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TCC
Pre-Filed Testimony
Richard Hagar
EXH-5902_R

BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITING EVALUATION COUNCIL

In the Matter of the Application of:

DOCKET NO. EF-210011

Scout Clean Energy, LLC, for
Horse Heaven Wind Farm, LLC,
Applicant.

PRE-FILED TESTIMONY OF TCC
WITNESS RICHARD HAGAR

Q: Please state your name and address and the purpose of this testimony.

A: Richard Hagar. My Testimony is provided below.

PRE-FILED TESTIMONY OF TCC WITNESS

RICHARD HAGAR- 1

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1 **Critique of the Study regarding residential view properties**

2 **Richard Hagar**

3
4 Windmills are an industrial use, they produce a commodity which is sold, in varying
5 degrees, to all. They are an industrial application to areas that are not zoned for
6 industry. The windmills require support infrastructure (roads), special access, and
7 high-tension power lines to transmit the industrial output to the market.

8 The authors are not real estate appraisers and have not determined the value of any
9 home.

10 Researcher providing studies comparing how a view of windmills may impact the
11 **average** price of homes. While the studies can be general indicators of potential
12 value impacting issues, they are not analyzing the windmill's impact on specific homes
13 or individual buyers (even if they are a significant portion of the market).

14 None of the studies has been published in peer-reviewed appraisal publications. All
15 reviews are by other people who publish general studies and not by people who
16 provide value statements regarding real estate.

17 7,459 arms-length transactions are the base data used in the reports, the sales taking
18 place between 1996-2007. 6,000 of the sites were visited by, or someone working on
19 behalf of, the author.

20 The visited, 6000 properties are scattered over nine states. Assuming a viewing of 20
21 homes per day it would take 300+ days, plus travel, to view each home, was this really
22 accomplished? As evidence of inspection, were photographs taken of each home as
23 well as the view amenity from each? There is no proof in the study.

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1 **Possible contradiction**

2
3 *To balance the cost and quantity of data collection in each study area with the desire*
4 *to cover as many study areas as possible, the research effort sought to collect data on*
5 *400 to 1,250 transactions in each study area.⁷ In some instances, this meant including*
6 *all residential transactions within ten miles of the wind turbines. In others, only*
7 *transactions within five miles were included. In some extreme instances, when the*
8 *number of transactions inside of five miles exceeded the 1,250 limit, all transactions in*
9 *close proximity to the wind turbines (e.g., inside three miles) were included in*
10 *combination with a random sample of transactions outside of that distance band (e.g.,*
11 *between three and five miles).(Page 40)*

12
13 However, the prior text indicates a **viewing of 6,000** properties out of 7,459. Which
14 is it, a sampling or all?

15 Since these sales took place over 11 years, how soon after the sale did the individual
16 inspection occur?

17 Is it possible that the view amenity changed between the property's sales date and the
18 date of inspection? Sometime after a property's purchase, is it possible that view
19 amenities were increased due to the removal of trees on their or adjacent sites? Is it
20 possible that properties with a view amenity had a decreased view due to
21 circumstances outside of the property owner's control? Was the author aware of any
22 changes in the view between the property's purchase date and the date the author
23 visited the property?

24 Did these visits determine the view from the street, from the yard, or from inside the
25 home? When the definitions used in the study indicate "visible from the home" does
26 this mean the author was personally inside each home or does this mean from the
property, or from the street?

While a vacant lot can have a view amenity, it does not mean that a house
constructed on the lot was orientated to take advantage of the view. Was there a

1 viewing from inside the homes? Local building codes and property setbacks can have
2 a dramatic impact on how a home was built, often to the detriment or inability to take
3 advantage of a view; was this accounted for in the research? I see no consideration
4 for this in the study.

5 Was the view amenity from high value rooms such as the living room, family room,
6 primary bedroom, kitchen or deck or from a low view impact room such as a bedroom,
7 den, or bathroom?

8 Were the rooms with a view looking directly at the windmills or were they at an angle
9 with minimal impact on the total view?

