTRODUCTION**

This report is an extension of the June 2006 report titled "Macro-Corridor Study: Smith to West Garrard 345-kV Transmission Project" ("Macro-Corridor Study") prepared by East Kentucky Power Cooperative (EKPC) and submitted to the Rural Utilities Service (RUS) as part of the EKPC's compliance with the National Environmental Policy Act and related regulations.

The Macro-Corridor Study documents the stages of routing that were undertaken to analyze project area data and develop a macro corridor and alternative corridors for the Smith to West Garrard 345-kV project. The report describes the development of a built environment alternative corridor, a natural environment alternative corridor, an engineering environment alternative corridor and simple average alterative corridor.

These corridors were generated using a routing methodology developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC). It is referred to in this report as the EPRI-GTC methodology. This methodology has been adapted for use in Kentucky with the Kentucky Siting Model, which is described in the Macro-Corridor Study. Figure 1 below is a graphical representation of the steps in the EPRI-GTC routing methodology.



FIGURE 1: EPRI-GTC Routing Methodology

This report, titled "Selection of Preferred Route: Smith to West Garrard 345-kV Transmission Project," documents the steps taken by EKPC to begin with the Macro-Corridor Study results, develop viable alternative routes and select a final preferred route using the EPRI-GTC methodology.

# **PART II: ALTERNATIVE CORRIDORS**

On July 11, 2006, RUS conducted a public scoping meeting in Richmond, Ky., to solicit information and gather comments for the preparation of an Environmental Assessment of this project. Approximately 25 people attended the scoping meeting. Maps of Alternative Corridors, which were generated by the EPRI-GTC routing model as documented in the Macro-Corridor Study, were presented at that scoping meeting. Copies of the Macro-Corridor Study were made available for public review and comment during and after this meeting and at public libraries in Clark, Garrard and Madison counties. Personnel from RUS and EKPC were available to solicit comments and answer questions. Appendix A contains copies of the public comments submitted to RUS during the scoping meeting and during the subsequent comment period.

Figures 2 through 4 display the Alternative Corridors that were developed for each of the three environments, as described in the Macro-Corridor Study. Figure 5 on page 5 displays the Simple Average Alternative Corridor. Figure 6 on page 5 overlays the corridors from the three environments and the Simple Average Corridor in order to create a single combined alternative corridor.



#### **FIGURE 2: Built Environment Alternative Corridors**


FIGURE 3: Natural Environment Alternative Corridors

FIGURE 4: Engineering Environment Alternative Corridors







FIGURE 6: Combined Alternative Corridors



## **PART III: ALTERNATIVE ROUTE CORRIDORS**

Two independent teams of transmission line professionals from EKPC analyzed aerial photography, topographic maps, windshield field survey information, and GIS data collected in conjunction with the EPRI/GTC model to further examine the Alternative Corridors identified in Part II of this report.

These are some typical features examined by these teams.

- Opportunities for co-locating with existing lines are considered.
- Potential road crossings are examined to ensure that a crossing is possible under Department of Transportation guidelines.
- Potential stream and river crossings are evaluated to ensure they would meet the requirements of the applicable regulatory agencies.
- Potential angle points are evaluated to verify that the slope and terrain would accommodate construction of a structure.
- Potential proximity to residential, commercial, industrial and agricultural buildings.
- Existing linear features, such as fences or property lines, are taken into account.
- Land use (residential, agricultural, commercial or industrial) is evaluated.
- Properties that are listed on the National Register of Historic Places GIS database as provided by the National Park Service, and locations provided by the Kentucky Heritage Council are identified and taken into consideration.

Using this information, each team developed Alternative Route Corridor Centerlines within the previously established Alternative Corridors. For this project, some portions of the Alternative Route Corridor Centerlines fell outside of the Alternative Corridors. However, this occurred only in instances where portions of affected parcels of property were already included in the Alternative Corridors. These approximate centerlines were not intended to become the final centerline, but only serve as a basis for the formation of the Alternative Route Corridors to be presented to the public in order to gather more detailed routing information and comment.

Figures 7 and 8 on page 7 display separately the Alternative Route Corridor Centerlines generated by each team. Figure 9 on page 8 overlays the Alternative Route Corridor Centerlines generated by both of EKPC's independent routing teams.



FIGURE 7: Alternative Route Corridor Centerlines, As Identified by Team 1

FIGURE 8: Alternative Route Corridor Centerlines, As Identified by Team 2





FIGURE 9: Alternative Route Corridor Centerlines, Both Teams

After developing the Alternative Route Corridor Centerlines independently, the routing teams met to discuss the centerlines they had developed, and to combine their efforts into one set of route corridor centerlines. The resulting Merged Alternative Route Corridor Centerlines are displayed in Figure 10 below.





The Merged Alternative Route Corridor Centerlines were the basis for the Alternative Route Corridors, which were presented to property owners and the public during open houses conducted by EKPC in August 2006. Beginning with the Merged Alternative Route Corridor Centerlines, the Alternative Route Corridors were formed by expanding the centerlines to one-half mile wide corridors on greenfield segments and 1,000 feet wide corridors on segments co-located with existing transmission lines. ("Greenfield" refers to segments of proposed line that would be constructed where electric transmission lines do not currently exist.) Figure 11 below shows the Alternative Route Corridors.

#### FIGURE 11: Smith-West Garrard Alternative Route Corridors



## **PART IV: ALTERNATIVE ROUTES**

EKPC hosted two public open houses to collect more information about the Alternative Route Corridors and to provide information about the project to the public. The first was on Aug. 29, 2006, in Lancaster, Ky., and the second on August 31, 2006, in Richmond, Ky. Using information from county Property Valuation Administrators, EKPC identified the names and addresses of the owners of property parcels crossed by the Alternative Route Corridors. Property owners were mailed letters to inform them their property could be affected by this project and to invite them to attend the open houses. These letters also contained a detailed packet of information about the proposed project, including a map of the Alternative Route Corridors. In addition, EKPC's open houses were advertised in newspapers of general circulation in Clark, Garrard and Madison counties. These newspaper advertisements included a map of the Alternative Route Corridors.

At the open houses, EKPC personnel were present to solicit information from individuals concerning the proposed Alternative Route Corridors and to answer questions about the project. Attached as Appendix B is a compilation of comments received at the two open houses hosted by EKPC.

Following the open houses, EKPC personnel met to further refine the Alternative Route Corridors into route segments, taking into account the information that was gathered at the open houses. Appendix C contains a list of corresponding actions or responses by EKPC to determine the final route segment locations. Figure 12 on page 12 displays the centerlines of the merged route corridors and the final route segments based on the information gathered at the open houses.



FIGURE 12: Adjusted Alternative Route Corridor Centerlines

After taking into account all centerline segments, a total of 16 possible Alternative Routes were evaluated using the EPRI-GTC model, as well as the extra steps by EKPC to incorporate public comment. This evaluation included all feasible routes connecting the line segments displayed in Figure 12 above.

Figure 13 on page 13 displays the Alternative Routes that were evaluated. An "r" in the route name indicates a route that would involve rebuilding segments 10 and/or 12 rather than paralleling these segments.



FIGURE 13: Alternative Routes Evaluated by EKPC

### **PART V: ALTERNATIVE ROUTE COMPARISON**

The EPRI-GTC Route Evaluation Model applies a statistical comparison to Alternative Routes based on predefined weighted criteria. These comparisons focus on the Built, Natural, and Engineering Environments. Separate comparisons are conducted placing emphasis on each of these three environments. Then, a separate comparison is conducted equally balancing the environments. Thus, there are four statistical comparisons conducted for each of the routes. Table 2 on page 16 displays the criteria used in evaluating routes. Each of the three environments displayed is weighted equally, and each criterion contained within each environment has its own weighting applied within that environment. If there are no features associated with a criterion for all alternative routes, then the associated weighting is distributed proportionately across the other criteria within that environment.

The tables on the following pages summarize the results of the complete statistical analysis of the 16 routes that were scored using the EPRI-GTC routing methodology. Table 1 on page 15 summarizes cost estimates associated with each of the routes, taking into account the line length for single-circuit or double-circuit construction, line angles, clearing costs and easement costs.

This data was then transferred to Table 2 on page 16. This table summarizes the features identified for each criterion on each of the alternative routes, as well as the normalization of this data. Normalization is a statistical process that fits a wide range of data into a scale of values between 0 and 1 for comparison purposes. A relatively lower normalized score for a route indicates a relatively higher suitability for a transmission line along that route. After normalizing the data, a comparison was conducted based on the weightings identified for each of the criteria. As noted earlier, weightings for any criteria not represented by a feature within an alternative route are distributed across the other items within the categories. This occurs in both the Built and Natural Environments where instances of residences within the right-of-way, proximity to industrial buildings, proximity to special parcels, and wetland acres were not identified in any of the routes. As a result, the weightings of these criteria are distributed proportionately across the other criteria.

Four comparisons were conducted. Each of the first three comparisons put a "five times" emphasis on a different environment. The fourth comparison, the Simple Average Comparison, weighted the three environments equally. Tables 3, 4, 5, and 6 show the scoring of each of the routes with the respective weightings. Table 7 on page 26 is a composite summary showing the scores of each route in all the environments and averaged.

Because the Simple Average Comparison places equal weighting on each of the environments, the top three routes from the simple average comparison were analyzed in the Expert Judgment phase. The top three alternative routes analyzed in the Expert Judgment phase were Gr, Er, and Hr. They are shown in Figure 14 on page 27.

	ROUTE A	ROUTE B	ROUTE C	ROUTE D	ROUTE E	ROUTE F	ROUTE G	ROUTE H
FNGTH	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Single Circuit Length	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Cost ner Single Circuit Length	\$34.272,000	\$34,752,000	\$34,464,000	\$34,944,000	\$33,888,000	\$34,368,000	\$33,696,000	\$34,176,000
Double Circuit Length	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cost per Double Circuit Length	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
							-	
Angle Cost	\$505,000	\$590,000	\$535,000	\$620,000	\$505,000	\$590,000	\$485,000	\$570,000
Forested Acres	132.2	130.9	133.4	132.1	139.8	138.4	132.8	131.4
Clearing Cost	\$317,280	\$314,160	\$320,160	\$317,040	\$335,520	\$332,160	\$318,720	\$315,360
No. of Parcels	144.0	155.0	146.0	157.0	132.0	143.0	132.0	143.0
Property Cost	\$1,224,351	\$1,318,378	\$1,230,124	\$1,324,151	\$1,334,998	\$1,334,698	\$1,234.227	\$1,328,251
Total	\$36,318,631	\$36,974,538	\$36,549,284	\$37,205,191	\$36,063,518	\$36,624,858	\$35,733,947	\$36,389,611

**TABLE 1: Estimated Costs Associated With Alternative Routes** 

	ROUTE Ar	ROUTE Br	ROUTE Cr	ROUTE Dr	ROUTE Er	ROUTE Fr	ROUTE Gr	ROUTE Hr
ENGTH	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Single Circuit Length	27.8	24.2	28.0	24.4	27.4	23.8	27,4	23.8
Cost ner Single Circuit Length	\$26.688.000	\$23,232,000	\$26,880,000	\$23,424,000	\$26,304,000	\$22,848,000	\$26,304,000	\$22,848,000
Double Circuit Length	7.9	12.0	7.9	12.0	7.9	12.0	7.7	11.8
Cost ner Double Circuit Lenath	\$8,934,900	\$13,572,000	\$8,934,900	\$13,572,000	\$8,934,900	\$13,572,000	\$8,708,700	\$13,345,800
Andle Cost	\$565,000	\$700,000	\$595,000	\$730,000	\$565,000	\$700,000	\$545,000	\$680,000
Forested Acres	107.6	99.9	108.8	101.1	115.2	107.5	109.0	101.2
Clearing Cost	\$258,240	\$239,760	\$261,120	\$242,640	\$276,480	\$258,000	\$261,600	\$242,880
No of Parcels	144.0	155.0	146.0	157.0	132.0	143.0	132.0	143.0
Property Cost	\$1,057,345	\$979,321	\$1,063,006	\$984,982	\$1,073,665	\$995,641	\$1,074,265	\$996,241
Fotal	\$37,503,485	\$38,723,081	\$37,734,026	\$38,953,622	\$37,154,045	\$38,373,641	\$36,893,565	\$38,112,921

Built	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Feature	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	0	0	0	0	0	0	0	0
Weighted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proximity to Residences (300')	36	48	37	49	33	45	30	42
Weighted	0.3	0.9	0.4	1.0	0.2	0.8	0.0	0.6
Proposed Residential Developments	ε	2	e	2	e	2	3	2
Weighted	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
Proximity to Commercial Buildings (300')	-	з	0	2	0	2	0	2
Weighted	0.3	1.0	0.0	0.7	0.0	0.7	0.0	0.7
Proximity to Industrial Buildings (300')	0	0	0	0	0	0	0	0
Weighted	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0
School, DayCare, Church, Cemetery, Park Parcels (#)	0	0	0	0	0	0	0	0
Weighted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	<b>y</b> art	2	0	F	0	-	0	-
	0.5	1.0	0.0	0.5	0:0	0.5	0.0	0.5
Natural								
Natural Forests (Acres)	132.2	130.9	133.4	132.1	139.8	138.4	132.8	131.4
Weighted	0.8	0.8	0.8	0.8	1.0	1.0	0.8	0.8
Stream/River Crossings	54	53	54	53	50	49	51	50
Weighted	1.0	0.8	1.0	0.8	0.2	0.0	0.4	0.2
Wetland Areas (Acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Weighted	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0
Floodplain Areas (Acres)	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
Weighted	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Engineering								
Miles of Rebuild with Existing T/L <sup>*</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Weighted	0.0	0.0	0:0	0.0	0.0	0.0	0:0	0.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Miles of Co-location with Existing T/L*	23.7	27.8	25.2	29.3	23.4	27.5	22.5	26.6
Weighted	0.6	0.9	0.7	1.0	0.6	0.9	0.5	0.8
	0.4	0.1	0.3	0.0	0.4	0.1	0.5 .	0.2
Total Project Costs	\$36,318,631	S36,974,538	\$36,549,284	\$37,205,191	\$36,063,518	\$36,624,858	S35,733,947	\$36,389,611
Weighted	0.2	0.4	0.3	0.5	0.1	0.3	0.0	0.2

