



Low-Voltage Transmission Lines and Effects on Residential Property Value

Is there a negative value impact?

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Most of the published literature and research studies regarding electric power lines focus on high voltage. In Wisconsin, power lines carrying 100 kilovolts or more are labeled “high voltage,” and in the real estate field, buyers are notified if these lines are on property to be sold. The notice is given on seller disclosure forms and in Real Estate Board Offer to Purchase Forms.

The assignment many appraisers are given is to estimate appropriate impacts of low-voltage transmission lines on property value. Since most published information is on high-voltage transmission line literature and studies, appraisers often rely on these to develop their appraisals. Low-voltage lines typically have shorter poles, narrower easement widths, and sometimes, less stringent regulations regarding vegetation and some structures.

In the Midwest in particular, considerable effort by power companies has been made to rebuild low-voltage lines and clarify company rights in old easements. Because of this, many appraisers are experiencing more requests for easement appraisals on these types of transmission lines.

In an effort to develop up-to-date impact measurements, Steigerwaldt Land Services, Inc. has conducted its own study that focused on a 69 kilovolt-and-lower voltage lines that extends through a portion of La Crosse County, Wisconsin, where lot sizes and home prices are quite similar. The study covered a period between the years of 2017 through 2021. Rather than average on and offline prices, 16 sale pairings were made by selecting homes that were

considered similar. The price of homes in the study ranged from \$175,000.00 to \$398,000.00 and averaged \$264,540.00. There was a sufficient number of sales to allow very good pairings, where lot size, home square-foot area and style were very similar for on and offline properties.

The easements specified widths ranged from 30- to 60-feet and often included language permitting setting guy lines with anchors. The transmission line easements were located at variable distances from homes, primarily from 40- to 80-feet and up to approximately 100 feet.

As part of the study, each sale was detailed in a narrative description and the pairings were also described in a comparative analysis. The individual pairing percentage differences were summarized and then averaged.

The study was completed in three parts — the first was a direct pairing of 16 sets of residential sales. The second was a separate pairing of four sets of the most comparable on and offline sales. A third pairing of 19 sets of sales, where homes and lot sizes were more dissimilar, was also made.

Part 1: General Sale Pairings

The pairings below are residential sales that have occurred in La Crosse County, Wisconsin. The first sale in each of the pairings is encumbered with a low-voltage transmission (LVTL) line easement. The second sale in each pairing is a sale of a property that is similar to the first sale but is not encumbered with a low-voltage transmission line. The results of the first set of pairings are presented as follows:

Result Summary	
Pairing Number	Percent Difference
1	+3.1
2	+0.3
3	+4.4
4	+6.6
5	-2.5
6	+1.2
7	+5.5
8	+9.2
9	-3.9
10	+1.5
11	-0.9
12	-11.6
13	+3.2
14	-3.2
15	-8.0
16	-8.9
Percent Difference Average	-0.25

As seen in the table above, there is no consistent difference in value between properties that are encumbered by a low-voltage transmission line and those that are not. Considering the varying degrees of value separation and that encumbered properties often have a higher value than unencumbered properties, a specific percentage of value diminishment is not apparent from the data gathered.

The pairings showed a value variation ranging from -11.6 to +9.2. The average difference of 16 pairings analyzed was -0.25%.

The second set of 19 pairings indicated an average percent difference of -0.78% and the difference for the third set of pairings was +0.97%.

The positive percentage differences within the three sets of pairings does not mean that low-voltage transmission lines enhance property value.

This analysis demonstrates that the sale price of properties is not greatly affected by the presence of low-voltage electric transmission lines. The differences in value of the presented sales appears to be caused by other characteristics specific to each property.

Appraiser interviews with buyers support this. When negative impacts appear, they center on easement location within a lot, vegetation clearing requirements and aesthetics regarding poles. Many buyers did not know the difference between distribution lines and those that are 69-kV lines because the structures often appear quite similar.

Appraisers should treat each easement appraisal assignment singularly and consider the specifics of the easement. Some of these could be easement width, vegetation restrictions, pole height or location within a property.

At Steigerwaldt Land Services, Inc., appraisers have the opinion that 69-kV or low-voltage transmission lines typically have low or no impact on residential home values, and observed impacts are below what has been indicated by most high-voltage transmission line studies.

After addressing the physical differences in the three sets of sale pairings, the presence of the 69-kV transmission line showed no significant effect on the property value. 🌟



Ed and Lee Steigerwaldt are both Certified General Real Estate Appraisers with over 40- and 20-years' experience, respectively, working on electric and gas transmission line projects throughout the Midwest.