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BEFORE THE STATE OF WASHINGTON  
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of  
Application No. 2004-01  
  
WIND RIDGE POWER PARTNERS,  
L.L.C.  
  
WILD HORSE WIND POWER  
PROJECT

PRE-FILED TESTIMONY OF  
ROBERT KRUSE  
  
EXHIBIT 100

**QUESTION NO.1: Please tell us about yourself.**

ANSWER: My family owns 148 acres of property near the proposed Wild Horse Wind Power Project. Our property lies six miles east of the proposed project site at the confluence of Skookumchuck Creek and the Columbia River. The family purchased the property from Clarence and Florence Scammon who homesteaded it beginning in 1932. In 1980, the Kruse family purchased the land with the Scammons retaining tenancy for life. The lands owned by the Scammons were much larger prior to the construction of Wanapum Dam and the subsequent elevation of Wanapum Pool.

The Scammons farmed and raised livestock for subsistence and Mr. Scammon undertook a wide variety of jobs and contract work. He performed logging, road

1 grading and construction, carpentry, automotive mechanics, trapping and petrified wood  
2 mining. Mr. Scammon contracted a portion of the mining and removal of hieroglyphics  
3 on basalt stone and placement at the Wanapum Museum prior to the elevation of  
4 Wanapum Pool. Hunting was a significant element of his and Florence' life. It was their  
5 primary source of protein.  
6

7 The Scammons lived on the property for 50 years. While they cherished the  
8 solitude of their existence they were welcoming to visitors at any time. During one year,  
9 the Scammons had over 1,000 visitors.  
10

11 Florence passed away in 1980 and Clarence in 1995 at the age of 98. In addition  
12 to his skills in contract work and labor, he was an amateur geologist, archaeologist,  
13 mathematician, humorist and humanitarian. He became a legend in his own time and the  
14 property retains his namesake of Scammons Landing and is indicated as such on all  
15 maps. His history is widely known amongst residents of the Kittitas Valley and the  
16 Columbia Basin.  
17

18 The Scammons taught the Kruse Family and their friends much about the lands,  
19 the history of the lands, the landscape and the wildlife. As part of our education from the  
20 Scammons, we were taught how to move through the landscape with the least possibility  
21 of detection by wildlife. For instance when traveling from upwind into landscape which  
22 might contain wildlife, crush sagebrush with your fingers. The explosion of scent  
23 disguises yours. Stay low in the wide open so you're less of a beacon. Kneel or sit  
24 when you stop. Remain still. We were given the tools to enjoy wildlife viewing in the  
25 shrub steppe.  
26

1           The Kruse Family and its 7 children were raised with a tradition of appreciation  
2 and respect for the outdoors, wilderness and wildlife.

3           The family utilizes its property for recreation and is undertaking activities related  
4 to preservation of the property history, elimination of noxious weeds and re-  
5 establishment of native grass and shrub species.  
6

7           **QUESTION NO.2: Please tell us about Friends of Wildlife and Windpower.**

8           ANSWER: Friends of Wildlife and Windpower is a citizen organization  
9 comprised of residents, land owners and interested users of the lands in and surrounding  
10 the Wild Horse project site who reside in Eastern and Western Washington. The  
11 organization and its members have an interest in the successful development of wind  
12 power at the same time minimizing and avoiding the impacts of wind farm development  
13 on wildlife. Members of Friends of Wildlife and Windpower own property in close  
14 proximity to the proposed Wild Horse project. The Kruse family membership group  
15 owns 148 acres of land of the same shrub steppe wildlife habitat approximately six miles  
16 east of the project.  
17  
18

19           **QUESTION NO.3: Is Friends opposed to all development of wind power?**

20           ANSWER: Not at all. As our name suggests, Friends and its members have  
21 an interest in the successful development of wind power because of its numerous  
22 environmental advantages, most importantly, the elimination of emissions related to  
23 global climate change. Friends recognizes, however, that poorly sited wind power  
24 projects may have unnecessary adverse impacts on wildlife. Friends has an interest in  
25 ensuring that impacts to wildlife are minimized or eliminated to the extent possible.  
26

