



## Electric Reliability Project Fact Sheet

### Line 17 and Line 55 (Interstate 10 corridor)

**1. If the North option is chosen, will it require any removal of trees from the adjacent lots in the Whitfield Plantation area due to the embankment of the Interstate?**

**Response:** No. There may be areas where trees from the private property side grow into the I10 corridor that may need to be trimmed, but this will not necessitate the removal of the entire tree.

**2. Won't erosion occur by removal of all trees and not replacing with full grown trees?**

**Response:** No. The City will maintain the slopes by using erosion control measures as they currently exist along the Interstate. We do not intend to remove any more trees than what is absolutely necessary.

**3. Why can't the City bury the transmission line along the Interstate?**

**Response:** While technically, the City can bury the lines, the cost is significantly higher than for overhead construction. In addition, utilizing underground construction will result in the same, if not more, tree removal along the route as compared to overhead. This is due to the need to have clearances for the construction and maintenance of the transmission line and the nature of underground construction versus overhead construction. Underground construction requires large pull boxes every 1000' feet or so. These pull boxes, coupled with the boring or trenching required for the underground, will likely result in additional tree removal than the overhead option due to root damage. Lastly, overhead conductors typically do not require replacement during their useful life, whereas underground conductors likely will need to be replaced periodically due to the higher operating temperatures.

**4. Won't it improve the EMF levels if you bury the transmission lines?**

**Response:** EMF level is a function of the distance from the line, line loading, and line configuration. The earth itself does not shield EMF. Since underground lines are typically buried only a few feet below the surface, the EMF levels above the line are potentially greater.

**5. Won't there be higher noise levels along the Interstate because of the tree clearing?**

**Response:** The City engaged a local firm, Ecology and Environment, Inc. (E&E) to perform a sound study and acoustical analysis for the Line 55 route options along the I-10 corridor. E&E took sound measurements at various sites along the I-10 corridor that included sites where there is currently no tree buffer between the interstate and the FDOT right of way. E&E also took measurements where a tree buffer would remain even after the necessary trees were cleared. E&E performed acoustical modeling to analyze the noise levels at nearby noise receptors to determine the noise impact of the tree removal. Based on this analysis, the tree removal is projected to result in an increase between 1.0 and 1.7 dBA.



E&E has advised that it takes an increase of at least 3 dBA for the human ear to detect a noticeable difference and an increase of 5 dBA is generally required to be noticeable by everyone. Based on this analysis, the noise impacts associated with the transmission line project are not expected to be significant.

While the removal of the trees is not expected to result in significant changes in noise levels, the City's plans include the potential (subject to City Commission approval) to allow for tree replacement to occur on the lots that back up to the I-10 corridor along the new transmission line. This tree replacement would utilize tree bank funds and allow for low growing trees to be planted on private property to re-establish the tree buffer.

**6. Options 1 and 3 would have a considerable environmental impact to Whitfield Plantation Properties and the wildlife located in the A.J. Henry Park – the City's evaluation doesn't appear to have considered sensitive species that habituate this park including bald eagles, multiple species of owls, ospreys, and hawks that could be affected by transmission lines.**

**Response:** The proposed design for the power lines will follow the recommendations in the Avian Protection Plan Guidelines prepared by the U.S. Fish and Wildlife Service for the installation of power poles and lines. This includes constructing "avian-safe" structures that provide adequate clearances to accommodate large birds. In addition, field reviews will be conducted during the design phase and prior to construction to verify that there are no eagle nests impacted by the construction of the project. The preliminary review conducted for the Natural Features Inventory did not identify any nests within the U.S. Fish and Wildlife recommended radius of a 660-ft buffer.

