



July 11, 2019

Mr. Jeffrey T. Bennett, Partner
Bingham Greenebaum Doll LLP
2700 Market Tower
10 West Market Street
Indianapolis, IN 46204

Dear Mr. Bennett:

As requested, I have reviewed the consulting reports and research completed by the Pillar Valuation Group, pertaining to the effect of wind farms on residential property values. In my opinion, as a licensed commercial real estate appraiser in the State of Indiana and an MAI Designated Member of the Appraisal Institute, Pillar's findings and conclusions are credible, well-supported, and consistent with recent academic research.

My opinions regarding the Pillar reports are based on the following:

1. The raw data analyzed by Pillar is extensive. The study of Tipton and Madison Counties, completed in April of 2017, contains transaction data for more than 100 residential sales. The study of White County, completed in November of 2016, includes transaction data for nearly 200 residential sales. The study of Benton County, completed in February of 2017, contains transaction data for more than 700 residential sales – and the time period analyzed spans from 2007 to 2016. Pillar also analyzed dozens of paired sales (sale-resale transactions) and measured trends in transaction volume based on local MLS data. Additionally, Pillar interviewed 17 licensed real estate agents and brokers who represented buyers/sellers of properties located within a one-mile radius of a wind turbine.
2. The Pillar reports have analyzed the potential impact of wind turbines from a variety of perspectives. In addition to sales price data, Pillar has analyzed trends in sales volume, marketing time (days on market), the gap between list and sale prices, rates of REO/bank ownership, and pricing trends indicated by the sale/resale of singular properties. The broad scope of the research suggests that the authors performed their work without bias, and that they developed their conclusions based primarily on empirical data.

3. The methodologies used by Pillar are widely used in appraisal practice, and they are consistent with generally accepted appraisal principles and procedures.
4. All three of the studies completed by Pillar incorporated multiple methods and measures, and all three yielded similar results. This consistency in outcome adds a measure of credibility to Pillar's conclusions. It also suggests that the margin of error is small.
5. Recent academic research supports Pillar's conclusions. One of the largest known studies, published in 2014, analyzed a data set comprised of more than 50,000 home sales that span 27 counties and 9 states. Of this total, 1,198 sales were located within one mile of a wind turbine and 331 were located within a half mile. The six authors of the study were affiliated with Texas A&M University, San Diego State University, the Lawrence Berkley National Laboratory, and the Federal Reserve Bank of Kansas City. In their published paper, entitled "Spatial Hedonic Analysis of the Effects of US Wind Energy Facilities on Surrounding Property Values", the authors conclude the following:

"Across all model specifications, we find no statistical evidence that home prices near wind turbines were affected in either the post-construction or post-announcement/pre-construction periods." *

Should you have any questions or wish to discuss our conclusions in additional detail, please feel free to contact me at the number(s) below.

Regards,



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* B. Hoen et. al. (2014). *Spatial Hedonic Analysis of the Effects of US Wind Energy Facilities on Surrounding Property Values*. *The Journal of Real Estate Finance and Economics* (2015) 51:22-51.