10 Most of the data, excluding Pennsylvania and New York, was based on properties
11 located in "flat land" areas such as Oklahoma Illinois and Iowa. The majority of
12 properties included in the study don't appear to have a view amenity of mountains or
13 higher hillsides. Of the few photographs that I have seen, due to the topography,
14 most of the photographs of "view" had a very limited panoramic view; in many
15 instances the limited "view" may have had no impact, positive or negative, on the
16 value of the property.

17
18 The report indicates: *The sample of transactions ranges from 412 in Lee County,*
19 *Illinois (ILLC) to 1,311 in Howard County, Texas (TXHC). (Page 17)*

20 Again, the sampling is from "flat land" with few rolling hills while areas in Washington
21 would have residential properties either looking up at hillsides or from higher hills
22 looking down on lower hills, in each the value of the view component would be greater
23 than that of "flat land" properties.

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RICHARD HAGAR- 4

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1 **Average Price**

2 The median price of the homes used in the study was \$102,968 with 1,623 square
3 feet, which would best describe a “starter” home. However, for lower priced homes a
4 view amenity has a minimal impact on the total value. Buyers of lower priced homes
5 have different priorities; they are more likely to swap a view amenity for a larger
6 house. They are willing to purchase a lower priced “fixer-upper” because it fits into
7 their budget. While many would like to live on the waterfront, or have a view amenity,
8 a house that fits their basic housing needs is more important. The study doesn’t
9 appear to have considered this segment of the buying market.

10 The buyer of a home in the upper tier of any area usually is buying their second, third,
11 or fourth home and has the financial ability to be selective of the property. In an effort
12 to include a large number of sales (7,459) the study appears to **FAIL** specifically
13 analyzing higher priced properties, the very properties where a view amenity has a
14 greater impact on value. By mixing higher and lower priced properties the results are
15 diluted and become unconvincing.

16
17 **Cross Checking**

18 While the studies are using generally acceptable methods, they have failed to use the
19 best methods available or use additional methods (typically used by real estate
20 appraisers) to cross check the study’s results. Two additional methods that would
21 have increased accuracy and applicability are: matched-pair analysis and personal
22 interviews with the buyers of these properties.

23 Did the authors query the buyers to determine if they had a choice between a view of
24 rolling hills with or without windmills when purchasing their homes? If not, why not?
25 Interviews of buyers is a common appraisal practice, why was it not utilized?
26

1
2 **Alternatives**

3 Did the homes have views facing the same direction (north, south, east or west) as
4 homes with and without views of the windmills? In many markets the direction homes
5 face and the direction of a view amenity can have an impact on their value; this does
6 not appear to have been considered.

7 Was it possible that there was a limited number of view homes available for purchase
8 therefore buyer's choices were between homes with a view inclusive of a windmills vs
9 homes with no view at all? If a majority of homes had views of windmills, then the
10 market might not have the option of passing over lower quality view homes and
11 selecting homes with no view of a windmill.

12 Typically, buyers pick a city or town to live in based on the location of their jobs (new
13 or existing) or location of family. The quality, condition, size, and amenities that a
14 home has are some of the primary criteria, a view amenity can be a secondary
15 criterion. The study tended to focus on lot size, house size, condition and a few other
16 factors, but were these the primary criteria for the buyers of view homes?

17 For buyers whose primary focus was a view amenity, did they have choices between
18 view with and without a view of a windmill? If not, then the results of the study are not
19 convincing. Neither of these issues were addressed in the study.
20

21 **Pre-Vetting of Properties**

22 Buyers who do not want to have a view inclusive of windmills may have rejected all
23 homes that had that attribute and focused on homes that didn't have that view
24 component. Text from the report indicates that the authors did not consider this when
25 analyzing data as stated on Page 91:
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1 *It is hypothesized that although turbines are visible, and sometimes*
2 *dramatically, that home buyers adjust to their visual presence, and therefore,*
3 *do not discount the sale prices. In other words, self-selecting buyers without*
4 *prejudice to the turbines, might be bidding on the properties, while others*
potential buyers who possess prejudice are not bidding. Of course, without
further research, this theory cannot be confirmed.

5 The report indicates that they don't know if homes with a view of windmills were
6 immediately rejected by potential buyers, and they looked elsewhere. Knowing this
7 simple fact indicates a lack of analyzing the desires of potential buyers.