TABLE 2: Alternative Route Features and Normalized Comparisons (cont'd on page 17)

Built	Route A r	Route B r	Route C r	Route D r	Route E r	Route F r	Route G r	Route H r
Feature	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	0	0	0	0	0	0	0	0
Weithted	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0:0
Proximity to Residences (300')	36	48	37	49	33	45	30	42
Weighted	0.3	0.9	0.4	1.0	0.2	0.8	0.0	0.6
Proposed Residential Developments	ო	2	ĸ	2	e	2	З	2
Weighted	1.0	0.0	1.0	0:0	1.0	0.0	1.0	0.0
Proximity to Commercial Buildings (300')	-	ß	0	2	0	2	0	2
Weighted	0.3	1.0	0.0	0.7	0.0	0.7	0.0	0.7
Proximity to Industrial Buildings (300')	0	0	0	0	0	0	0	0
Weighted	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0
School. DavCare, Church, Cemetery, Park Parcels (#)	0	0	0	0	0	0	0	0
Weighted	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	-	0	0	-	0	-	0	
	0.5	1.0	0.0	0.5	0.0	0.5	0.0	0.5
Natural								
Natural Forests (Acres)	107.6	99.9	108.8	101.1	115.2	107.5	109.0	101.2
Weighted	0.2	0.0	0.2	0.0	0.4	0.2	0.2	0.0
Stream/River Crossings	54	53	54	53	50	49	51	50
Weighted	1.0	0.8	1.0	0.8	0.2	0.0	0.4	0.2
Wetland Areas (Acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Weighted	0:0	0.0	0:0	0.0	0.0	0.0	0.0	0.0
Floodplain Areas (Acres)	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
Weighted	0.0	0.0	0.0	0.0	0.0	0:0	0:0	0.0
Engineering								
Miles of Rebuild with Existing T/L <sup>-</sup>	7.9	12.0	7.9	12.0	7.9	12.0	7.7	11.8
Weighted	0.7	1.0	0.7	1.0	0.7	1.0	0.6	1.0
	0.3	0:0	0.3	0.0	0.3	0.0	0.4	0:0
Miles of Co-location with Existing T/L*	15.8	15.8	17.3	17.3	15.5	15.5	14.8	14.8
Weighted	0.1	0.1	0.2	0.2	<u> </u>	0.0	0.0	0.0
	0.9	0.9	0.8	0.8	1.0	1.0	1.0	1.0
Total Project Costs	S37,503,485	S38,723,081	\$37,734,026	S38,953,622	S37,154,045	S38,373,641	I \$36,893,565	S38,112,921
Weighted	0.5	0.9	0.6	1.0	0.4	0.8	0.4	0.7

TABLE 2: Alternative Route Features and Normalized Comparisons (cont'd from page 16)

Built	72%	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Feature		Unit							
Residences within the ROW	0.0%	0.00	00:00	0.00	00:0	0.00	0:00	0.00	0.00
Weighted		0.00	00:00	0.00	0:00	0.00	0.00	0.00	0:00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0.43	0.07	0.34	0:00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0.00	0.10	0.00	0.10	0:00	0.10	0:00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0:00	0.05	0:00	0.05	0.00	0.05
Proximity to Industnal Buildings (300')	0.0%	0.00	0:00	0:00	0:00	00.0	0:00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0:00	0:00	0.00	0:00
School, DayCare, Church, Cemetery, Park Parcels (#)	0.0%	0:00	0.00	0.00	0:00	0:00	0:00	0:00	0.00
Weighted		0.00	0.00	0.00	0:00	0:00	0:00	0.00	0:00
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/M)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	0.00	0.20	00.0	0.20	00'0	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL	A MANAGARANA AN	0.33	0.63	0.19	0.49	0.12	0.42	0.07	0.37
Natural	14%								
Natural Forests (Acres)	73.4%	0.81	0.78	0.84	0.81	1.00	0.96	0.82	0.79
Weighted	Statements of the second	0.59	0.57	0.62	0.59	0.73	0.71	0.61	0.58
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0:00	0.08	0.04
Wetland Areas (Acres)	0.0%	0.00	0:00	0:00	0:00	0:00	0:00	0.00	0:00
Weighted		0.00	0:00	0.00	00.0	0:00	0:00	0.00	0.00
Floodplain Areas (Acres)	6.0%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weighted		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	100.0%	0.86	0.80	0.88	0.82	0.84	0.77	0.75	0.68
WEIGHTED TOTAL		0.12	0.11	0.12	0.11	0.12	0.11	0.10	01.0
Engineering	14%								
Miles of Rebuild with Existing T/L*	33.3%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weighted		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Miles of Co-location with Existing T/L.	52.7%	0.39	0.10	0.28	0.00	0.41	0.12	0.47	0.19
Weighted		0.20	0.05	0.15	0.00	0.21	0.07	0.25	0.10
Total Project Costs	14.0%	0.18	0.39	0.25	0.46	0.10	0.28	0.00	0.20
Weighted		0.03	0.05	0.04	0.06	0.01	0.04	0.00	0.03
TOTAL	100.0%	0.56	0.44	0.52	0.40	0.56	0.44	0.58	0.46
WEIGHTED TOTAL		0.08	0.06	0.07	0.06	0.08	0.06	0.08	0.06
SUM OF WEIGHTED TOTALS		0.53	0.80	0.38	0.66	0.32	0.59	0.26	0.53
ANK		5	16	9	14	4	12	2	11

TABLE 3: Built Environment (cont'd on page 19)

Built	72%	Route A r	Route B r	Route C r	Route D r	Route E r	Route Fr	Route G r	Route H r
Feature		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	0.0%	0.00	0.00	0:00	0.00	0.00	0.00	0:00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0:00	0.00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0,43	0.07	0.34	0:00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0:00	0.10	0:00	0.10	0.00	0.10	0.00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0.00	0.05	0.00	0.05	0.00	0.05
Proximity to Industrial Buildings (300)	0.0%	0.00	0.00	0:00	00'0	0.00	0.00	0.00	0.00
Weighted		0:00	0:00	0.00	00'0	0:00	0.00	0:00	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	0.0%	0:00	0.00	0:00	0.00	0.00	0:00	0.00	0:00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0:00
NRHP Listed'Eligible Strucs./Districts (1500' from edge of R/W)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
	A CONTRACTOR OF A CONTRACTOR A	0.20	0.39	0.00	0.20	0.00	0.20	0.00	0.20
	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.33	0.63	0,19	0.49	0.12	0.42	0.07	0.37
Natural	14%								
Natural Forests (Acres)	73.4%	0.19	0.00	0.22	0.03	0.38	0.19	0.23	0.03
Weighted		0.14	0.00	0.16	0.02	0.28	0.14	0,17	0.02
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0:00	0.08	0.04
Wetland Areas (Acres)	0.0%	00.0	0.00	0.00	0:00	0:00	0:00	0:00	0:00
Weighted		00.0	00:0	0.00	0.00	0.00	0:00	0.00	0.00
Floodplain Areas (Acres)	6.0%	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00
Weighted		0:00	0:00	0.00	00:0	0.00	0.00	0.00	0.00
TOTAL	100.0%	0.35	0.16	0.37	0.19	0.32	0.14	0.25	0.07
WEIGHTED TOTAL STATES STATES STATES		0.05	0.02	0.05	0.03	0.05	0.02	0.03	0.01
Engineering	14%								
Miles of Rebuild with Existing T/L*	33.3%	0.34	0.00	0.34	0.00	0.34	0.00	0.36	0.02
Weighted		0.11	0.00	0.11	0.00	0.11	0.00	0.12	0.01
Miles of Co-location with Existing T/L*	52.7%	0.93	0.93	0.83	0.83	0.95	0.95	1.00	1.00
Weighted		0.49	0.49	0.44	0.44	. 0.50	0.50	0.53	0.53
Total Project Costs	14.0%	0.55	0.93	0.62	1.00	0.44	0.82	0.36	0.74
Weighted		0.08	0.13	0.09	0.14	0.06	0.11	0.05	0.10
TOTAL	100.0%	0.68	0.62	0.64	0.58	0.68	0.62	0.70	0.64
VEIGHTED TOTAL		0.10	0.09	0.09	0.08	0.09	60.0	0.10	0.09
SUM OF WEIGHTED TOTALS		0.48	0.74	0.33	0.59	0.26	0.53	0.21	0.47
AANK		80	15	a	13	ю	6	-	2

TABLE 3: Built Environment (cont'd from page 18)

	14%	Route A	Route B	Route C	Route D	Route E	Route F	.Route G	Route H
France		Unit	Unit						
Residences within the ROW	0.0%	0:00	0:00	00:00	0.00	0.00	0:00	0.00	0.00
Workhood		0.00	0:00	0:00	0.00	0.00	0:00	0.00	0.00
Provimity to Besidences (300")	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Whichted		0.14	0.41	0.16	0.43	0.07	0.34	0.00	0.27
Pronosed Besidential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Volced Treatent Concerns		0.10	0.00	0.10	0:00	0.10	0.00	0.10	0.00
Provimity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
		0.02	0.07	0:00	0.05	0.00	0.05	0:00	0.05
Proximity to Industrial Buildings (300')	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0:00	0.00
Wolchkrod		0:00	00.0	0.00	00.00	0:00	0.00	0.00	0.00
School DavCare Church Cemetery Park Parcels (#)	0.0%	0.00	0.00	0.00	0:00	0:00	0.00	0:00	0.00
Weighted		0.00	0.00	0:00	0:00	0.00	0.00	0.00	0.00
NRHP Listed/Eligible Strucs./Districts 11500° from edge of B/W)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	0.00	0.20	0.00	0.20	0:00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.06	0.12	0.04	0.09	0.02	0.08	0.01	0.07
Natiral	72%								
Natural Forests (Acres)	73.4%	0.81	0.78	0.84	0.81	1.00	0.96	0.82	0.79
Wainhod		0.59	0.57	0.62	0.59	0.73	0.71	0.61	0.58
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weinhted		0.21	0.16	0.21	0.16	0.04	00.00	0.08	0.04
Wetland Areas (Acres)	0.0%	0:00	0.00	00.00	0:00	00.00	0.00	0.00	0:00
Weinhled		0:00	0.00	0.00	0:00	0:00	0:00	0.00	0:00
Flondhlain Areas (Acres)	6.0%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Wainhod		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
TOTAL	100.0%	0.86	0.80	0.88	0.82	0.84	0.77	0.75	0.68
WEIGHTED TOTAL		0.62	0.57	0.64	0.59	0.60	0.55	0.54	0.49
Engineering	14%								
Miles of Rebuild with Existing T/L.	33.3%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Woinhood		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Miles of Co-location with Existing T/L	52.7%	0.39	0.10	0.28	0.00	0.41	0.12	0.47	0.19
Weithtood		0.20	0.05	0.15	0.00	0.21	0.07	0.25	0.10
Total Project Costs	14.0%	0.18	0.39	0.25	0.46	0.10	0.28	0.00	0.20
Weithhod		0.03	0.05	0.04	0.06	0.01	0.04	0.00	0.03
TOTAL	100.0%	0.56	0.44	0.52	0.40	0.56	0.44	0.58	0.46
WEIGHTED TOTAL		0.08	0.06	0.07	0,06	0,08	0.06	0.08	0.06
SUM OF WEIGHTED TOTALS		0.76	0.76	0.74	0.74	0.70	0.70	0.63	0.63
RANK		16	15	14	13	12	=	10	6

TABLE 4: Natural Environment (cont'd on page 21)