**7. I am not aware of an environmental impact study or assessment that was conducted for this project. Was a study conducted or completed and are results available. Is the City's environmental staff available for discussion on this?**

**Response:** The City of Tallahassee Land Development Code requires the preparation of a Natural Features Inventory (NFI). The NFI includes field, literature and map reviews of all natural features within the proposed project limits. The environmentally sensitive features included in the analysis are as follows:

- Native and High Quality Successional Forests
- Significant and Severe Grades
- Listed Species
- Archaeological and/or Historical Sites
- Floodplains and Floodways
- Wetlands, Watercourses and Water bodies
- Karst Features
- Canopy Road Protection Zone
- Closed Basins
- Wells and Areas Susceptible to Groundwater Contamination
- Protected Trees

A Natural Features Inventory (NFI) was conducted for all three route options to identify the environmental features potentially impacted by these routes. The NFI includes field, literature, and map review of all natural features within the proposed project limits. The analysis identified that all three route options had one or more of the following within the limits of construction: severe grades, significant grades, floodplains, wetlands, watercourses, water bodies, canopy road protection zone, and protected trees. Based on the NFI information, while there are differences in environmental impacts between the routes, there is no significant environmental issue with any of the routes from a NFI perspective. The table below depicts the NFI results.

**TABLE 1  
FINDINGS OF NATURAL FEATURES INVENTORIES**

**LINE 55 NORTH AND SOUTH ROUTES  
TALLAHASSEE, FLORIDA**

UNALTERED NATURAL FEATURES	AREA OF IDENTIFIED FEATURES (ACRES)	
	NORTH ROUTE (AC)	SOUTH ROUTE (AC)
FLOODPLAIN*	5.0	5.4
WETLANDS	0.5	1.6
WATERCOURSES*	0.05	0.1
CANOPY ROAD PROTECTION ZONE	0.3 Tree Removal = 27 trees	0.3 Tree Removal = 45 Trees

ALTERED NATURAL FEATURES	AREA OF IDENTIFIED FEATURES (ACRES)	
	NORTH ROUTE	SOUTH ROUTE
WETLANDS	1.8	1.8
WATERCOURSES*	0.2	0.2
WATERBODIES*	1.2	1.2
SEVERE GRADES*	6.7	3.0
SIGNIFICANT GRADES*	6.5	7.8

\* NOTE: No Anticipated Impact to Floodplain Areas (Aerial Crossing)  
No Anticipated Impact to Watercourses or Waterbodies (Aerial Crossing)  
No Anticipated Impact to Severe or Significant Grades (At-Grade Construction)



## 8. What methodology did the City use to estimate the number of trees to be removed?

**Response:** The tree count estimate was completed using the following analysis:

- A field review and aerial map review was conducted for both the north and south sides of I-10 to evaluate the tree density located within the I-10 right-of-way where tree removal will be necessary. The information resulting from this review was used to classify the trees into the following categories: No Tree Coverage, Low Density Tree Coverage, Medium Density Tree Coverage and High Density Tree Coverage.
- A field tree survey was then conducted using representative areas of 7,500 square feet for each of the above referenced density classifications. The representative areas were located within the I-10 right-of-way along the fence line. Only those trees regulated by the City of Tallahassee for removal (trees with a diameter of 12" or greater) were included in the survey.
- The results obtained from the various representative areas were then extrapolated along the I-10 corridor for both the north and south sides of the right-of-way to determine an estimated tree removal value.

The results of the tree density survey indicated less than a 4% difference in the total number of trees to be removed for the 3 proposed Options. The exception to this is within the first 2,500-ft of the project near the Thomasville Road Interchange. In this area, there will be no tree removal required for the North or Hybrid options due to the existing conditions. The South option would require tree removal.

As noted above, the City's plans include the potential (subject to City Commission approval) to allow for tree replacement to occur on the lots that back up to the I-10 corridor along the new transmission line. This tree replacement would utilize tree bank funds and allow for low growing trees to be planted on private property to re-establish the tree buffer.