8 9 **Market Time**

10 The study did not analyze the marketing time for the homes. Homes that have
11 detrimental conditions typically take longer to sell; it's a great indicator and a method
12 of measuring market resistance. However, the study did not analyze the marketing
13 time for any of the homes, therefore the report's conclusions are questionable.

14 15 **Lack of interviews**

16 Very few buyers would want a view of industrial production. If given a choice between
17 viewing windmills on the crest of rolling hills and looking at the hills without the
18 windmills, it makes sense that most would choose the view without the windmills.
19 However, when choices are few buyers may end up "settling" for what's available.
20 The study attempts to group a large data set and see if there's a measurable impact.
21 However, if buyers don't have valid choices between a house with a windmill view and
22 a house without windmills..... then the result of any analysis is biased. The study did
23 not interview a large number of buyers therefore the results are not credible.

24 **Matched-Pair**

25 There are many critics of a matched-pair analysis method, and I would agree, to a
26 point. A single matched typically has only a 17% chance of accurately measuring the

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1 market. However, when more than 10 matched pairs are used then the accuracy can
2 be increased to 85% or greater. A matched-pair analysis, **if property performed**, can
3 more accurately measure the actions of the market. The study did not perform any
4 matched-pair analysis which would have added validity to the study and may have
5 been better at determining the actual view amenity of the homes being analyzed. It
6 would have been a great addition to the study. Both interviews and specific matched-
7 pairs should have been used in the study. The failure to include these methods
8 reduces the credibility of the study.
9

10 **MODELS**

11 The study used four different models to analyze the same base data.

12 The study did not use other methods, such as paired-sales analysis or personal
13 interviews with buyers of these homes to confirm the results of the four models.

14 Interviews would have provided an opportunity to confirm or adjust the models to
15 better display the market's reaction to a view amenity.
16

17 Most of the studies relate to distance from the windmills and not the number of
18 degrees of a view amenity, that are encumbered by windmills or power transmission
19 towers. (Out of the total number of degrees of view each property had, how many
20 included the windmills?)

21 The study uses the term “..the degree to which the wind facility might impact that
22 scenic vista.” In this instance the term “the degree” appears to be a qualitative
23 measurement and not a quantitative measurement based on the actual number of
24 degrees on a compass that would allow a more accurate measurement of the impact.
25 The focus of the study is on windmills while only slightly referencing the major power
26

1 lines and transmission towers that are used to convey electricity. Other studies have
2 indicated that transmission towers are not a desirable component of a view amenity
3 and can impact property values.
4

5 **Inflation**

6 The impact of an individual component on property value can vary depending on when
7 the value was measured. For instance, during a shortage driven market where
8 property values are increasing many negative issues may have no measurable
9 impact. In the greater Seattle market, as well as other areas nationwide, during 2015-
10 2022, there was a shortage of available homes for sale. As such, people were often
11 paying the same for a “fixer-upper” property as they were for a home in average to
12 average+ condition. Buyers didn’t have the choice between a poor condition home
13 and a livable home, their choice was to buy the poor condition home or not buy any
14 home at all; all the while the price of homes was increasing.