Built	14%	Route A r	Route B r	Route C r	Route D r	Route E r	Route F r	Route G r	Route H r
Feature		Unit							
Residences within the ROW	%0.0	0.00	0:00	0.00	0:00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	00.00	0:00	0:00	0.00	0.00	0.00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0.43	0.07	0.34	0:00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0.00	0.10	0.00	0.10	0.00	0.10	0.00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0.00	0.05	0.00	0.05	0.00	0.05
Proximity to Industrial Buildings (300')	0.0%	0.00	0:00	0.00	0.00	0:00	00.00	00:00	0:00
Weighted		0.00	0:00	0:00	0.00	0:00	0.00	0.00	0:00
School, DayCare, Church, Cemetery, Park Parcels (#)	0.0%	0.00	00.00	0.00	00.00	0:00	0.00	00.00	0.00
Weighted		0.00	00:00	0.00	0:00	0:00	0.00	0:00	0.00
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	0.00	0.20	0:00	0.20	0:00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.06	0.12	0.04	0.09	0.02	0.08	0.01	0.07
Natural	72%								
Natural Forests (Acres)	73.4%	0.19	00.00	0.22	0.03	0.38	0.19	0.23	0.03
Weighted		0.14	0:00	0.16	0.02	0.28	0.14	0.17	0.02
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0.00	0.08	0.04
Wetland Areas (Acres)	%0.0	0.00	0.00	0:00	0.00	0.00	0:00	00:00	00.00
Weighted		0.00	0.00	0:00	0.00	0:00	0.00	0.00	0.00
Floodplain Areas (Acres)	6.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0:00	0:00	0.00	00:00	0:00	0.00
TOTAL	100.0%	0.35	0.16	0.37	0.19	0.32	0.14	0.25	0.07
WEIGHTED TOTAL		0.25	0.12	0.27	0.13	0.23	0.10	0.18	0.05
Engineering	14%								
Miles of Rebuild with Existing T/L*	33.3%	0.34	0.00	0.34	0.00	0.34	0.00	0.36	0.02
Weighted		0.11	00.00	0.11	0.00	0.11	0.00	0.12	0.01
Miles of Co-location with Existing T/L*	52.7%	0.93	0.93	0.83	0.83	0.95	0.95	1.00	1.00
Weighted		0.49	0.49	0.44	0.44	0.50	0.50	0.53	0.53
Total Project Costs	14.0%	0.55	0.93	0.62	1.00	0.44	0.82	0.36	0.74
Weighted		0.08	0.13	0.09	0.14	0.06	0.11	0.05	0.10
TOTAL	100.0%	0.68	0.62	0.64	0.58	0.68	0.62	0.70	0.64
WEIGHTED TOTAL		0.10	0.09	0.09	0.08	0.09	0.09	0.10	0.09
SUM OF WEIGHTED TOTALS		0.41	0.33	0.39	0.31	0.35	0.27	0.29	0.21
BANK	-	œ	3	7	4	9	2	e	

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	14%	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Feature		Unit							
Residences within the ROW	%0.0%	0.00	0.00	0.00	0.00	0.00	0:00	0:00	0.00
Weinhted		0.00	0:00	0.00	0.00	0.00	0:00	0:00	0.00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weinhted		0.14	0.41	0.16	0.43	0.07	0.34	0.00	0.27
Pronosed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weinhted		0.10	0:00	0.10	0.00	0.10	0.00	0.10	0.00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weinhted		0.02	0.07	0.00	0.05	0.00	0.05	0.00	0.05
Proximity to Industrial Buildings (300')	0.0%	0:00	0.00	0:00	0.00	0.00	0:00	0.00	0.00
Wainhed		00'0	0.00	0:00	0:00	0:00	0.00	0:00	0.00
School DavCare, Church, Cemeterv, Park Parcels (#)	0.0%	0.00	0.00	0:00	0.00	0:00	0:00	0:00	0.00
Weighted		0.00	0.00	00:00	00:00	0:00	0.00	0:00	0:00
NRHP Listed/Eligible Strucs./Districts [1500' from edge of R/W)	39.4%	0.50	1.00	0.00	0.50	00.00	0:50	0.00	0.50
		0.20	0.39	0.00	0.20	0:00	0.20	0:00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WFIGHTED TOTAL		0.06	0.12	0.04	0.09	0.02	0.08	0.01	0.07
Natural	14%								
Natural Forests (Acres)	73.4%	0.81	0.78	0.84	0.81	1.00	0.96	0.82	0.79
Waiohted		0.59	0.57	0.62	0.59	0.73	0.71	0.61	0.58
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0.00	0.08	0.04
Wetland Areas (Acres)	%0.0	0.00	0.00	0:00	0:00	0:00	0:00	0.00	0:00
Wainthed		0.00	0.00	0.00	0.00	0.00	0:00	0.00	0:00
Floodblain Areas (Acres)	6.0%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Wairhted		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
TOTAI	100.0%	0.86	0.80	0.88	0.82	0.84	0.77	0.75	0.68
WFIGHTED TOTAL		0.12	0.11	0.12	0.11	0,12	0.11	0.10	0.10
Engineering	72%								
Miles of Rebuild with Existing T/L.	33.3%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weiahted		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Miles of Co-location with Existing T/L*	52.7%	0.39	0.10	0.28	0.00	0.41	0.12	0.47	0.19
		0.20	0.05	0.15	0.00	0.21	0.07	0.25	0.10
Total Project Costs	14.0%	0.18	0.39	0.25	0.46	0.10	0.28	0.00	0.20
Weighted		0.03	0.05	0.04	0.06	0.01	0.04	0.00	0.03
TOTAL	100.0%	0.56	0.44	0.52	0.40	0.56	0.44	0.58	0.46
WEIGHTED TOTAL		0.40	0.32	0.37	0.29	0.40	0.31	0.42	0.33
SUM OF WEIGHTED TOTALS		0.59	0.55	0.53	0.49	0.55	0.50	0.54	0.50
RANK		14	12	4	-	6	co	9	N

t'd on page 23)
(con
Environment (
Engineering
<b>TABLE 5:</b>

Buit	14%	Route A r	Route B r	Route C r	Route D r	Route E r	Route F r	Route G r	Route H r
Feature		Unit							
Residences within the ROW	0:0%	0.00	0.00	0.00	0:00	0:00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0.43	0.07	0.34	0.00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0.00	0.10	0.00	0.10	0.00	0.10	0.00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0.00	0.05	0.00	0.05	0.00	0.05
Proximity to Industrial Buildings (300')	%0.0	0.00	0.00	0.00	0:00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0:00	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	%0:0	0.00	00.00	0:00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0:00	0.00	0:00	0.00	0.00	0.00	0.00
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	00:00	0.20	0.00	0.20	0.00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.06	0.12	0.04	0.09	0.02	0.08	0.01	0.07
Natural	14%								
Natural Forests (Acres)	73.4%	0.19	0.00	0.22	0.03	0.38	0.19	0.23	0.03
Weighted		0.14	0.00	0.16	0.02	0.28	0.14	0.17	0.02
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0:00	0.08	0.04
Wetland Areas (Acres)	0.0%	0:00	0.00	0.00	0:00	0.00	00:00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0:00	0.00
Floodplain Areas (Acres)	6.0%	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.0%	0.35	0.16	0.37	0.19	0.32	0.14	0.25	0.07
WEIGHTED TOTAL		0.05	0.02	0.05	0.03	0.05	0.02	0.03	0.01
Engineering	72%								
Miles of Rebuild with Existing T/L <sup>-</sup>	33.3%	0.34	0.00	0.34	0.00	0.34	0.00	0.36	0.02
Weighted		0.11	00.00	0.11	0:00	0.11	0.00	0.12	0.01
Miles of Co-location with Existing T/L.	52.7%	0.93	0.93	0.83	0.83	0.95	0.95	1.00	1.00
Weighted		0.49	0.49	0.44	0.44	0.50	0.50	0.53	0.53
Total Project Costs	14.0%	0.55	0.93	0.62	1.00	0.44	0.82	0.36	0.74
Weighted		0.08	0.13	0.09	0.14	0.06	0.11	0.05	0.10
TOTAL	100.0%	0.68	0.62	0.64	0.58	0.68	0.62	0.70	0.64
WEIGHTED TOTAL	5 -	0.49	0.45	0.46	0.41	0.49	0.44	0.50	0.46
SUM OF WEIGHTED TOTALS		0.60	0.59	0.55	0.54	0.56	0.55	0.55	0.54
RANK		16	15	10	ŋ	13	8	11	2

TABLE 5: Engineering Environment (cont'd from page 22)

Bult	33%	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Feature		Unit							
Residences within the ROW	0.0%	0:00	0:00	0.00	0:00	0.00	0.00	0.00	0:00
Woiehted		0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0.43	0.07	0.34	0.00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0:00	0.10	0:00	01.0	0.00	0:10	0:00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0.00	0.05	0:00	0.05	0.00	0.05
Proximity to Industrial Buildings (300')	0.0%	0.00	0.00	0.00	0.00	0:00	0.00	0:00	0.00
Weighted		0:00	00.0	0.00	0.00	0.00	0.00	0.00	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	0.0%	0:00	0.00	00'0	0.00	0:00	0.00	0:00	0.00
Weighted		00.00	0.00	0.00	0:00	0.00	0.00	0:00	0.00
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	0.00	0.20	0.00	0.20	0.00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.15	0.29	0.09	0.22	0.06	0,19	0.03	0.17
Natural	33%								
Natural Forests (Acres)	73.4%	0.81	0.78	0.84	0.81	1.00	0.96	0.82	0.79
Weighted		0.59	0.57	0.62	0.59	0.73	0.71	0.61	0.58
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weiahted		0.21	0.16	0.21	0.16	0.04	0:00	0.08	0.04
Wetland Areas (Acres)	0.0%	0.00	0.00	0.00	00.0	0:00	0:00	0.00	0:00
Weiahted		0.00	0.00	0.00	0.00	0:00	0.00	0:00	0:00
Floodplain Areas (Acres)	6.0%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weichted		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
TOTAL	100.0%	0.86	0.80	0.88	0.82	0.84	0.77	0.75	0.68
WEIGHTED TOTAL		0.28	0.26	0.29	0.27	0.28	0.25	0.25	0.22
Engineering	33%								
Miles of Rebuild with Existing T/L.	33.3%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weighted		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Miles of Co-location with Existing T/L*	52.7%	0.39	0.10	0.28	0.00	0.41	0.12	0.47	0.19
Weighted		0.20	0.05	0.15	0.00	0.21	0.07	0.25	0.10
Total Project Costs	14.0%	0.18	0.39	0.25	0.46	0.10	0.28	0.00	0.20
Weighted		0.03	0.05	0.04	0.06	0.01	0.04	0.00	0.03
TOTAL	100.0%	0.56	0.44	0.52	0.40	0.56	0.44	0.58	0.46
WEIGHTED TOTAL		0.19	0.15	0.17	0.13	0.19	0.14	0.19	0.15
SUM OF WEIGHTED TOTALS		0.62	0.70	0.55	0.62	0.52	0.59	0.47	0.55
RANK		14	16	12	15	σ	13	9	10

TABLE 6: Simple Average Comparison (cont'd on page 25)

Built	33%	Route A r	Route B r	Route C r	Route D r	Route E r	Route Fr	Route G r	Route H r
Featuro		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	%0.0	0.00	0.00	0.00	0:00	00:00	0:00	0:00	0:00
Weighted		0:00	0.00	0:00	0:00	0:00	0:00	0:00	0:00
Proximity to Residences (300')	43.2%	0.32	0.95	0.37	1.00	0.16	0.79	0.00	0.63
Weighted		0.14	0.41	0.16	0.43	0:02	0.34	0.00	0.27
Proposed Residential Developments	10.3%	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Weighted		0.10	0.00	0.10	0.00	0.10	0.00	0.10	0.00
Proximity to Commercial Buildings (300')	7.1%	0.33	1.00	0.00	0.67	0.00	0.67	0.00	0.67
Weighted		0.02	0.07	0.00	0.05	0.00	0.05	0.00	0.05
Proximity to Industrial Buildings (300')	%0.0	0.00	0.00	0.00	0.00	00'0	0:00	0.00	0.00
Weighted		0:00	0:00	0.00	0:00	0.00	0:00	0:00	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	0.0%	0:00	0:00	0.00	0:00	0:00	0.00	0:00	0:00
Weighted		0.00	0.00	0:00	0:00	0.00	0:00	0.00	0.00
NRHP Listed/Eligible Strucs./Districts [1500' from edge of R/W]	39.4%	0.50	1.00	0.00	0.50	0.00	0.50	0.00	0.50
		0.20	0.39	0:00	0.20	0.00	0.20	0.00	0.20
TOTAL	100.0%	0.46	0.87	0.26	0.68	0.17	0.59	0.10	0.52
WEIGHTED TOTAL		0.15	0.29	0.09	0.22	0.06	0.19	0.03	0.17
Natural	33%								
Natural Forests (Acres)	73.4%	0.19	0.00	0.22	0.03	0.38	0.19	0.23	0.03
Weighted		0.14	0:00	0.16	0.02	0.28	0.14	0.17	0.02
Stream/River Crossings	20.6%	1.00	0.80	1.00	0.80	0.20	0.00	0.40	0.20
Weighted		0.21	0.16	0.21	0.16	0.04	0.00	0.08	0.04
Wetland Areas (Acres)	0.0%	0:00	0:00	0:00	0.00	00.00	0:00	0:00	0:00
Weighted		0.00	00:00	0:00	0.00	0:00	0:00	0.00	0.00
Floodplain Areas (Acres)	6.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0:00	0:00	0.00	0.00	0.00	0:00	0.00
TOTAL	100.0%	0.35	0.16	0.37	0.19	0.32	0.14	0.25	0.07
WEIGHTED TOTAL STREET STATES AND STREET ST		0.11	0.05	0.12	0.06	0.11	0.05	0.08	0.02
Engineering	33%								
Miles of Rebuild with Existing T/L.	33.3%	0.34	0.00	0.34	0.00	0.34	0.00	0.36	0.02
Weighted		0.11	0.00	0.11	0.00	0.11	0.00	0.12	0.01
Miles of Co-location with Existing T/L	52.7%	0.93	0.93	0.83	0.83	0.95	0.95	1.00	1.00
Weighted		0.49	0.49	0.44	0.44	0.50	0.50	0.53	0.53
If otal Project Costs	14.0%	0.55	0.93	0.62	1.00	0.44	0.82	0.36	0.74
Weighted		0.08	0.13	0.09	0.14	0.06	0.11	0.05	0.10
TOTAL	100.0%	0.68	0.62	0.64	0.58	0.68	0.62	0.70	0.64
WEIGHTED TOTAL		0.22	0.20	0.21	0.19	0.22	0.20	0.23	0.21
SUM OF WEIGHTED TOTALS		0.49	0.55	0.42	0.47	0.39	0.44	0.35	0.40
RANK		8	F	4	~	2	ŋ		e

TABLE 6: Simple Average Comparison (cont'd from page 24)







FIGURE 14: Alternative Routes Er, Gr and Hr

## PART VI: EXPERT JUDGMENT

The final step of the EPRI-GTC routing methodology is to evaluate each of the final three routes by applying expert judgment. This step is accomplished by reviewing select issues on each of the routes, and assigning them a rating of low, medium, or high impact. Each of categories of expert judgment is listed below and a chart showing the final score is displayed in Table 8 below.