1 Friends opposition to the Wild Horse Wind Power Project is based on the failure of the  
2 proposal to minimize and/or eliminate impacts to wildlife and the failure of the Applicant  
3 to consider a specific alternative site which likely has less wildlife impacts.  
4

5 **QUESTION NO.4: Please describe your familiarity with the site and**  
6 **surrounding area.**

7 ANSWER: Beginning in 1960, the Kruse family members and friends,  
8 including me, began to explore the shrub steppe region of the Quilomene, Whiskey Dick,  
9 and Colockum Wildlife and Game Management areas. Relative to the proposed Wild  
10 Horse site, the Colockum lies northwest; the Quilomene is north and northeast and  
11 Whiskey Dick is south and southeast. A large tract of private land of approximately  
12 20,000 acres, surrounds the Wild Horse site and separates the Quilomene Area to the  
13 north from the Whiskey Dick Area to the south. We and other members of Friends of  
14 Wildlife have visited the region and recreated there for over 45 years. Members of our  
15 group, including myself, spend time, hike and travel in the region throughout the year.  
16 Over time and based upon a wide range of wildlife viewing experience (developed not  
17 only in the area of the project but also throughout the State of Washington), I know that  
18 lands of the shrub steppe region within and surrounding the boundaries of the Wild  
19 Horse project are on a comparative basis of extremely high value in wildlife density and  
20 habitat. The variety of species concentrated within and surrounding the project site is  
21 unique compared to all other regions of the State of Washington. This observation is  
22 based on experience gained and time spent and travels throughout the State of  
23 Washington including the shrub steppe region.  
24  
25  
26

1 Wildlife of all species common to the shrub steppe region can be seen at all times  
2 of the year. However, the density of wildlife changes through the course of the seasons.  
3 Some species move up to higher elevations beginning in spring and then return to lower  
4 elevations in the fall and winter months as temperatures drop in the higher elevations and  
5 as freezing diminishes the water resources. A noticeable increase in wildlife population  
6 occurs beginning in October. Density then increases as the winter months advance.  
7 Snow in the higher elevations drives wildlife to the lower elevations of the shrub steppe  
8 region. As the winter advances the cold and snow drive wildlife to the lowest elevations.  
9 The wildlife is then restricted in their ability to migrate for forage by the Columbia River  
10 to the east and, to a lesser extent, Highway 10 and Interstate 90 to the south. The  
11 wildlife, including deer and elk, coyote and rabbits as well as avian species including  
12 upland birds, congregate in the deeper, more well-protected riparian corridors and in  
13 area's with taller more dense grass and shrub growth, particularly sagebrush  
14  
15

16 I have observed that the wildlife follow patterns of routes of travel. Big game,  
17 including deer and elk, travel north to south along the upper reaches of the heads of  
18 canyons and seem to generally maintain routes of travel at a common elevation. A  
19 portion of these routes passes by the springs within the project boundaries of the Wild  
20 Horse project. We have observed over time these routes from Quilomene canyon to the  
21 north to Whiskey Dick canyon to the south. The evidence for them exists in game trails  
22 which are ancient and heavily worn into the landscape.  
23  
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1           **QUESTION NO.5: Please describe the project site for the Wild Horse Wind**  
2 **Power Project and surrounding lands.**

3           ANSWER: The area is comprised of shrub steppe, which are natural  
4 grasslands. The area is a rolling landscape with a number of canyons located both on the  
5 project site and in the surrounding area. The area of the project can be divided into two  
6 distinct landscapes: those which lie to the north and those to the south of the Whiskey  
7 Dick Mountain ridgeline which runs generally in a northwest/southeast direction through  
8 the project site.  
9

10           The lands to the south of the ridge comprise approximately 1/3rd of the project  
11 site. This is the area of the so-called “southern string” of proposed turbines. This area  
12 is more open, less undulating and lacks deep riparian corridors, rock cliffs or dense  
13 shrub. Most parts of the landscape are within sight lines of access roadways and  
14 therefore impacted by humans. This landscape is comparatively less dense in wildlife  
15 population than the lands to the north.  
16