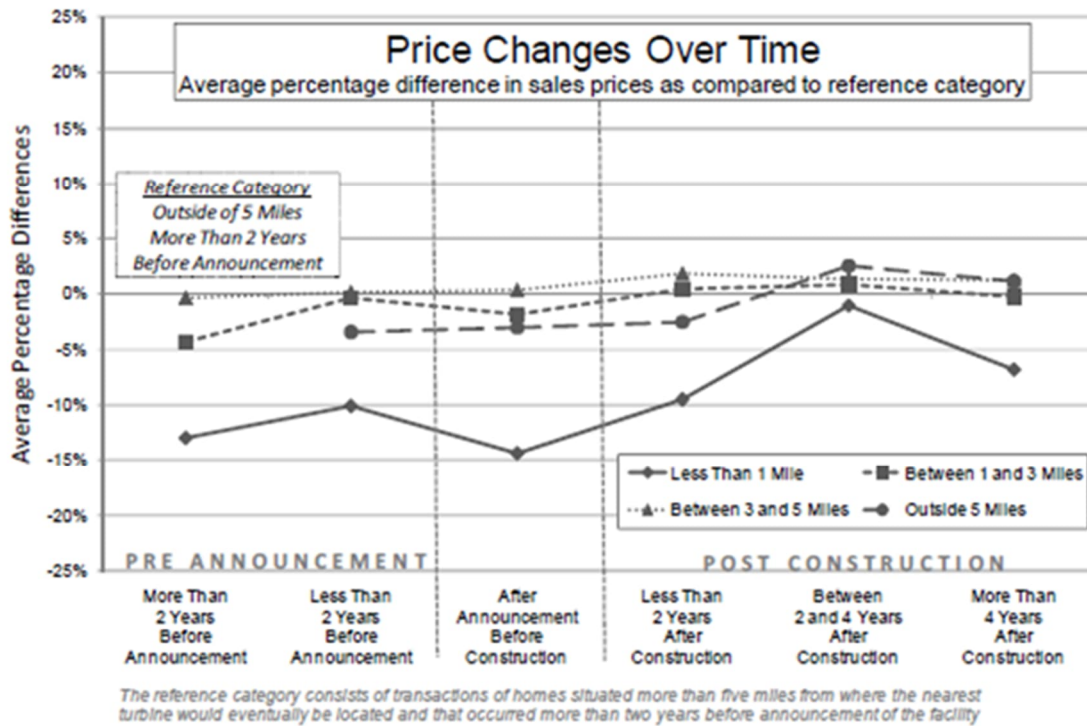
15 The study appears to have based inflation on a straight-line basis and was not
16 inclusive of the available inventors or the number of listings vs the number of sales
17 taking place during different levels of market activity and shortages. Therefore, the
18 study ignored market fluctuations that would be considerations of most buyers and
19 may have masked the market discount for a view of an industrial component
20 (windmills).
21

22 **Figure 2, Table 11**

23 As noted below, homes within less than a mile from a windmill are experiencing a
24 downturn in value during a period of slowing market demand. This figure indicates that
25
26

1 lower valued properties, those with greater view of windmills have experienced a
 2 greater decline in value.

3 **Figure 2: Results from Model Four**



17 **Number of homes was restricted during some periods.**

18 The following text is on page 40 of the report:

19 *This argument notwithstanding, the results for Model Four need to be qualified*
 20 *in two ways. First, because the dataset contains few observations for homes*
 21 *located within one mile and that either sold more than two years before*
 22 *announcement or more than four years after construction, there is less*
 23 *confidence in these two coefficient estimates (-13% and -7% respectively) than*
 24 *for the estimates for other temporal periods inside of one mile. Based on*
 25 *additional sensitivity analysis not detailed here, it is believed that if these*
 26 *coefficients are biased, both are likely biased downward.*

25 During times when there are declining values also corresponds with a time where
 26 people were not buying homes that had a view of the windmills. The authors of the

1 study minimized the results due to a “lack of data”. However, the lack of sales is
2 telling It indicates that the market is unwilling to pay for these homes unless there
3 is a substantial discount. The fact that this data was minimized indicates a bias by the
4 authors or a failure to analyze the number of sales throughout the market at that time.
5

6 **Model 2 indicates a loss**

7 The following text from the report:

8 *Similarly, Model Two finds that those homes within 3000 feet and those*
9 *between 3000 feet and one mile of the nearest wind turbine sold for roughly 5%*
10 *less than similar homes located more than five miles away that sold in the*
11 *same post-construction period. (Page 37)*

12 The report does conclude that there is a 5% reduction in value for certain homes,
13 especially homes close and likely with a greater view of windmills.

14 **Page 92**

15 The following text is contained in the report:

16 *Model Four provides a clearer picture of these findings (see Figure 2). It is*
17 *estimated that homes that sold prior to wind facility announcement but situated*
18 *within one mile of the eventual location of the turbines sold, on average, for*
19 *between 10% and 13% less than homes that sold in the same time period but*
20 *located more than five miles away. Therefore, the homes nearest the wind*
21 *facility’s eventual location were depressed in value, in comparison to homes*
22 *further away, prior to the announcement of the facility.*

23 The report indicates that there is an impact due to a view of windmills, however that
24 was not stated in the conclusion which reduces the credibility of the report.
25
26