EXPERT JUDGEMENT	1 = Low Impact 2	= Medium	Impact 3 = H	igh Impact
	Per Project	Gr	Er	Hr
Visual Issues	5%	2	2	2
Weighted		0.1	0.1	0.1
Community Issues	40%	3	3	2
Weighted		1.2	1.2	0.8
Right-of-Way Schedule	25%	2	2	1
Weighted		0.5	0.5	0.25
Construction/ Maintenance Accessability	5%	1	1	1
Weighted		0.05	0.05	0.05
Regulatory Issues	25%	2	2	1
Weighted		0.5	0.5	0.25
TOTAL			3	
	100%	2.35	2.35	1.45

#### **TABLE 8: Expert Judgment Scoring**

**Visual Issues**—The siting team defined visual issues as impacts to people in the immediate area that are not directly crossed by the proposed transmission line project. Routes Er and Gr were considered to have medium impact on visual issues since they have 11.9 miles and 12.6 miles, respectively, of new right-of-way, which introduces a new visual impact to areas that are vacant of transmission lines at this time. Route Hr also was given a medium impact score due to the section of rebuild of the existing line near Ky. 39. Rebuild of the existing 69-kV transmission line in this area will require taller structures, which will be more visible from the road.

**Community Issues**—The siting team defined community issues as impacts on the public that result from the project. Routes Er and Gr are considered to have high impact as compared to Route Hr because of the greater length of greenfield right-ofway. Route Hr is considered a medium impact since it is mostly rebuild south of Newby substation. This impact is indicated by the amount of new acreage of easement that is required by the proposed routes. Routes Er and Gr will require approximately 452 and 455 acress of new easement, respectively, while Route Hr will require approximately 37 acres less of new easement.

**Rights-of-Way Schedule**—The siting team defined rights-of-way schedule as impacts on the project schedule due to right-of-way acquisition. Routes Er and Gr are considered to have medium impact compared to Route Hr because of the greater length of greenfield right-of-way, which would require new easements. Route Hr is considered low impact because it is mostly rebuild of an existing line south of the Newby substation and is co-located for approximately 75 percent of its length while Routes Er and Gr are co-located for only 66 percent and 64 percent, respectively.

**Construction/Maintenance Accessibility**—All three routes are given low impact scores due to reasonable access from existing roads and/or rights-of-way.

**Regulatory Issues**—Recent Kentucky Public Service Commission orders have highly encouraged utilities to co-locate and /or rebuild electric transmission lines whenever reasonable. Taking this into account, the siting team gave Routes Er and Gr medium impact scores because they have 2.9 miles and 3.6 miles more greenfield rights-of-way, respectively, than Route Hr. Route Hr was given a low impact score because it better reflects recent orders issued by the PSC on transmission line locations in Kentucky since it has more co-location than the other two routes.

The siting team also took into consideration issues that apply to impacts on cultural/historic resources. EKPC employed two cultural/historic consultants to inventory the Area of Potential Effect (APE), as agreed upon by EKPC, RUS, and the Kentucky State Historic Preservation Office. Initial findings revealed a structure that may be eligible for listing on the National Register of Historic Places. This structure is located on both Routes Er and Gr. The approximate location of this structure is shown on Figure 15 below. This finding contributed to the medium impact score for Routes Er and Gr.



FIGURE 15: Location of a Potentially Eligible Structure

## **PART VII: CONCLUSION**

Based on the total analysis, including the application of Expert Judgment, Route Hr was selected by EKPC as the preferred route.

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Appendix A



**Public Comments from RUS Scoping** 

		40475 104 10475 104	
ISDA Rural Development	Scoping Meeting Sign-In Sheet ct Name: Smith – West Garrard 345 kV insmission Line and Switching Station Date: July 11, 2006 Time: 3:00 PM – 7:00 PM	SB WILDONGO Da. RICHMOND 40475 SBA HERKEH RIKA RICHMOND 119 BLD WINGRENSTE PICHMOND 20 BEAREH CH RICHMOND 20 BEAREH CH RICH RICHMOND 20 BEAREH CH RICH RICHMOND 20 BEAREH CH RICH RICHMOND 20 BEAREH CH RICH RICH RICHMOND 20 BEAREH CH RICH RICH RICHMOND 20 BEAREH CH RICH RICH RICHMOND 20 BEAREH RICH RICH RICHMOND 20 BEAREH RICH RICH RICH RICHMOND 20 BEAREH RICH RICH RICHMOND 20 BEAREH RICH RICH RICH RICHMOND 20 BEAREH RICH RICH RICHMOND 20 BEAREH RICH RICH RICH RICH RICH RICHMOND 20 BEAREH RICH RICH RICH RICH RICH RICHMOND 20 BEAREH RICH RICH RICH RICH RICH RICH RICH RIC	
	ΡΟ	16 STEVE MARICHMEAUX 3 17 MERIS ATIM GREAUX 3 18 PAULD REAMERUNCEDEN 20 PAVLD REAMERUNCEDEN 21 R. C. M. M. GREES 22 23 24 24 25 25 26 20 27 20 28 29 29 29 20 2	

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Comments/Questions
U. S. Department of Agriculture, Rural Development, Utilities Programs (Rural Utilities Service) Scoping Meeting
Smith – West Garrard 345kV Transmission Line and Switching Station Project Best Western Holiday Plaza, Richmond, KY July 11, 2006
Recorded by: GARRY HARNEY
Name: FRED SIMPSON Address: Jim CLARK RD IN GARRAAD CO. Comments/Questions: MR. SIMPSON WAS INTERESTED IN THE ROUTE OF THE LINE IN RELATION TO HIS FORM AND ALEO HIS DISTRICT -> HE IS A MAGISTRATE. WE JUST WENT THROUGH THE DISPLOYS AND THE STUDY CORRIDORS HE HAD A FEW QUESTIONS BUT NOT MANY COMMENTS



# **Comments/Questions** U. S. Department of Agriculture, Rural Development, Utilities Programs (Rural Utilities Service) **Scoping Meeting** Smith - West Garrard 345kV Transmission Line and Switching **Station Project** Best Western Holiday Plaza, Richmond, KY July 11, 2006 Recorded by: GARRY HARNEY Name: MARY LOU & CHARLES HILTON NEAR RIVA ROG RD IN RICHMOND Address: Comments/Questions: APPEARS THAT THEIR PROPERTY WILL PROBABLY NOT BE AFFECTED, MR. HILTON ADVISED OF AN AREA WHERE Some DEVELOPMENT IS BEGINNING NEAR MCCORD LN. NORTH WEST OF RICHMOND.



Comments/Questions
U. S. Department of Agriculture, Rural Development, Utilities Programs (Rural Utilities Service) Scoping Meeting
Smith – West Garrard 345kV Transmission Line and Switching Station Project Best Western Holiday Plaza, Richmond, KY July 11, 2006
Recorded by: Brace Murphen
Name: CITEVE MARCINIEAUX
Address'
Comments/Questions: $H_{A \in KII}$ $L_{III} = A C P A \leq C$
Property if A NEW EASEMENT is REQUIRED Will PROPERty OWNER BE COMPENSATED?

۰,



Comments/Questions
U. S. Department of Agriculture, Rural Development, Utilities Programs (Rural Utilities Service) Scoping Meeting
Smith – West Garrard 345kV Transmission Line and Switching Station Project Best Western Holiday Plaza, Richmond, KY July 11, 2006
Recorded by:
Name: DAVE GERREIN
Address: MADISON CO.
Comments/Questions: WOULD LIKE TO SEE US
FOLLOW EXISTING R/W.
•

September 21, 2006 Mr. Joe Settles East Kentucky Power Cooperative 4775 Lexington Road Winchester, KY 4039/ Dear Mr. Settles: My wife and I are the owners of the Boutz-Owskey House, which is listed on the National Regulater of Historia Homes, and om property is adjacent to land which has been idditified as la probable corridor for the proposed new power line near Kyllinghway 52 in Davard County, KY. In accordance with applicable federal statutes and regulations, Request that East Kentury Bower Congerative include me as a consulting party on matters concerning this project, and that receive appropriate informattion in timely fashion. Thank you signeerely. My name and address are below. - Ochert Crawford signature : name : (ROBERT CRAWFORD) (1.0, Box 603) alpens! LANCASTER, KY al - e '



### Public Comments from RUS Scoping PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538 P.O. Box 1527 MIAMI, OKLAHOMA 74355 Page 9 of 23

CHIEF John P. Froman

SECOND CHIEF Jason Dollarhide

July 10, 2006

East KY Power Cooperative Attn: Joe Settles 4475 Lexington Road Winchester, KY 40391

RE: Smith – West Garrad Transmission Line Project

Thank you for notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the proposed construction. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Peoria Tribe request notification and further consultation.

The Peoria Tribe has no objection to the proposed construction. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

John P. Froman Chief

xc: Bud Ellis, Repatriation/NAGPRA Committee Chairman












Must be received by by August 10<sup>th</sup>

Must be received by by August 10<sup>th</sup>





Appendix A

-----Original Message----- **From:** saundrac2@aol.com [mailto:saundrac2@aol.com] **Sent:** Friday, August 25, 2006 11:54 AM **To:** Stephanie.Strength@wdc.usda.gov **Cc:** Joe Settles **Subject:** EKPC Smith- West Garrard construction project

Ms. Strength;

EKPC has had a notification in the Winchester Sun newspaper inviting property owners that may be affected by the new Smith - West Garrard project to make known their questions and concerns. My wife and I own property in Madison County that most probably will be involved in the construction. We contacted EKPC with some of our concerns, they suggested we should also inform you so that RUS will be aware that we may have some comments at the next open house scheduled for August 31. We believe all our comments and concerns can be satisfactorily responded to by EKPC's staff, however, we ask you to be aware of our intention to make some comments. Some of our comments may be as follows, others may be apparent after we see the design and how it may affect our property:

Specifically we are concerned about EMF and stray voltage, health and safety issues.

Line design as it relates to the amount of right of way easement needed.

The line location as it relates to an existing Texas Eastern high pressure gas transmission pipe line that crosses our property.

Mr. and Mrs James Caudill



August 11, 2006

East Kentucky Power Co-op 4775 Lexington Road P.O. Box 707 Winchester, KY 40392-0707

Appendix A

To Whom It May Concern:

The attached letter and photos were both e-mailed and sent by U.S. Postal Servicë to the USDA, Rural Development, Utilities Programs, Engineering and Environmental Staff in Washington, DC. These items are being submitted for your review and consideration of our position regarding your proposed overhead transmission lines and substation in Garrard County.

As detailed in the attached letter, we feel these lines would mar the natural beauty, as well as presenting a health hazard to those living nearby. We would support legislation to require the lines to be run underground, as was done in the State of Connecticut in 2004.

Copies of this letter have also been sent to Governor Ernie Fletcher and Representative Lonnie Napier, House District 36.

Thank you for your consideration.

Sincerely,

Phillip R. Price

Deirdre L. Price

Enclosures RECEIVED AUG 1 4 2006





August 9, 2006

COPY

Stephanie Strength Environmental Protection Specialist USDA Rural Development, Utilities Programs Engineering and Environmental Staff 1400 Independence Avenue, SW Stop 1571 Washington, DC 20250-1571

Dear Ms. Strength:

This letter is written to express our family's opposition to the planned transmission line that will originate in Clark County, Kentucky, cross Madison County, and terminate at a planned substation near KY-52 and Boone's Creek Road, just outside of Lancaster, Garrard County, Kentucky. It is our understanding that lines will be strung from towers over 100 feet in height that will stretch from the substation near Lancaster to the Buckeye area of Garrard County, crossing US-27 near Sugar Creek Road.

The locations at KY-52/Boone's Creek Road and US-27/Sugar Creek Road lead us to believe that those monstrous towers will pass very near our property.

My wife and I moved to Kentucky from the Washington, DC, area following retirement after 25 years of federal service. We purchased secluded, wooded acreage, where we built our dream retirement home. We fled city living for this rural, pastoral environment to escape from the "concrete jungle" with its traffic congestion, pollution, and many miles of the same type of ugly high voltage towers that might now possibly end up in our backyard or very near it. Since East Kentucky Power

Page 2

Co-op (EKPC) seems reluctant to divulge the exact route of this line, we can't be entirely sure of the extent of impact to our property. We do know that there is a very good possibility that this terrible eyesore (and health hazard) may be visible from our home, as well as those of many other Garrard County residents.

We believe that EKPC and the USDA have handled this initiative poorly, and it gave the appearance of subterfuge. Until last week, the only scheduled meeting, to our knowledge, was held at Richmond in Madison County, KY, with minimal press coverage. Only after the meeting had already occurred were we made aware of a small article in the Lexington Herald-Leader. There was no announcement to Garrard County residents in the local newspaper prior to the meeting in Madison County, and no one of our personal acquaintance in this county had any prior knowledge of this meeting.