17           Lands to the north of the ridgeline comprise approximately 2/3rds of the project  
18 site. This is the area of the so-called “northern string.” This area is more varied in  
19 topography and landscape. From the ridgeline north, the landscape recedes down to the  
20 head of Whiskey Dick Canyon, which is a deep riparian corridor. “The Pines” lie on a  
21 plateau above Whiskey Dick Canyon and are adjacent to Pine Springs and Government  
22 Springs. The Pines are the only grouping of coniferous trees within miles. There are  
23 few roads in this area – none easily navigated by even a four-wheel drive. Human  
24 impacts are slight. In this area, we have observed higher concentrations of wildlife such  
25  
26

1 as deer, elk, coyote, bats and avian species including eagles and upland birds. Extending  
2 north, the landscape remains generally flat, open, shrub steppe landscape extending  
3 further to the Colockum Pass Road. To the east, the landscape feeds into the heads of  
4 the numerous canyons which generally extend east and descend to the Columbia River –  
5 approximately seven miles in distance.  
6

7 In particular, there are six canyons in the project area: Whiskey Dick Canyon, the  
8 North Fork of Whiskey Dick Canyon, Hartman Canyon, Bryant Canyon, Bohinkleman  
9 Canyon and Skookumchuck Canyon. Within these canyons and generally at the heads of  
10 the canyons, there are a number of natural springs. These springs are: Wild Horse  
11 Springs; Skookumchuck Heights Springs; Seabrook Springs; Pine Springs; Government  
12 Springs; Thorn Springs; Reynolds Springs and Dorse Springs. These water sources are  
13 miles from any other alternative water sources. I have personally seen many types of  
14 avian and terrestrial species in/and around the springs. Chuker are common visitors.  
15 We also have some bald eagle, red-tail hawk, and magpies. Deer and elk frequent the  
16 springs. Particularly during the winter, it appears that they travel along the upper  
17 reaches of the head of the canyons and near the springs.  
18  
19

20 The proximity of the canyons and springs to the ridgelines appears vital to the  
21 terrestrial and avian wildlife in the area. The springs provide an important water supply  
22 to birds and animals. The canyons provide shelter from major storms and cover for  
23 habitat. The wind-blown ridge tops provide a snow-free area for winter foraging by  
24 animals. The close proximity of these three features makes this a special place for  
25 wildlife. By far, the greatest concentration of wildlife is in the area of these springs.  
26

1 Other areas of this shrub steppe habitat have nowhere close to the concentration of  
2 wildlife that is seen around the springs. I have walked these hills far and wide many  
3 times over the years. I am quite familiar with the terrain and wildlife range from hills  
4 just north of the Vantage Highway as far north as Quilomene Canyon and beyond; from  
5 the Columbia River on the east to the Colockum Pass Road on the west. Nowhere else  
6 in this area do you see concentrations of wildlife like that around the springs, most of  
7 which are on the project site.  
8

9 **QUESTION NO.6: What wildlife have you seen onsite and in the area?**

10  
11 I have observed elk, deer and many other terrestrial and avian species on the site  
12 and surrounding area year-round. I have observed that it is not only the riparian  
13 corridors of Whiskey Dick Creek which provide cover for elk, deer and birds, but the  
14 adjoining corridors of Hartman Canyon, Bryant Canyon, the North Fork of Whiskey  
15 Dick Canyon, Skookumchuk Canyon and Bohinkleman Canyon. I have seen birds,  
16 including bald eagles, golden eagles, puffins, falcons, ducks, geese, and chukar, and  
17 terrestrial animals, including badgar, coyote, rabbits and ground squirrels, deer, elk, and  
18 big horn sheep drink around these spring and have seen bats on night hikes.  
19

20 **QUESTION NO.7: Based on your long experience with wildlife in the area,**  
21 **what wildlife impacts do you anticipate if the project goes forward?**

22  
23 ANSWER: Let me preface my answer by noting that while I am not a wildlife  
24 biologist, my testimony is based not just on my familiarity with the area and its wildlife  
25 but also my review of the Applicant's Application for Site Certification and the DEIS;  
26 many conversations with WDFW employees knowledgeable about this area; and several

1 meetings with the Applicant's representatives where I learned more about the proposal.

