

FACT SHEET

TRANSMISSION LINE PREFERRED ROUTE EAST GLASGOW, KENTUCKY

Based on preliminary environmental review, engineering surveys, land use, cultural and public input, TVA has selected transmission line alternative route 7 as the preferred route for the new transmission line that will power the East Glasgow, Kentucky 161-kV substation owned by Glasgow Electric Plant Board. TVA will conduct environmental field studies, as required under the National Environmental Policy Act (NEPA), on the proposed transmission line route.

Evaluation Criteria

TVA uses several tools to evaluate alternative routes for new transmission lines and to identify a preferred route:

- ∞ Information from property owners, open house participants, interest groups, elected officials, subject matter experts and others
- ∞ Topographic maps
- ∞ Aerial photography
- ∞ Geographic Information System (GIS) constraint maps
- ∞ Field reconnaissance surveys
- ∞ Professional experience

Ultimately, in making the final decision, TVA weighs and balances public input and all pertinent engineering, environmental, land use and cultural considerations. The final decision may not always be the shortest or least expensive route. Although individual property owners may feel significantly affected, the objective of the process is to ensure that the solution will address the need and that overall impacts, as well as impacts to the community at large, are minimized.

Assessment of Alternative Routes

Eight route segments were identified for the East Glasgow project. Six alternative route corridors were developed from the segments presented at the Open House. It was determined after the open house that the existing transmission line next to segment 2 could be retired and segment 2 built on that right-of-way (ROW). Therefore two additional alternative route corridors were evaluated. The eight alternative route corridors were developed from the segments as shown below. These alternative routes can also be seen on the map (see www.tva.com/power/projects/index.htm).

<u>Alternative Route</u>	<u>Segments</u>
1	1, 2, 8
2	1, 2, 7
3	3, 4, 6, 8
4	3, 4, 6, 7
5	3, 5, 6, 8
6	3, 5, 6, 7
7	1, 2, 8 (with segment 2 using existing ROW)
8	1, 2, 7 (with segment 2 using existing ROW)

Each alternative offers different opportunities and constraints for power line construction. Opportunities include characteristics such as open land, areas less suitable for development and lack of sensitive environmental areas and land use conflicts. The assessment of the opportunities and constraints for these eight alternatives are summarized in Table 1 (see page 4) by engineering, environmental, land use and cultural impacts.

Engineering

After evaluating the alternative routes for the number of road crossings, railroad crossings, existing transmission lines affected, and/or tap location, no significant constraints were found along any of the alternative routes. Alternative routes 7 and 8 do not require crossing a transmission line, have the better tap location and use existing right-of-way as part of the overall length.

Environmental

Environmental resources include new right-of-way, forestland, flood plains, sensitive stream crossings, wetlands, caves, threatened and endangered species or sensitive environmental areas. No flood plains, sensitive stream crossings, caves, endangered species or sensitive environmental areas were found. The major environmental constraints for alternatives 3 through 6 are wetlands and for alternatives 1 and 2 the amount of new ROW.

Land Use

Schools, dwellings (houses and apartments) and commercial buildings are considered to be constraint features; however, none of the alternative routes are in close proximity to schools, apartments or commercial buildings. Route 7 is close to three houses.

Alternative 7 has the least number of parcels affected by new ROW. There is no significant difference in the number of parcel affected by construction.

Cultural

Cultural resources include features such as archaeological sites, cemeteries, historical sites, historic structures, churches, and recreational areas. The preliminary environmental review has identified one historic site near alternatives 3 through 6. None of the alternative routes fall near churches, cemeteries, or recreational areas.

Preferred Route

Table 2 ranks the result of the eight alternative routes based on the features shown in Table 1.

**Table 2
Alternative Route Ranking**

Alternative Routes	Rankings by Criteria			
	Engineering	Environmental	Land Use	Cultural
1	6	5	2	1
2	2	8	5	1
3	6	6	4	5
4	2	6	8	5
5	6	1	2	5
6	2	1	5	5
7	5	3	1	1
8	1	3	5	1

Based on the information evaluated, alternative route 7 presents the greatest opportunities and fewest constraints of all the alternative routes considered. As a result, route 7 has been identified as TVA's preferred route. Even though alternative routes 7 and 8 have similar ranking values, it is preferred as a result of the impact to fewer houses and parcels. The impact to houses and parcels are weighed more than the engineering impact of the additional local road crossing and the slight increase in line length.

Improvements to the Preferred Route

TVA will send letters to the affected property owners explaining the project and requesting permission to access their property for the purposes of conducting field surveys. A map showing the preferred location on their property will be enclosed. Adjustments may be made based on discussions with property owners.

Other Possible Adjustments

TVA will conduct a detailed environmental review of the proposed route. During the review, onsite environmental data will be collected and analyzed as part of the decision making process. This may lead to further minor modifications of the route to minimize impacts.

Table 1

Assessment of Alternative Routes*

Alternative Routes	Engineering					Environmental				Land Use		Cultural
	Length of Route - Miles	Road Crossings - State	Road Crossing - Local	Transmission Line Tap Point	Transmission Line Crossing	New Right-of-Way Acres	Forestland Acres	Minor Stream Crossing	Wetland Acres	Houses within 300'	Property Parcels - New Right-of-Way	Historic Sites within 1000'
1	2.57	0	2	1	1	31.28	2.65	6	0.18	2	11	0
2	2.43	0	1	1	1	29.69	2.65	6	0.20	4	11	0
3	1.58	1	2	2	1	19.26	0.87	3	0.69	2	16	1
4	1.44	1	1	2	1	17.65	0.87	3	0.71	4	16	1
5	1.56	1	2	2	1	19.11	0.00	2	0.53	3	8	1
6	1.43	1	1	2	1	17.50	0.00	2	0.55	5	8	1
7	2.57	0	2	1	0	20.66	1.30	6	0.21	3	7	0
8	2.43	0	1	1	0	19.02	1.30	6	0.22	6	8	0

Preferred Route

7	2.57	0	2	1	0	20.66	1.30	6	0.21	3	7	0
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*This table reflects the major considerations which affected the final site rankings.