A meeting was subsequently held in Lancaster last week at the First Southern Bank. During that meeting local residents asked many good questions, but gained very little information from EKPC representatives. It appears that the die is cast without consideration of the concerns of those citizens most impacted by the proposed initiative, the people of Garrard County. Imminent Domain rules without heart, and without due consideration of the concerns of those most affected. I saw so much of this in my federal career and throughout my life – big government, big business and/or big utilities running roughshod over the poor, the middle class, the weak and/or under-represented "little guy." It certainly does seem that less affluent, rural, agricultural, low density areas are often taken advantage of.

It appears this power line will be forced upon us, irregardless of our objections. In fact, at the Lancaster meeting, an EDPC representative hinted at this by basically stating that it was going to happen one way or another. The proposed power lines and substation will spoil our rural scenic beauty and destroy what my wife and I have worked a lifetime to achieve and own. We know there are others in this same position within the county, who came here planning to spend the rest of their lives in their dream home. Garrard County will not benefit one kilowatt from this project, but yet will be forced to bear the burden of its unsightliness, the diminished property values, not to mention the effect on the health of residents.

If EKPC insists on proceeding with this project to serve their customers in other counties, we hope there will at least be consideration given to buried lines. We know this can be done and, as I'm sure you're aware, there are studies to support our position.

Page 3

It would seem to us that it makes more sense to bury the lines, rather than expose them to the harsh elements, accidents involving airplanes or vehicles, or even vandalism. In 2004, there was an independent review in Connecticut of a proposed 345 KV power line upgrade that showed it was technically feasible to bury 10 to 20 miles of lines underground. Nick Comer, spokesman for EKPC, stated in the Lexington Herald-Leader article that burying the lines isn't feasible because it costs more than traditional overhead lines. We note that the planned line would stretch 35-37 miles. Based on the amount of monthly electric bills, we suspect that EKPC is in no financial distress. Additionally, adding new customers as a result of the planned line will generate even more revenue. EKPC fills the needs of energy users; however, it is not in the business out of any civic duty or responsibility, but rather to increase the stock value of the company and its investors. Money is always the bottom line. We would hope that the USDA would not let this project go forth based upon EKPC's monetary considerations alone.

This is a beautiful, scenic county, rich with abundant and varied wildlife species. It would be hard to gauge the impact of these high-voltage lines on the wildlife in this area. We are enclosing a photograph taken very near the proposed high-voltage towers and substation, so that you can see for yourself the scenic richness of the area. Can you imagine this scene being despoiled for untold miles by a wide path of mowed-down trees, monstrous 100-foot high-voltage towers and a huge, ugly substation? We're sure you can see our point.

We also object to the towers, not only for aesthetic reasons, but for possible devaluation of property values. There are studies whose findings reveal that when property/homes are located adjacent to or very near the towers, the value of that property can deteriorate by as much as 21%. While we have no plans to ever sell our home, perhaps some of our neighbors might need to do so in the future. My wife, who is younger than me, may find herself in that position someday also. The financial impact could be devastating.

We have also read studies dealing with the negative health effects on people living at or near high-voltage towers. Studies from across the U.S. and Europe, including a recent Oxford University study, show the link between magnetic fields greater than 2-4 MG and cancer. Children whose birth address was within 200 meters of an overhead power line had a 70% increased risk of leukemia. Children living 200 to 600 meters away still have a 20% increased risk of developing cancer.

Page 4

Also, based on a Pacific Northwest Natural Laboratory study involving rats and ozone, scientists identified a chemical reaction that might explain higher rates of illness observed among people exposed to strong electromagnetic fields, such as those produced by high-voltage power lines.

In addition, a California Department of Health Sciences Evaluation study concluded EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease, miscarriages, and perhaps even suicide. This particular 2002 study was the culmination of a 9-year, \$7 million research effort. According to the study, "The evaluation used was a standard causation, which is a more rigorous test than the more common standard that seeks to demonstrate an association between EMFs and many of these diseases."

There are also studies showing disruption to cardiac pacemakers, and I happen to have an implanted pacemaker myself.

We can understand and appreciate the need to serve the nation's energy requirements; however, we believe it is possible to do so and still reduce the impact on the environment and those living in it, both humans and animals. "Invisible" underground power lines are a feasible and revolutionary approach to power transmission. In fact, a company called ABB USA promotes their "no EMF technology, delivering reliable, 'invisible' energy without any electromagnetic fields" through the use of underground power lines.

Other states have successfully fought the above ground transmission lines. Connecticut Governor John G. Rowland signed legislation in 2004 that requires new high-voltage lines to be buried, including a controversial project proposed by two major utilities. Both the state House and Senate overwhelmingly approved the restrictive measure that was hailed as the toughest in the country when it comes to regulating transmission lines. State Senator Winthrop Smith (R-Milford) said, "It's outstanding. The power companies kept saying, 'We can't do this. No one else has done this.' and we said, 'Oh, yes we can' – and we did." This information came from an article in the *Journal Register News Service*, 05/07/2004.

The article went on to say, "The bill was proposed by a dozen New Haven County lawmakers in response to plans by Connecticut Light & Power and United Illuminating to upgrade a 69-mile transmission line from Middletown to Norwalk. The

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Page 5

utilities said the upgrade, from 115 kilovolts to 345 kilovolts, was needed to improve energy reliability in Fairfield County, which was consuming increasing amounts of electric power."

State Senator Len Fasano (R-North Haven) stated: "This is a victory for the people in all the impacted towns. Nearly everyone who spoke to me about this legislation expressed concern over the health consequences of the electromagnetic fields. That's why we included language requiring lines be placed underground unless NU and IU can prove it's safe not to. The onus is now on them, which is how it should be."

In our opinion, there should be a federal law like the state law in Connecticut requiring big utility companies to prove, through independent studies, the safety of overhead power lines to people and the environment – and requiring that power lines be buried underground.

It appears that the reason there is still a perception that power lines are not dangerous, despite all the evidence otherwise, is because rich corporations reward lobbyists and scientists handsomely for distorting scientific evidence in order to advance the corporations' economic interests. This is all too common a practice in our country today, as discussed in a June 2005 article in the *Scientific American*.

We're sure that we speak for many other Garrard County residents, some of whom may feel that they don't have the power to "fight City Hall." Our cause is pure and intended to make suggestions to arrive at the best possible answer to a bad situation.

We appreciate your consideration of our letter and welcome your comments.

Sincerely,

Phillip R. Price

Deirdre L. Price

cc: Kentucky Governor Ernie Fletcher State Rep. Lonnie Napier East Kentucky Power Cooperative





Appendix A



----Original Message----From: Robert Ukeiley [mailto:rukeiley@igc.org]
Sent: Wednesday, August 30, 2006 3:21 PM
To: Joe Settles
Subject: EKPC Power Line Projects in Clark, Madison and Garrad Counties and proposed CFB at Smith Station

Joe Settles, EKPC 4775 Lexington Road, Winchester, KY 40391 Joe.settles@ekpc.coop

Dear Mr. Settles:

On behalf of my client, the Sierra Club, I am requesting to be a consulting party with regard to the NEPA and other environmental analysis for the proposed transmission lines in Clark, Madison and Garrard Counties and the proposed coal-fired unit at the J.K. Smith Station.

Please send me notification of actions at the below address or via e-mail that this e-mail address. I appreciate your prompt attention to this matter.

Sincerely,

Robert Ukeiley Counsel for Sierra Club

Robert Ukeiley Law Office of Robert Ukeiley 433 Chestnut Street Berea, KY 40403 Tel: (859) 986-5402 Fax: (859) 986-1299

# QUESTIONNAIRE

#### FOR

# PUBLIC PARTICIPATION IN

SMITH-WEST GARRARD 345 KV

TRANSMISSION LINE SITING

You may leave this form at the registration table as you leave tonight or pick up a return envelope already stamped in which to mail us the form at a later time. Responses must be received by <u>5:00 p.m. Tuesday, September 5, 2006</u> to be considered.

This survey will allow us to get your opinions on specific issues regarding the siting of our transmission line. Your response will assist our design group in understanding public concerns and allow them to incorporate those concerns in the final site selection. Thank you for your help.

1. The following information is optional but could be useful if follow-up is needed. (Names and addresses are considered confidential and are for EKPC use only)

MASTERS County MADISON Name Momas House Road Address 1829 House Kond Location of property

- 2. Which of the following applies to your situation?
  - $\checkmark$  Live and work within the immediate area.
  - \_\_\_\_ Frequently travel the roads in the immediate area.
  - \_\_\_\_ Live in \_\_\_\_\_ County but not within the immediate area.
  - \_\_\_\_ Other, please specify.
- 3. Many criteria are involved in the siting of a transmission line. Please choose the four most important to you in regard to the siting of this line. The most important item will be No. 1, the least important No. 4.
  - <u>4</u> Crossing Agricultural Land.
  - \_\_\_\_ Crossing Wooded or Forest Land.
  - \_\_\_\_ Crossing Streams or Wetlands.
  - \_\_\_\_ Road Crossings.
  - / Proximity to Residences.
- $\mathcal{L}$  Proximity to Barns or Sheds.
- Proximity to Commercial or Industrial Areas.
- Proximity to Historic or Archaeological Sites.
- <u>う</u> Visibility.
- \_\_\_\_ Construction Cost.
- \_\_\_\_ Other, please specify below.

- 4. Are you aware of any buildings or landmarks in the study area that may be architecturally or historically important? If so, please specify location, names or addresses.
- 5. You may be aware of unique or specific information regarding this corridor. Please describe any special items of interest or concern below such as scenic areas, recreation areas or new homes. Please give the location of the item or contact one of the representatives to mark it on a map.

6. Please summarize what you feel are the most important qualities or resources of the area.

\* If you have any additional comments, please list on back of this page.

This proposed crossing on my property (which is prime Real estate in Madison County) will likely devalue my property. I have one field with Road Alentage that we may want to sell at refirement which would likely bring a high price. If you cross this field, it probably won't be usable for building residential. If you put the line on the other side it will be too close to our current residence where we are planning a future den Addition. We Already have one unsightly transmission line crossing the property and don't need Another.

#### **PROCESS EVALUATION SURVEY**

Please help us to improve the siting procedures, which you have participated in by completing this form.

Did this process give you:

- \_\_\_\_ An adequate amount of information? Too much information?
- Not enough information?

Was advertisement for the open house:

I heard of this by word of mouth And did Not Receive A formal Invitation until I contacted EKP. Adequate? \_\_\_\_ Early enough?

Were most of your questions answered by:

EKPC staff? Written information? Displays?

Do you feel that you know more about EKPC and its operation?

Did you voice any questions that were not adequately addressed?

If yes, what is your question and may we contact you to discuss?

(h:Smith-WestGarrard.doc)

# QUESTIONNAIRE

#### FOR

## PUBLIC PARTICIPATION IN

#### SMITH-WEST GARRARD 345 KV

#### TRANSMISSION LINE SITING

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1. The following information is optional but could be useful if follow-up is needed. (Names and addresses are considered confidential and are for EKPC use only)

Name <u>Fred Logan Simpson County Gauard</u> Address <u>2393 Sugar Creek Road</u> <u>Lancaster</u>, KY 40444 Location of property junction of Sugar Creek Road and Jim Clark Road - 4 miles north of Lancoster

- Which of the following applies to your situation? 2.
  - $\checkmark$ Live and work within the immediate area.
  - $\checkmark$  Frequently travel the roads in the immediate area.
  - \_\_\_\_ Live in \_\_\_\_\_ County but not within the immediate area.
  - \_\_\_\_ Other, please specify.
- Many criteria are involved in the siting of a transmission line. Please choose the 3. four most important to you in regard to the siting of this line. The most important item will be No. 1, the least important No. 4.





- \_\_\_\_ Crossing Streams or Wetlands.
- \_ Road Crossings.
- 2 Proximity to Residences.
- \_\_\_\_ Proximity to Barns or Sheds.

Proximity to Commercial or Industrial Areas. Proximity to Historic or Archaeological Sites.

- \_\_\_\_\_ Visibility.
- \_\_\_\_ Construction Cost.

\_\_\_\_ Other, please specify below.

Are you aware of any buildings or landmarks in the study area that may be 4. architecturally or historically important? If so, please specify location, names or addresses.

such as scenic areas, recreation areas or new homes. Please give the location of the item or contact one of the representatives to mark it on a map.

Please summarize what you feel are the most important qualities or resources of the area.

\* If you have any additional comments, please list on back of this page.

I feel that I have worked to keep this farm for so many years, thinking 2 would have a legacy for my two daughters. An electric transmission line across the main ridge virtually takes the market away for the secluded minifarm market, the only market potential it has, Farming this type land is more a lifestyle, a way of life, not a real way to make a living.

5.

Appendix B

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# PROCESS EVALUATION SURVEY

Please help us to improve the siting procedures, which you have participated in by completing this form.

Did this process give you:

\_\_\_\_\_ An adequate amount of information? Too much information? Not enough information?

Was advertisement for the open house:

 $\checkmark$  Adequate? Inadequate? Early enough?

Were most of your questions answered by:

\_\_\_\_ EKPC staff? \_\_\_\_\_ Written information? \_\_\_\_ Displays?

Do you feel that you know more about EKPC and its operation? <u>yes</u>, and sympathize to a degree But a route across my farm destroys a lifetime of hard work Did you voice any questions that were not adequately addressed? <u>not really</u>

If yes, what is your question and may we contact you to discuss?