2 I also have reviewed:

3 1. The US Fish and Wildlife Briefing Paper on Sage Grouse, 2003 and 2004  
4 (Ex. 101.4).

5  
6 2. The Washington Department of Fish and Wildlife Sage Grouse Status  
7 Report, March, 1998.

8 3. The Washington Department of Fish and Wildlife Wind Power Guidelines,  
9 August 25, 2003 (Ex. 101.5).

10 4. The Washington Department of Fish and Wildlife SEPA Scoping  
11 Comments, April 30, 2004.

12 5. The Washington Department of Fish and Wildlife DEIS Comment Letter,  
13 September 10, 2004.

14 6. Knick, et al., *Teetering on the Edge or Too Late? Conservation and*  
15 *Research Issues for Avifauna of Sagebrush Habitats*. Cooper Ornithological Society,  
16 2003 (Ex. 101.1).

17  
18 7. BPA Meta Analysis, December, 2002

19 8. Sierra Club Wind Siting Advisory, November 25, 2003

20 9. Wind Power Myths, August 25, 2003

21 10. Wild Horse Wind Power DEIS Comment Letters, September 10, 2004.

22 11. News Articles and Editorial Commentary.  
23  
24  
25  
26

1 With that background, I don=t hesitate to conclude that the project will have  
2 significant adverse impacts on wildlife. Some - but not all - of these impacts are  
3 acknowledged in the ASC and DEIS.  
4

5 **QUESTION NO.8: What are the impacts in the ASC and DEIS that are of**  
6 **particular concern?**

7 **ANSWER:** Generally our concern is that wildlife will be driven from the project  
8 area initially by the construction phase and the associated noise, human contact and  
9 habitat disturbance associated with construction. The permanent features of the project  
10 and the on-going operations and maintenance of the facility will then deter wildlife  
11 habitation and wildlife populations will diminish as a result.  
12

13 The ASC and the DEIS are clear in the forecast of dislocation of wildlife  
14 species during the construction phase and continuing operations. The following are  
15 excerpts:  
16

17 DEIS 3.5.2:

18 Impacts on wildlife species and in particular avian and bat  
19 species are expected to occur from the project.

20 Other impacts include direct loss of habitat due to project  
21 facilities, and indirect impacts such as disturbance and  
22 displacement from the wind turbines, roads, and human  
23 activities.

24 Potential impacts on birds using the study area include  
25 fatalities from collision with wind turbines or from  
26 construction equipment, loss of habitat, disturbance to  
foraging and breeding behavior, collision with overhead  
power lines and electrocution. Project-related human  
activity could alter bird behavior and cause displacement  
during the construction phase of the project, and the

1 postconstruction density of turbines and facilities on the  
2 developed portion of the site may alter avian use.

3 The WDFW has expressed concern over the potential  
4 effects of wind power development and operation on  
5 wintering big game. Winter is a crucial period of time for  
6 the survival of many big game. Deer, for example,  
7 cannot maintain body condition during the winter because  
8 of reduced forage availability combined with the increased  
9 costs of thermogenesis (Reeves and Lindzey 1991). In  
10 other words, as deer expend more energy than they take  
11 in, body condition gradually declined throughout the  
12 winter (Short 1982). Unnecessary energy expenditures  
13 may increase the rate at which body condition declines,  
14 and the energy balance determining whether a deer will  
15 survive the winter is thought to be relatively narrow,  
16 especially for fawns (Wood 1988). Overwinter fawn  
17 survival may decrease in response to human activity or  
18 other disturbances (Stephenson et al. 1996). Roads and  
19 energy development may also fragment otherwise  
20 continuous patches of suitable habitat, effectively  
21 decreasing the amount of winter range available for big  
22 game. Fragmentation of habitat may also limit the ability  
23 of big game populations to more throughout the winter  
24 range as conditions change, causing big game to utilize  
25 less suitable habitat (Brown 1992).

