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TCC  
Supplemental Testimony  
Margaret Hue  
EXH-5917\_S

BEFORE THE STATE OF WASHINGTON  
ENERGY FACILITY SITING EVALUATION COUNCIL

In the Matter of the Application of:  
  
Scout Clean Energy, LLC, for  
Horse Heaven Wind Farm, LLC,  
Applicant.

DOCKET NO. EF-210011  
  
SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS MARGARET HUE

Q: Please state your name and address

A: Margaret Hue, PhD, 29204 S 816 PR SE, Kennewick WA 99338

Q: Have you prepared supplemental testimony regarding the Horse Heaven Wind Farm application?

A. Yes, my supplemental testimony is provided below.

Q: Please briefly describe your work experience and qualifications.

A: Badger Canyon farmer for 42 years and a retired educator.

Q: Please state the address of your home and the name of the neighborhood in which it is located.

A: 29204 S 816 PR SE, Kennewick WA 99338 this is south of Kennewick in the Badger Valley Road area

1 Q: Please state how long you have lived at this address and why you chose to live  
2 here.

3 A: My husband and I have lived and farmed in Badger Canyon since 1978.  
4

5 Q: Please describe your opinion on the effect this project will have on the property  
6 value of your farm and other farms in the area.  
7

8 A: The project will significantly reduce the value of residential homes and acreages  
9 with families, single or senior citizens and people all levels of income who live in close  
10 proximity to the proposed turbines.  
11

12 I am 1 ½ miles from the turbines proposed but at the base of the largest watershed  
13 drainage canyon in Benton County that will carry the sound and echo into my farm  
14 and livestock. This is another concern for health and property values.  
15

16 I am opposed to the Horse Heaven Hill Wind Farm Project because the significant  
17 impacts the project will have on diversified agriculture in the local area.  
18

19 We began raising cattle and sheep in 1980-1981. In 1982 we began raising alfalfa  
20 and in 1984 noticed our yields decreasing. In 1986 we realized our yields kept  
21 decreasing in the entire Badger Canyon valley from Kennewick to Kiona so in 1987  
22 we diversified crops to asparagus, commercial flowers along with alfalfa, pasture, and  
23 cattle. In 1988 we learned our crops were damaged from repeated herbicide drift off  
24 the HHH wheat farms that killed 75% of our asparagus, a 20-year crop just one year  
25 old and 100% of our commercial flowers for the next 3 years.  
26

PRE-FILED TESTIMONY OF TCC WITNESS

MARGARET HUE - 2

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1  
2 In 1988-89 Battelle Meteorology completed the only meteorology study in Badger  
3 Canyon/HHH explaining how the meteorology and topography conditions on HHH and  
4 the numerous canyons draining off HHH into Finley, Kennewick, Badger Canyon,  
5 Kiona and Benton City.

6  
7 I now raise cattle and pasture but want to plant some acreage to wine grapes but am  
8 concerned about wind turbulence, weather change and particularly from nighttime  
9 temperature changes. The research indicates that wind farms built in grassland and  
10 croplands show a larger warming effect than those built on forests.

11  
12 I have concerns about the impacts on agriculture from the increase in temperature  
13 caused by the wind turbines in the area adjacent to the Horse Heaven Hill Wind  
14 Project.

15  
16 A study of NASA data showed that an area in Texas covered by 4 large wind farms  
17 warmed at a rate of .72 degrees C per decade relative to nearby regions without wind  
18 farms. over a nine year period.<sup>1</sup>

19 There is research that indicates that every 1 degree C rise in night-time temperatures  
20 cause a 4-10% decrease in crop yields, depending on the crop. Research confirmed  
21  
22  
23

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24 <sup>1</sup> NASA Satellite measurements Imply Texas Wind Farm Impact on Surface  
25 Temperature, Earth 04.30.12 <https://www.nasa.gov/topics/earth/features/tx-wind-farm.html>  
26

1 by Arkansas State University, University of Nebraska, Kansas State University, and  
2 University of Nottingham (UK) among others.<sup>2</sup>

3  
4 There are reports that indicate that wind turbines can influence climate and weather  
5 downwind for up to 15 miles. Winds turbines have been shown to dry out the soils,  
6 change the moisture, remove dew, affecting size, harvest, and impact our diversified  
7 ag crops on every level.

8  
9 Research shows that the warming effect from wind farms is greater than the effect of  
10 reduced emissions for the first century of operation because of the localized effect of  
11 warming near the wind farm. Wind farms will cause a local average annual  
12 temperature rise of 1.5- 2 degrees C with most of the critical effects of the warming  
13 occurring at night. Turbines can pull down warmer air from as high as 1640 feet in the  
14 air to the surface, causing warming, impacting people, plants, and animals - rising  
15 temperatures can be a major problem for animals which use night time temperatures  
16 to recover from stress from excessive day time temperatures.<sup>3</sup>

17  
18 Another study looked at the Impacts of 319 wind farms on surface temperature and  
19 vegetation in the United States. It indicates that the LST (land surface temperature)

20  
21  
22 \_\_\_\_\_  
23 <sup>2</sup> Tack, Barkley, and Nalley, Effects of Warming temperatures on US wheat yields,  
24 PNAS (2014) <https://www.pnas.org/doi/10.1073/pnas.1415181112>

25 <sup>3</sup> Climatic Impacts of Wind Power, Joule, Lee M. Miller, David W. Keith,  
26 [https://keith.seas.harvard.edu/sites/hwpi.harvard.edu/files/tkg/files/climatic\\_impacts\\_of\\_wind\\_power.pdf?m=1538752648](https://keith.seas.harvard.edu/sites/hwpi.harvard.edu/files/tkg/files/climatic_impacts_of_wind_power.pdf?m=1538752648)

1 impacts declined with increasing distance from the wind farm, with detectable impact  
2 up to 10 km (6.214 miles).<sup>4</sup>  
3  
4

5 Q: Are you providing photographs?

6 Yes: They are provided on the following pages 6, 7 and 8.  
7

8 I declare under the penalty of perjury under the laws of the State of Washington that  
9 my testimony and reports are true and correct to the best of my knowledge and belief.

10 Signed this \_\_\_3\_\_\_ day of July, 2023, in \_\_\_Kennewick WA \_\_\_\_\_.

11 \_\_\_\_\_Margaret Hue\_\_\_\_\_ /s/\_\_\_\_\_  
12

13 Printed Name  
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23 \_\_\_\_\_  
24 <sup>4</sup> Yingzuo Qin , Yan Li , Ru Xu , Chengcheng Hou, Alona Armstrong , Eviatar Bach ,  
25 Yang Wang and Bojie Fu, Environmental research Letter 17 (2022) 024026 Published  
26 11 February 2022 <https://iopscience.iop.org/article/10.1088/1748-9326/ac49ba/pdf>

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Photographs

Hue Farm property looking towards Badger Canyon alluvial fan.





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PRE-FILED TESTIMONY OF TCC WITNESS  
MARGARET HUE - 8

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