(h:Smith-WestGarrard.doc)

#### QUESTIONNAIRE

## FOR

# PUBLIC PARTICIPATION IN

SMITH-WEST GARRARD 345 KV

TRANSMISSION LINE SITING

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1. The following information is optional but could be useful if follow-up is needed. (Names and addresses are considered confidential and are for EKPC use only)

ma and mind
Name Laul R. Black County Garvard
Address 2488 Sugar CREEK Road
Lancaster, Ky 40444
Logation of property 4 Miles From Lancaster on
SUGAR CREEK Road - North on Duy 1355
2. Which of the following applies to your situation?
$\underline{X}$ Live and work within the immediate area. Frequently travel the roads in the immediate area.

- Live in \_\_\_\_\_ County but not within the immediate area.
- \_\_\_\_ Other, please specify.
- 3. Many criteria are involved in the siting of a transmission line. Please choose the four most important to you in regard to the siting of this line. The most important item will be No. 1, the least important No. 4.
  - $\frac{2}{2}$  Crossing Agricultural Land. <sup>2</sup> Proximity to Barns or Sheds. \_\_\_\_ Crossing Wooded or Forest Land. Proximity to Commercial or Industrial Areas. Proximity to Historic or Archaeological Sites. \_\_\_\_ Crossing Streams or Wetlands.
  - \_\_\_ Road Crossings.
  - / Proximity to Residences.
- \_\_\_\_\_ Visibility.
- \_\_\_\_ Construction Cost.
- \_\_\_\_ Other, please specify below.

Appendix B

Smith-West Garrard 345 kV Transmission Line Project Siting Survey Page -2

4. Are you aware of any buildings or landmarks in the study area that may be architecturally or historically important? If so, please specify location, names or addresses.

5. You may be aware of unique or specific information regarding this corridor. Please describe any special items of interest or concern below such as scenic areas, recreation areas or new homes. Please give the location of the item or contact one of the representatives to mark it on a map.

6. Please summarize what you feel are the most important qualities or resources of the area.

If you have any additional comments, please list on back of this page.

(Then) also if this for line comes through one perpety -His worked greatly devalue our property -

# **PROCESS EVALUATION SURVEY**

Please help us to improve the siting procedures, which you have participated in by completing this form.

Did this process give you:

\_\_\_ An adequate amount of information? Too much information? Not enough information?

Was advertisement for the open house:

<u>X</u> Adequate? \_\_\_\_\_ Inadequate? Early enough?

Were most of your questions answered by:

 $\underline{\chi}$  EKPC staff? \_\_\_\_\_ Written information? Displays?

Do you feel that you know more about EKPC and its operation?  $VES \quad Mo = -$ 

NU Did you voice any questions that were not adequately addressed?\_\_\_\_

If yes, what is your question and may we contact you to discuss?

(h:Smith-WestGarrard.doc)

\* Our T.VIS with No and a catenar provide lyceelent reception to bee Lesington plation . with this live Coming through or close her own prepulso this live coming through or close her or great concern about worked destroy that derives . I have a great concern about my caule grazing new or under line -

#### QUESTIONNAIRE

#### FOR

# PUBLIC PARTICIPATION IN SMITH-WEST GARRARD 345 KV TRANSMISSION LINE SITING

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1. The following information is optional but could be useful if follow-up is needed. (Names and addresses are considered confidential and are for EKPC use only)

Name Harold Harris County Madison	
Address 775 Peacock Rd	
Richmond KY 40475	
Location of property 775 Peacock, Brookstown Re	ł

- 2. Which of the following applies to your situation?
  - $\nearrow$  Live and work within the immediate area.
  - \_\_\_\_\_ Frequently travel the roads in the immediate area.
  - \_\_\_\_Live in \_\_\_\_\_County but not within the immediate area.
  - \_\_\_\_ Other, please specify.
- 3. Many criteria are involved in the siting of a transmission line. Please choose the four most important to you in regard to the siting of this line. The most important item will be No. 1, the least important No. 4.

Like Crossing rightoutturur Duna.	1	瀫	Crossing	Agricultural	Land.	
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- \_\_\_\_ Crossing Wooded or Forest Land.
- \_\_\_\_ Crossing Streams or Wetlands.
- \_\_\_\_ Road Crossings.

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- 2 Proximity to Residences.
- **3** Proximity to Barns or Sheds.
- Proximity to Commercial or Industrial Areas.
- Proximity to Historic or Archaeological Sites.
  Visibility.
- **4** Construction Cost.
- \_\_\_\_ Other, please specify below.

6.

Smith-West Garrard 345 kV Transmission Line Project Siting Survey Page -2

- 4. Are you aware of any buildings or landmarks in the study area that may be architecturally or historically important? If so, please specify location, names or addresses.
- 5. You may be aware of unique or specific information regarding this corridor. Please describe any special items of interest or concern below such as scenic areas, recreation areas or new homes. Please give the location of the item or contact one of the representatives to mark it on a map.

Productive farmland Please summarize what you feel are the most important qualities or resources of the area.

- Agriculture
- \* If you have any additional comments, please list on back of this page.

# **PROCESS EVALUATION SURVEY**

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Please help us to improve the siting procedures, which you have participated in by completing this form.

Did this process give you:

An adequate amount of information? Too much information? Not enough information?

Was advertisement for the open house:

Adequate? Inadequate? Early enough?

Were most of your questions answered by:

\_\_\_\_ EKPC staff?
\_\_\_\_ Written information?
\_\_\_\_ Displays?

Do you feel that you know more about EKPC and its operation?

Did you voice any questions that were not adequately addressed? MO

If yes, what is your question and may we contact you to discuss?

(h:Smith-WestGarrard.doc)

EK Map No(s)	First name	Last name	Open House comments	EKPC FOLOWUP
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7	J. I odd & Billic L.	200000		
	-	E		
3, 5d	Russell & Cherie	1 racy		
4	William M. & Janice N.	Alexander		
			<b>T. Mumm:</b> Hoovers prefer line to parallel on north side. Hoovers complained about activities of EKPC contractor on	
5a, 5b	Tracy & Yana	Hoover	previous project.	EKPC proposes to parallel existing line on north side on #5a, #5b.
<u>5</u> c	Donnie & Phyllis	Lainhart		
			H.K. Cunningham: Ms. Friend wants gravel on land where Smith-Lake Reba crosses Clark Energy line. A pond bank and	T. Hayes of EKPC contacted Ms. Friend on 11-21-06 and discussed
6,7	Kathlyn	Friend	ruts need to be repaired.	repairing roadway, iterus allu pullu valla.
8	James E. & Betty Jane	Short		
		ī	<b>B. Grillon:</b> Shorts have a cabin on the edge of the corridor. Shorts and EKPC have not settled on first line. Shorts say fences were damaged and roads left with trenches in them. Felt	FK PC to resolve easement damages on existing right-of-way.
6	Billy R. & Janet M.	Short	Collibeliation on last mice crossing and the collection	
10	Thomas & Susan	Llark		
11	G.E.	Black		
uume Lineaansaa			<b>G. Harvey:</b> Mr. Bailey is unhappy with the project. He wants to lease property to EKPC instead of granting an easement. He said	EKDC's wronosed route is to the north of existing line.
12, 15, 16	Reubin Jr. & Sherill	Bailey	he preters that new line be located on north side of existing line.	FINE Co biohosen to any to the the time of the to t
13	J.C. & Ida O.	Wall		
14, 17	Edith	Smith		

EK Map	First name	Last name	Open House comments	EKPC Followup
No(s)				
			M.J. Warner: After Sept. 5, call Duane Curry, codes	
			set if EKPC should go to meeting 1st or 3rd Tuesday. Dr. Witt	R. Terrill emailed a contour map to Dr. Witt. In a followup phone conversation with Terrill. Dr. Witt said a field visit would not be
			prefers brown steel. Clean up structures not up 1-1-2 at 131 control of the contr	necessary.
			county. Would prefer EKPC build new double-circuit line, then	N. Comer and R. Terrill made a presentation to the Madison
			move circuit over and tear down old line and poles.	commission members expressed a preference that EKPC rebuild
			soil. Parallel on the north. 1-75 crossing is messy. EKPC should	existing transmission lines rather than co-locating beside existing
		***./11	meet with county planning board. Email contour map to	EKPC is taking photos to document possible erosion.
19	Tanya Baker	W III		On EKPC Parcel #21, EKPC considered routing line on south side
			B. Murrey: Bartons prefer line on south side. OK to survey. 859-	but would impact improvements on Parcel #22. In addition, would remine ouxs.
20	Harold B. & Martha H.	Barton		Ityluity 5475.
			Returned open house survey. T. Mumm: Mr. Harris prefers transmission line be located on	Line could not be located south of existing line due to buildings on
21, 29	Harold & Evelyn	Harris	south side with no guy wires. Keep out of fields.	aujarciii propriij.
22	Joan	Shackeltord	hod martine about easement	
		Wells	<b>B. Grillon</b> : Property owned that questions about super-	
23	William B. & Carlavon L.	WCIIS	110600101010	
			<b>D. Adams:</b> Mr. Harris' father owns #21 & 31. The existing line has poles that have taken away good pasture land. Preference is the evision of the existing line. Also, wants poles	Structures will be located outside of agricultural operations, if
			located so as not to take away good pasture land on his father's	possible. Line could not be located south of existing line due to.
24	William Haden & Ruby	Harris	parcels. Wants to be notified about plaits on itis ration a parcels.	
25		Hart Farms Ltd.		
			<b>T. Mumm:</b> Fortneys prefer line be located on south side. On	
Č	Toutho & Ganaviave H	Fortnev	previous occasions, have had problems with access, cutuing fences and leaving gates open.	Buildings on Parcel #22 limit ability to move south.
07	Jephila & Ucilcvicve 11.	Courto 1		
27	Pamela & Gloria Crabtree	Love		
28, 30	Terry Allen & Rosana	Wilson		
			Returned open nouse survey. T. Mumm: Mr. Harris said he does not have a preference which	
31	Harold	Harris	side line is located.	
32, 33	Orval M.	Reid		

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
		-		
34	Verna	Eaton		
35	Charles J. and Nicole M.	Neeley		
36	Donald G. & Sheile	Edwards		
7.7	Buby	Pearson	R. Terrill: Land a little rougher. OK to survey.	
10	Vuuy		<b>G. Harvey:</b> Mr. Brassfield's property is off the right of way but he is concerned about static on fences and metal roof. He prefers	-
38	Steven W.	Brassfield	If the line be on side away from his house.	Proposed route is located on side away from house.
36	Saundra V. Darrell N. & Sarah M.	Caudill	<ul> <li>B. Grillon: There is a 24" gas line on the western property line. Caudills prefer use of non-restricted herbicides.</li> <li>M.J. Warner: Ms. Caudill wants advance calls on entry and for future maintenance. She wants to discuss restrictions on access path to easement and has concerns about "issues" vs. "money." She asked if there will be more circuits in future and expressed preference for double circuiting line. She also asked about other oppurtunities for input.</li> <li>J. Settles: The Caudill has concerns about turtures roosting on structures.</li> <li>P. Dolloff: Ms. Caudill has concerns about EMF and was offered materials.</li> </ul>	T. Hayes of EKPC met with Mr. Caudill on 11-16-06 to discuss a number of issues including the use of herbicides and entry to property.
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Summary of Open House Comments and EKPC Response

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EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
CK 11	Tames D & Wavvlen	Wells		
43	Paul & Mildred	Wells		
C+				
		U0		
44	Iviiciiaei U. & lasa U. Herhert	Wolfinbarger	<b>D. Ballard:</b> B. Saia is considering purchasing this property.	
Ê	110011	0	D. Adams: Mr. Reams had concerns about EMF that were	
			addressed by P. Dolloff.	
			G. Harvey: Mr. & Mrs. Eirich live in doublewide on property.	
46	Ronald G. & Brenda P.	Reams	They are UN with project. The reams property is sugnity outside the study area.	
47	Keith Turnin & Betty B.	Parke		
			<b>G. Harvey:</b> Mr. Sword has no problem with the project. The existing line only clips his property. Looks like line will be on	
48	Cecil F, & Lillian J.	Sword	side away from house.	
49	Robert M. & Linda P.	Brant	D. Ballard: Not affected.	
			<b>D. Ballard:</b> Mr. Bunch prefers line be located on northwest side	
50	Gene Alan	Bunch	01 ITARISTIUSSION THE. UN tO SULVEY.	
51	Michael W, & Alice E.	Murphy	R. Terrill: Property is inside the corridor.	
52	Bennie Sue & Bobby R. Howard	Helton		
53	Edward T.	Rader		
54	Mary A.	Stamper		

EK Map	First name	Last name	Open House comments	EKPC Followup
10(2)				EKPC to verify ownership. City of Richmond might have
55, 57	Allen D.	Grant		ourchased property.
2K	Tohy R & Karen	Wehb		have purchased it.
90	Dorothy F.	Johnstone		
59	Mark F. & Carolyn Sue	Sweet		
60	Charles T. & Patsy N.	Baker		
619	Mitzi A & Felix A	Talamantez		
10			Returned open house survey.	
			T. Mumm noted "Thomas Masters" for this parcel. B. Grillon: Noted "Tom Masters" Property owner is planning on	
			lot for his retirement. The north side of the parcel is preferred.	Cannot move around other properties because of impact on other
62	Thomas	Masters	Parcels #55 & #56 owned by city.	property owners.
63	Dan C & Patti C.	Reynolds	T. Mumm: Not affected.	
64	Gary D. & Marianne	Reams		
59	Flinor Ann Hisle	Routt	<b>H.K. Cunningham:</b> Ms. Routt has concerns about EMF. EMF issues were addressed at open house.	
60		11-11-	C University Onterida of study area	
99	Stephen & Susan	Wells	G. Hal yey. Ouiside of study upon	
59	۲. م	Adams		
in	TOP	Millard Jones Life	<b>B. Sharp:</b> Mr. Jones said he wanted original line to be on	EK PC monosed to construct line parallel to north of existing line.
68, 70		Estate	northern property line.	
07	н м	Coleman		EKPC to verify mailing address.
10	Trin C	Fenton		
1/	Laura G.			
72	Evan H. & Lillian F.	McCord		
73	Coleman BOR	Witt	b n 1. 1. D. f	
74	Evan H. & Lillian F.	McCord	<b>D. Ballaru:</b> Freiers foure of not near and of variants transmission line. Cell:	Proposed Route on North side of existing line.