17 Project construction may affect birds through loss of  
18 habitate, potential fatalities from construction equipment,  
19 and disturbance/displacement effects from construction  
20 and human occupation of the area.

20 During the construction period, it is expected that elk and  
21 mule deer will be temporarily displaced from the site due  
22 to the influx of humans and heavy construction equipment  
23 and associated disturbances (e.g., noise, blasting).

23 Impacts on bats or bat habitat on the site are unlikely  
24 during construction. Construction of the project may  
25 affect other mammals that are likely to be existing within  
26 the project site including badger, coyote, pocket gopher,  
Paiute ground squirrels, and other small mammals such as  
rabbits, voles, and mice through loss of habitat and direct

1 mortality of individuals occurring in construction zones.  
2 Excavation for turbines pads, roads, or other wind project  
3 facilities could kill individuals in underground burrows.  
4 Road and facility construction will result in loss of  
5 foraging and breeding habitat for small mammals. Habitat  
6 for ground-dwelling mammals would be removed in areas  
7 where permanent impacts would occur; however, these  
8 species are expected to repopulate the temporarily  
9 impacted areas.

10 **QUESTION NO.9: What wildlife impacts are not identified in the ASC or**  
11 **DEIS or are minimized in those documents?**

12 **ANSWER:** The importance of the on-site springs are of great concern and  
13 their importance to the wildlife community is virtually ignored in the ASC and DEIS.  
14 For example, the only commentary contained in the DEIS related to the springs and their  
15 relationship to wildlife is in the DEIS Sec. 3.3.11 – Surface Water – which states:

16 Springs: Wild Horse, Skookumchuck Heights, Dorse,  
17 Reynolds, Thorn , Government, Pine, and Seabrock  
18 Springs are mapped in the project area. One additional  
19 spring exists just east of turbine C-5 in the south part of  
20 the project area and is mapped simply as “spring” on the  
21 U.S. Geological Survey (USGS) base mapping. Ranchers  
22 in the area have developed several of these springs to the  
23 extent that they collect a portion of their flow and contain  
24 it for stock watering. The flow was approximated for  
25 several of these springs in May, 2003. The observed flow  
26 rates were found to be in the range of 1 to 5 gallons per  
minute. The majority of these springs exist between  
elevations of 3,300 and 3,400 feet in the project area.  
Because of the relatively short distance from the top of the  
ridges down to the location of the springs, the recharge  
area is relatively small, and it is anticipated that spring  
flow would decrease later in the summer and fall.

Section 3.5. 1 Affected Environment -  
Riparian habitat occurs in association with both streams  
and seeps/springs in the project site. Riparian habitat of

1 streams is dominated by trees such as black hawthorn  
2 (Crataegus douglasii)

3 Section 3.5.1.1. Species Occurrence –  
4 Primary habitats for birds on the project area are  
5 grassland/Shrub-steppe and riparian communities,  
6 although some species will utilize lithosol types habitats  
7 for various resources. The various springs on site likely  
8 provide important water sources for avian species.

9 While the DEIS briefly mentions the springs, the DEIS omits meaningful discussion of  
10 the importance of the springs for wildlife. The placement of turbines amongst the springs  
11 as presently designed is a particular hazard to avian species because the springs attract  
12 birds. Further, the DEIS provides no discussion of the dislocation of terrestrial species  
13 from the springs when turbines are placed in close proximity. Additionally, the DEIS  
14 Section 3.5-5 identifies the presence of the Colockum elk calving area: “the project is  
15 located within habitat designated by WDFW as winter range for mule deer and elk, is  
16 located adjacent to the Quilomene migration corridor, and the northern boundary of the  
17 project is approximately 0.5 mile (0.80 km) from the Colockum elk calving area.” But  
18 the DEIS does not address the potential impacts of the project on the elk calving area.