## 9. How did the City obtain the easement rights from the Federal DOT to utilize the Interstate corridor?

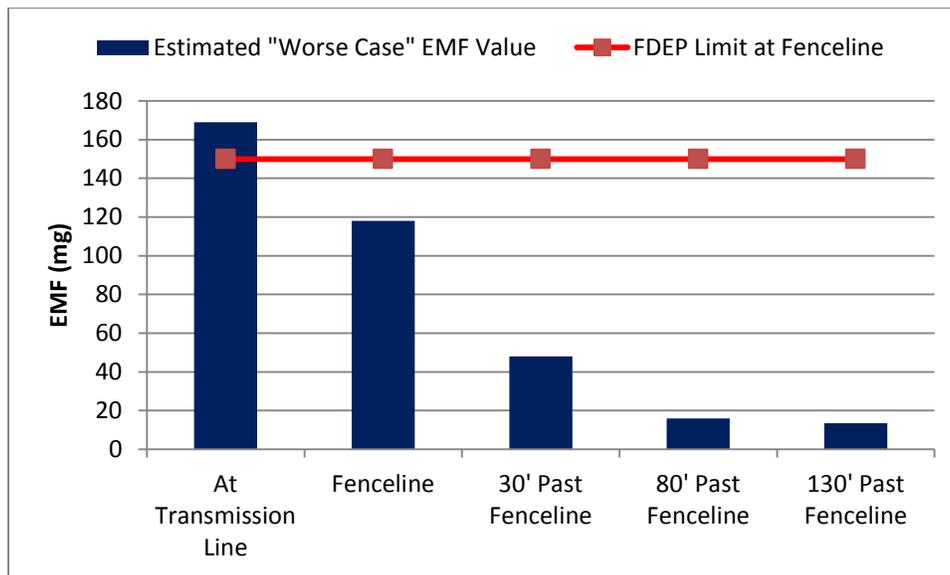
**Response:** Since the proposed construction would be entirely within a ROW, use permits are issued in lieu of easements. In this case, since the construction would be within the I-10 ROW, the City would obtain a use permit from the Florida Department of Transportation (FDOT). While FDOT has indicated a willingness to issue this use permit, the final details and issuance of the use permit cannot be obtained until the final route is identified.

## 10. Given the size and site location of the poles, what are the projected electric and magnetic field rates per foot from the transmission pole? What about the EMF rates from a transmission line to a customer's home if the home were 30 feet, 80 feet, and 130 feet from the fence line?

**Response:** The State of Florida has established EMF standards to protect human health and the environment. These standards require that the design EMF must be at or below 2kV/m and 150 milliGauss (mG) at the edge of the ROW. While final design and analysis cannot be completed until a final route is determined, preliminary studies have indicated that the maximum EMF levels, based on worse case load flows on the transmission line, will be approximately 0.78 kV/ and 116 mG along the edge of the I-10 ROW. The actual EMF levels will be lower since the transmission line will not be continuously operated at the worst case loading used in the design

calculations. To put this level of EMF into perspective, although microwave ovens are shielded, they can still emit EMF levels as high as 300mG within 6” of the microwave. (source - ehow)

With respect to EMF decay with distance, EMF levels do not decrease at a linear rate per foot. Rather, levels decrease at a faster rate near the lines. Taking only the EMF emitted by the transmission line, the following graph provides an example of how EMF associated with the transmission line would dissipate with distance from the line.



**11. What is the voltage and power rating of the proposed transmission line?**

**Response:** The voltage level is 115 kV. The maximum conductor rating is 1448 amps.

**12. Could this capacity be increased in the future due to development? If so, what would be the maximum voltage and power rating?**

**Response:** Currently there are no plans to upgrade this line above its current proposed rating.

**13. What is minimum and maximum number of poles that must be constructed for each option and what is cost per pole?**

**Response:** Each option will have between 27 and 30 poles. The estimated construction cost, not including materials and engineering, is \$1.6 million for the North route and \$2.6 million for the Hybrid and South routes.

**14. How high will poles be and what might their impact be on the visual aesthetics of Tallahassee?**

**Response:** The transmission poles will average 95 ft. above ground along I-10.