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EK Map No(s)	First name	Last name	Open House comments	EAFC FOILOWLP
31		William McCord Est	D. Ballard: Prefers route on northern side of existing transmission line. Cell:	oposed Route on North side of existing line.
C		Deatherage &		
76		Deautotage		
!	Ę	Harrison		
77	Peyton K.	Durbin		
78	Shirley	Duroin		
62	Charles J. and Nicole M.	Neeley		
		To the second	<b>D. Adams:</b> Roundtree Corp. owns property. Market Street Timber Inc. is long-term lessee. They have stacks of timber. Four concerns: 1) They often move logs around with cherry pickers 25- 30 feet in height. 2) They plan to build a storage building on higher elevation property. 3) Log crane is used to stack logs. 4) 11 se wireless handheld devices and concerned about interference. It	Not being crossed.
80		Kounatree Curp.	OSC MILCIOS HUILING CONTRACTOR	
x	Мауле	Lake	<ul> <li>G. Harvey: Doris Horne owns property in several different locations. Prefers this property be crossed if one has to be. She would not give a preferred location for crossing this parcel.</li> <li>J. Settles: Ms. Horne is concerned about herbicides and application, especially that applicators would cause damage.</li> </ul>	Herbicides policy on parcel will addressed in easement negotiation.
82.83	\ \	Hager Family Limited Partnership	<b>B. Grillon:</b> Property owners wanted information about route. There are townhouses in corner of parcel.	Not being crossed. Sent letter to that effect.
84	Neville T. & Josephine	Cotton	<b>T. Mumm:</b> Property is being developed. No problem with corridor.	
85		Smith Children Irrevocable Trust	<b>R. Terrill:</b> Smiths prefer line go along north property line. There is already one line and a gas line. Prefer the Newby line.	EKPC to verify property line.

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Appendix C
EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
56	Dichard Inc	C <sub>arr</sub>	<b>R. Terrill:</b> There is a gas line on the property. Mr. Carr does not want on northern part of property.	Proposed route will not cross northern portion of property. EKPC will verify property line and gas line.
87	C.S.	Wagers		
88 80	Richard IV & Martha J.	Cobb	<b>T. Mumm:</b> Cobbs prefer that new line parallel existing line, if possible. If not, they prefer that line follow property line.	EKPC's proposed route does not cross #88 or #89.
00	David L. & Harriette	Williams		
16	Klinton	Gilkerson		
92	Darrell	Wells	B. Sharp: OK to survey	
93	W. Denvce	Wells	B. Sharp: OK to survey	
94	Dwavne	Wells	B. Sharp: OK to survey	
95	W, Dwayne	Wells	B. Sharp: OK to survey	
96	Archie & Sheila	Wathen		
97, 102	James R.	Kelley		
98 104	James & Linda	Kellev	<b>H.K. Cunningham:</b> Mr. Kelley does not have a preference which side of the existing line the new line goes on. May lose a barn.	
99, 101	Alvin Jr. & Virginia	Foster		
1001	David & Donna	Rhodus		
103, 105	Lynda H.	Stivers	G. Harvey: OK to survey. Call Ms. Stivers or Don Kelley	
106, 107	Вапту & Joyce	Roberts	<b>D. Ballard:</b> Mr. Roberts said he would prefer the transmission line be located on the other side of the corridor.	EKPC's proposed route does not cross #106 or #107.
108	Jerry D. & Beverly Ann	Gumm		
109	Thomas E. & Deborah S.	Lane		
110.112	Stevie David & Jamie Lynn	Caldwell		
111	David E.	Phillips		
113	Michael & Peggy	Azbill	<ul> <li><b>D. Ballard:</b> Azbills said either side of existing transmission line is OK. OK to survey. Phone: <b>Example 1</b>. Settles: Azbills said access road is washing out and they want to know if EKPC can help maintain road.</li> </ul>	T. Hayes of EKPC contacted Mr. Azbill on 11-28-06 and discussed road maintenance issues.

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
114	Darrell	Osborne	T. Mumm: Mr. Osborne prefers new line stay south of existing line, and just south of barn is even better.	Proposed route will not cross #114.
115	Rhonda	Rule		
116	Arthur & Hazel	Turner		
117	Frank & Mertie	Jordan		
118	Melissa & Sarah	Turner		
011	l eonard & Linda	Rohinson	<b>D. Adams:</b> Robinsons are concerned about EMP issues. One of them (or a neighbor) is a cancer survivor. (EMF concerns were addressed at open house.) <b>R. Terrill:</b> Parcel is in a subdivision.	
		Nocilia de la companya		
120	Sandra	Culpepper	R. Terrill: Parcel is in a subdivision.	Proposed route will not cross #120.
121	Max & Bonita	Kraft		
122	Donald & Catherine	Rosenfarb		
123	Albert	Robinson		
124	Roland	Conner		
125 & 135	Thomas M. & Margaret Ruth	(Fox		
126	Robert & Deborah	Griffin		
127, 128	Jeffery & Michelle	Taylor		
129	Robert & Janis	Day		
130		Lionel Hill C/O Bonnie Hill		
100				

Summary of Open House Comments and EKPC Response

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EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
131	Avery & Susan	Mullins		
132	Delbert & Carolyn B.	Ousley		
133		Coy & Jones		
134		GMR LLC		
136	Ardith	Ross		
137	Wallace	Reams		
			<b>G. Harvey:</b> Mr. Howard said it is OK as long as line does not cut through the middle of the farm. Begin parallelling near east property line. (One property line shown on the open house maps	
138, 142	Joseph B.	Howard	is incorrect.) Parallel on the south if possible.	EKPC's proposed route parallels to south of existing line.
139, 141	Billy & Linda	Curtis		
140	Vernon & Lois	Mathis		
143	Barbara Jean	Smith		
144	Elvin & Angela	Smith		
145	Paul & Becky	Reams		
146	Eddie & Tammi	Warren		
147	Elizabeth A.	Doll		
148	Betty Jo	Harvey		
149, 150,	۲  ۲	Ĩ	H.K. Cunningham: Tracts will not be affected. Will be within	Harmons were mailed a packet of information regarding EMF by N.
152, 153	James Darby & Rosemary	Harmon	signt. Mr. Harmon nad Elvir questions.	
[51	Cleveland Jr. & Ima Jean LE	Perkins	<ul> <li>B. Murrey: Parcel is outside of corridor.</li> </ul>	
154, 160	Shirley W. & Cleo F.	Durbin		
951 551	Dirrane	Foster		
157		Pinpoint Pronerties LLC	B. Grillon: EKPC is crossing corner of property.	
158	Charles & Betty	Dargavell		
159	Billy G. & Brenda K.	Dargavell		

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
161, 163	Kenneth & Dorothy	Tudor	D. Ballard: Mr. Tudor plans to subdivide #163 into 20 lots. Prefers transmission line be located on south side of corridor in treeline. OK to survey. Also owns part of #160. Letter from attorney dated 9-5-06: EKPC can deal directly with Mr. Tudor but copy all correspondence to attorney (David L. Bohannon, Sword, Floyd & Moody, 218 W. Main St. Richmond, KY 40476-0300)	EKPC to verify with Mr. Tudor that it is OK to copy correspondence to attorney.
164	Kerri	Isaacs		
165	Jason & Kelli Stearman	Wright		
166	Mark & Elizabeth	Morrow	<ul> <li>B. Murrey: OK to survey, but call first, manufactor of construction</li> </ul>	Double circuit was considered but was ruled out because of economic feasiblity and proximity to houses on $#164$ and $#165$ . B. Grillon met with Mr. Murrow on 1-30-07 to discuss options for adjusting proposed route.
167	Sue G.	Riley		
168	Darrell & Janice	Reece		
169	Gene & Ruth	Morris	M.J. Warner: Spoke with Mr. Jones: There are four houses on the same tract. It is a trust. It's not likely affected. He wanted to see structure type.	
170		Unknown		
171	Jonathon Scott & Jane	Guiley	B. Sharp: Possibly will not affect.	
172	Terry & Emily	Agee		
173	J.B. & Louise	Agee		
174, 176	Roscoe & Louise	Winkler		
175	W. Cloyd	Short		
177	Greeley B. & Larry Donald	Long		
178	Russell Jr. & Stephanie	Carson		EKPC to verify ownership.
179	William F.	Curtis		

EKPC Followup	EKPC proposes to rebuild existing line on #180 & #181.				EKPC proposes to rebuild existing line on #185.		T. Hayes of EKPC contacted Mr. Webb on 10-22-06 and discussed herbicide application and entry to property. EKPC proposes to rebuild existing line on #187.			
Open House comments	<b>R. Terrill:</b> Owner prefers EKPC build double-circuit line. No problem to parallell to the south. Do not enter field if it is wet.	G. Harvey: Ms. Hovermale does not want another line on her property.			<b>B. Murrey:</b> Mr. Rogers said it is OK to survey but call first, the mean of the second state of the second		<b>R. Terrill:</b> Mr. Webb prefers north side. Tom Hayes to call about spraying. Work:			
Last name	Long	Hovermale	Simpson	Roman	Rogers	Chandler	Webb	Edinoton	Cornelison	Minerich Inc.
First name	Don & Janice	Rachael L.	Willard T. & Debra J.	Julius J. Jr. & Velinda S.	Rov	Ruth Masters	Barry J. & Wayne L.	Lerry & Darothy	John	1
EK Map No(s)	180, 181	182	183	184	85	186	187	100	180	190, 191, 192, 194

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EK Map	First name	Last name	Open House comments	EKPC Followup
No(s)				
195, 196	Shelby Joe & Ann	Masters	<b>B. Murrey:</b> OK to survey. Masters prefer line on south side.	EKPC proposes to rebuild existing line on #195 & #196.
197,200	Edward	Taylor		
193	Gordon & Sally J.	Cotton		
198	James R.	Cotton		
199	Alfred E. & Brandyn L.	Winkler		
201	William R.	Masters		
202	Kenneth & Brenda	Fowler		
203	Alco & Cleo	Ward		
204	James E. & Magalene	Tipton		
205	Wm. M. & Johny M.	Collins	D. Ballard: Mr. Collins had no problem with this location.	
206, 207	Lloyd Wilson	Rhodus		
			<b>B. Sharp:</b> OK to survey but call first <b>D. Ballard:</b> Does not want transmission line located next to existing line	
	Norvoline Cates	H H	<ul> <li>M.J. Warner: (Attended East open house in Richmond.) Ms.</li> <li>M.J. Warner: (Attended East open house in Richmond.) Ms. Cates had questions about EMF. Discussed health issues from news/press. Took EMF information.</li> <li>M. Stevens: OK to survey but call first. Ms. Hale has concerns about previous damage she says was done by EKPC.</li> </ul>	EKPC proposes to rebuild the existing line on $\#208$ (might cross) & $\#211$ .
441				
600	less	East		EKPC to verify ownership.
210	Neal & Dona	Rogers	R. Terrill: Wrong owner.	EKPC to verify ownership.
			<b>B. Murrey:</b> Property owner said when pole was replaced about one year ago, rocks were left in field. If EKPC parallels existing	210 m avieting avieting 10 #2010
212	Hogan	Moore	line, property owner preters new line be on east suce.	TULC biobases to require avisating time at white
213	Edd	East		
214	Hogan & Pauline & Hogan	Moore		

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
215	Glenmore	Prather	<b>T. Mumm:</b> Prefers rebuild, but if that is not possible, parallel to the southeast. Concerned about tearing up fences, clearing right-of-way.	EKPC proposes to rebuild existing line on #215.
216	Hogan & Pauline	Moore		
217	Jerome	Krumpelmon		
218	Marvin & Linda	Gill		
210	Priscilla Ann	Hawkins		
220	Newland Walker	May		
221.225	William Kirby & Ann & Arthur	Teater	<b>D. Ballard:</b> Set up field meeting for 9-5-06 at 1 p.m.	EKPC personnel met in the field with Mr. Teater on Sept. 5, 2006.
222	Ine	Coker		
222	A D	East		
VCC	Reschell A	I emaster		
477 JC1	Dandy & Angle	Preston		
220, 271	Nalluy & Augic	Folay		
227, 231	Mantord & Kathleen	roley		
228. 229.			<ul> <li>T. Mumm: Foleys prefer that poles be set in fences, not in fields; go south of barn on #231, miss field on #232; colocate on either side if possible.</li> <li>D. Meadows: Foleys prefer that EKPC use existing line. If new line is necessary, they prefer it be outside fences on #243 and</li> </ul>	EKPC proposes to rebuild existing transmission line that crosses #228. A small relocation of existing line near #243 will result in an
232. 243	F.C. & Alleta	Foley	cross road south of barn and north of house on #231.	easement on corner of #243
230	Woody & Darrell	Rhodus		
233	Delbert	Newby		
234, 235, 237	Ronnie & Christine	Moberly		Centerline adjusted due to proximity to existing home.
236	Steven S. & Linda G.	Browning		
238	Fred & Hallie	Lear		
239		John Kennedy Heirs		
240	Carliss & Frances	Conley		
241	Laurence & Joyce	Land		
242	Dorothy	Long	B. Sharp: OK to survey but call first.	
244	Charles E. & Barbara	Ray	<ul> <li>J. Settles: Prefer rebuild over parallel and prefer north route.</li> <li>R. Terrill: Prefer north route. Prefer rebuild. New owner.</li> </ul>	EKPC plans to rebuild existing line on #244.
245	William & Dora	Godber		
246	Gail	Stewart		
A	ppendix C		Summary of Open House Comments and EKPC Resp	onse Page 13 of 21

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
247	Ethel D. & James Porter	Wilmot	<b>B. Grillon:</b> There is a shop on the property east of fields on west side. Mr. Wilmot would prefer line not be on the ridge. He is planning a pond. Contact about mitigation.	EKPC plans to rebuild existing line on #247.
248	James H. & Bruce	Warren		
249	James Henry	Warren		
250	James H. & Dorothy	Warren		
			M.J. Warner: Stones asked about distance and EMF. Their home is near lines. They wanted to know about shielding by tractor cab. They took information and business card.	
			<b>B. Sharp:</b> OK to survey but call first (cell: <b>B. Sharp:</b> OK to survey but call first (cell: <b>B. Sharp:</b> Ok are concerned about blind calves. Please remove old notes 1 ook at moving old onvs near old hav rolls.	
252, 276,			<b>J. Settles:</b> Stones are concerned about herbicides and blind calves, as well as treatment on poles. On #325, move guy wires	T. Hayes of EKPC contacted Mr. Stone on 11-22-06 and discussed herbicide application, guy wires and removal of old poles from
325, 326	Carlisle & Patricia A.	Stone	near hay field.	property.
253	Russell D. & Agnes	Purcell	M. Stevens: OK to survey, but call first. Shop:	
254	Roger	Purcell		
255, 267, 275, 282, 375		Teater Bros Inc	B. Sharp: Phone:	EKPC personnel met in the field with William Teater on Sept. 5, 2006.
256	Patricia L. & Wm. Russell	Elmore	M. Stevens: Parcel has a newly built home that does not show up on map.	EKPC's proposed route does not cross #256.
257	Ronald & Theresa	Elwood		
258	Opal	McCulley		
259	Gary & Josephine	Ray	<b>B. Sharp:</b> Son has pacemaker.	
260	Terri Carter Odell	Murphy		
261	Othle W. & Barbara S.	Rav	<b>B. Grillon:</b> Gas line crosses property. Rays are concerned about grounding barns and fences. EKPC personnel addressed grounding of fences and buildings at open house.	
			<b>B. Grillon:</b> Mr. Vagaskey prefers line does not come up driveway or cut trees and says he is building house. He asked	
262	Steven M. & Faye M. Campbell	Vagasky	about constructing windmills. Responded that windmills are OK as long as they are not in easement.	EKPC's proposed route does not cross #262.
263	Eddie & Janet	Hasty		

 T			T	T	r		 T	T	T	Т		Т	 Г		T	Γ		
EKPC Followup														T. Hayes of EKPC contacted Mrs. Baker on 11-27-06 and	discussed applications of herbicides and entry to property.		EKPC's proposed route does not cross #285.	onse Page 15 of 21
Open House comments						<b>B. Sharp:</b> OK to survey but call first <b>B. Sharp:</b> Tennessee Natural Gas pipeline.								<b>R. Terrill:</b> Bakers do not want line and do not want spraying of herbicides. They say there have been livestock problems since spraying. They also have concerns about EMF.	J. Settles: Bakers said neighbor may have problems with cattle.	-	<ul> <li>Returned open house survey.</li> <li>B. Grillon: There is a barn on the edge of the corridor. Mr. Black said this parcel is the location of the John Hendrickson home site.</li> <li>D. Meadows: Mr. Black plans to use parcel as future home site for children. Parcel is site of 1770 John Hendrickson log cabin.</li> <li>M.J. Warner: Mr. Black is concerned about property value and future development.</li> <li>B. Sharp: Mr. Black is concerned about the route. He does not want the line. He would prefer line goes up the hollow.</li> <li>J. Settles: Mr. Black's home was an old log cabin. May need to investigate.</li> </ul>	Summary of Open House Comments and EKPC Resp
Last name	Mary Dorothy	McCulley Trust	Dillard	Hasty	Kelly	Oliver	Hammock	Middleton	Gibson	Kelly	Strunk	Gibson	Ray		Baker	Tudor	Black	Droaddus
First name			Charles & Rita	Shannon & Judy	Henry R.	Kevin & Deana	William E. & Paula D.	Maurice & Keith	Earl & Loretta	William B.	Mark & Elizabeth	David	Dwight Denny & Patricia	0	Paul J. & Jewell W.	Robert L. & Debbie	Paul & Oneida	Ronnie moondiv C
EK Map No(s)		264	265	266	268	269	270	272, 273	278, 279	271	274	777	 280, 327		281	283, 284	285	286

EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
287	Marc & Gilbert	Creech		
288	Dennis & Claudia	Smith		
			<ul> <li>Returned open house survey.</li> <li>B. Grillon: Mr. Simpson said there is a 1796 home site on the property that belonged to Randolph Hall, a preacher.</li> <li>B. Sharp: Mr. Simpson is concerned about the route. He does not want the line. See about Jim Clark Road along the top of the hill. There are potential historic sites.</li> <li>D. Meadows: Mr. Simpson plans to use parcel as a future home site for his children. Parcel #289 was site of 1796 Randolph Hall house that was destroyed by fire in 1830.</li> <li>M.J. Warner: Mr. Simpson was concerned about property value and ruining high development potential. He asked why not use northern rout? Explained to him further assessment and EKPC's conclusions. Mr. Simpson asked about negotiating an alignment. Explained next steps, including notice to property owners with plat and CPCN application. Explained EKPC could work on location until then and with minor adustment after PSC action, if approved.</li> <li>J. Settles: Mr. Simpson has archaelogical concerns about #289. He says a 1700s-era house burned in 1830 and he recovers</li> </ul>	
289, 296	Fred Logan	Simpson	pottery, etc., when plowing.	EKPC's proposed route does not cross #289 or #296.
290	Jimmy Ray	Doolin		
291	Jeffrey & Kimberly	Black		
267	James E. & Bertna Vouneth & Berhara	Montgomery		
794	Iohn Wesley	Gorman		
297	Robin	Whisman		
298	Paula	Tuggle		
000	Darel M. 8. Wather D	Turale	<b>D. Meadows:</b> Tuggles said they prefer line go on southern part of monerty.	EKPC's proposed route does not cross #299.
300	Gordon W & Katherine I	I uggic Hastv	vi proporti.	
301	Ronald & Pamela	Ray		
302	David Allen Jr.	Ray		
303	David A. Sr & Carol	Ray		

EKPC Followup			n EKPC's proposed route does not cross #306.					e EKPC's proposed route does not cross #321.			G		
Open House comments	<b>B. Sharp:</b> OK to survey.	Mr. Pendleton attended the Oct. 10, 2006 open house for the KU Lancaster to Garrard Co. project and said he does not want transmission line on his property.	<ul> <li>B. Sharp: All of the farm is now a platted subdivision. Could go along the subdivision and south side of the tract.</li> <li>H.K. Cunningham: Property has been subdivided. Can live with line on lower end, away from his house.</li> </ul>					<b>D. Ballard:</b> Ms. Clark is mother of Virgil Clark who worked in right of way for the state Department of Transportation for 30+ years. Life estate in property. Ms. Clark prefers transmission line be located between their home (#321) and uncle's home (#380), and parallel property line.			R. Terrill: This parcel is along a rebuild section and existing lind does not cross property.		
Last name	Bilbrey	Billy S. & Freda M. Pendleton Trust	Howard	King	Landmasters AVG LLC	Drew	Leavell	Clark	Davis	Beck	Hall	Jasper	Poynter
First name	Joe T.		Holton & Nancy	Michael J.		Grover W. & Teresa	Woodie & Marsha	Elizabeth	Roy & Debby	Joseph D.	Dan & Dorothy	Gary	Sue
EK Map No(s)	304	305	306	307	308-316	317	318, 319, 320	321	322	323	324	328	329

EK Map No(s) 330, 331	First name Billv Joe & Janice	Last name Yocum	Open House comments	EKPC Followup
32, 334	Roy	Davis		
335	Roy & Sue	Davis		
336	Roy & Sue	Davis		
337	Roy & Sue	Davis		
38, 339	Gabriel & Sharon	Edwards		
340	Patsy K.	Hume		
341	Ernie & Aundria	Davis		
342	Billy & Bruce	McMillian	H.K. Cunningham: <b>1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1</b>	
13, 344, 347	Shane E. & Sheila K.	Meece		
345	Wm. Carroll & Patsy	Broadus	<b>G. Harvey:</b> Mr. Broadus does not want a line on his property. He has had a bad experience with another line. May be a cooperative line.	
46, 348	Thomas Robinson & Vicki	Naylor		
349	Kevin & Keith	Middleton		
350	Mitchell & Connie	Lamb	<b>D. Ballard</b> : Locate on back of property. Prefer it not be on their property.	EKPC's proposed route is on the back of #350.
351		Michael C Noe & Merit Livestock		
352	Eulalah	Gilliam		
353	Judith Kirby	Shearer		
354	Elzie & Carlie P.	Barker		

EKPC Followup														EKPC's proposed route does not cross #367.						
Open House comments									<b>G. Harvey:</b> Unlikely they will be crossed. They are concerned about devaluing the property.	M.J. Warner: Collected information about EMF.				<ul> <li>M.J. Warner: Mr. Underwood collected EMF information and took some information for neighbor (Ophelia Parker, #368) and took business card.</li> <li>D. Ballard: Mr. Underwood does not want transmission line on this side of the corridor. He does not have a problem with the centerline of the corridor.</li> </ul>				B. Murrey: OK to survey.		B. Sharp: Probably will not cross.
Last name	Barker	Montgomery	Norton	Bolton	Pickett	Reusche	Young	Collins		Lane	Vice	Miller	Leavell	Underwood	Parker	Bean	Cox	United Methodist Church	Henderson	Foster
First name	Edward & Lucinda	Kenneth E. & Barbara	Kenneth D.	Ricky & Vickie	Allen & Tami L.	Sylvia	Sammy & Kimberly	John & Helen		Earl & Noemi	Rhonda	Lorraine	Joe	Kenneth & Phyllis	Ophelia	Para Lee	Jimmy W.		Tom M. & Susan	Kevin E. & Charity M.
EK Map No(s)	355	356	357	358	359	360	361	362		363	364	365	366	367	368	369	370	371	372	373

Summary of Open House Comments and EKPC Response

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EK Map No(s)	First name	Last name	Open House comments	EKPC Followup
374	Jimmy Rondal & Mildred	Broadus		
376	Judith	Clark		
			<ul> <li>R. Terrill: Gas line on property. Mr. Prewitt prefers that line come down property line.</li> <li>J. Settles: Property owner asked what bats were caught on the property. Settles responded that red bats and big brown bats were</li> </ul>	
377, 378	Donnie & Stella	Prewitt	caught.	
070		Davíd Daniel Marcy Inc		
380	Rov & Hildreth	Patterson		
			<b>B. Sharp:</b> Try to keep the line as far south on property as	
100	D & Chirlon	promo 11	possible. H.K. Cunningham: Prefer to keep line to the south, if possible,	EK PC's nronosed route does not cross #381.
387	Radford W & Nancy F	Iones		
200	David E	Dottoron	T Mumm. Will not he crossed	
383	Davia E.	Falterson		
			<b>D. Ballard:</b> Prices do not want line to cross their property and do not want to see the transmission line. Will not sell easement. Will start letter-writing campaign. There is a house on the back of the	
384	Phillip & Deirdre	Price	property. Two 4-acre tracts.	
385, 386, 387	Wm. Kirby & Ann C.	Teater		
388	Louis D. & Ann W.	Ball	<b>H.K. Cunningham:</b> Property is barely in corridor, unlikely to be affected.	
0000				
			<ul> <li>B. Sharp: OK to survey.</li> <li>T. Mumm: Hesters prefer that line go to the north on the back side of the ridge, don't cut trees and stay away from creek.</li> <li>B. Murrey: Mr. Hester prefers line to be as far away from the statement of the statemen</li></ul>	
			residence as possible, atong ridge, don't cut nees and sidy away from creek.	
			<b>J. Settles:</b> Mr. Hester requested that line be located as far away from house as possible and EKPC remove as few trees as	
005 035	leffrev C. & Iamie	Hester	possible. Mrs. Hester requested that EKPC take her school class netting.	
			G. Harvey: Mrs. Hatfield is concerned about cutting trees where	
			her husband hunts.	
		F L - 27 - 11	M.J. Warner: Mrs. Hatfield had questions about EMF. She took	
391	WENDELL K. & NATER S.	Пациени		

EKPC Followup				EKPC to verify ownership.		
Open House comments			B. Sharp: Likely to cross.	T. Mumm: Prefers that line stay to the north.		
Last name	Sutton	Dunn	Tolson	Amold	Arnold	Bourne
First name	Patricia D.	Arthur L. Jr.	Corbett & Deborah	Colby	Colby Clay & Joan C.	Samuel & Charles
EK Map No(s)	392	393	394	395	396	397