19 The DEIS does not address the impacts of the northern sting of turbines on the  
20 unique and vital habitat of the springs nor does it address the potential impacts of the  
21 northern string on the elk calving area. Additionally the DEIS and its fixed point surveys  
22 of wildlife do not discuss variations in habitat quality and wildlife density. The DEIS  
23 does not describe the higher quality habitat and wildlife density in close proximity to the  
24 springs. The northern string of turbines has been designed in, around, and amongst the  
25 features of the shrub steppe region which provide the highest quality habitat for wildlife.  
26

1 The turbines will be a hazard to avian species drawn to the springs and a deterrent to  
2 terrestrial species.

3 Of particular concern also is the conclusion of the DEIS Section 3.5.5, Significant  
4 Unavoidable Adverse Impacts: “With mitigation, no significant unavoidable adverse  
5 impacts are anticipated for birds or other wildlife.” This statement flies in the face of  
6 mountains of data and commentary contained within the DEIS which speaks to a different  
7 conclusion and it trivializes or ignores the severe impacts wildlife will suffer if the  
8 northern string is placed as designed. The impact of the proximity of the turbines to the  
9 springs and the elk calving area require additional study and consideration in an adequate  
10 EIS and require additional study by EFSEC before a decision is made on the ASC.  
11

12 **QUESTION NO.10: Will there be visual impacts caused by WHWPP?**

13 **ANSWER:** Yes. This is a beautiful landscape. Pictures attached as here as  
14 Ex. 100.1-100.3 reveal the beauty of the wide-open spaces in this area. I have done a  
15 vast amount of hiking in Washington and in other locations of the country and this area is  
16 unmatched for seeing wildlife and enjoying the beauty of the shrub steppe habitat. It is a  
17 unique place that would be gravely impacted by the proposed wind turbines.  
18

19 Members of the public and Friends of Wildlife and Windpower use this area for  
20 various recreational pursuits including hiking, wildlife viewing and nature photography.  
21 All of these activities will be significantly impacted because the landscape will be marred  
22 by the views of wind turbines (as well as due to the diminished wildlife that will be in the  
23 area as a result of the proposal).  
24  
25  
26

1 The EIS and the ASC state that the landscape will be “highly altered.” We  
2 believe the landscape will instead be SEVERELY altered as revealed by the attached  
3 photosimulations (Ex. 100.4 (A-E) and 100.5 (A-E)) (views of the project site from the  
4 north and southeast).

5  
6 Relocating the northern string of turbines to areas south and east in the Alternate  
7 Area would minimize the visual impacts of the project. Re-location of “northern string”  
8 turbines to this alternate area would simply result in an extension of the southern string  
9 of turbines as currently designed.

10  
11 **QUESTION NO.11: Are there alternatives to the project site for WHWPP**  
12 **that you are aware of?**

13 ANSWER: Yes. As I just mentioned, there is an alternative that I believe is  
14 superior to any of the alternatives analyzed in the ASC or DEIS, including the proposed  
15 site. The omitted alternative would move the northern string of turbines from their  
16 proposed location to an area that is east and southeast of the southeast portion of the  
17 current project site. This alternative area for the second turbine string would utilize land  
18 areas along a ridge top of Whiskey Disk Mountain -- the same ridge line used for the  
19 currently proposed southern string -- south to Highway 10 and easterly. This alternative  
20 would simply extend the current proposed southern string further east along lands  
21 bounded by Whiskey Dick Mountain ridge on the north and Highway 10 on the south.  
22 Exhibit 100.6 depicts this proposed relocation conceptually.

23  
24  
25 This alternative would still allow the applicant to site turbines in areas with good  
26 energy generation potential. Exhibit 100.7 depicts wind energy maps. The area Friends

1 is proposing appears to have the same or better wind energy potential as the area within  
2 which the northern string is currently proposed.

3           The alternative string alignment would reduce impacts to wildlife and wildlife  
4 habitat because it would take turbines out of the headwaters of five canyons important to  
5 wildlife: Whiskey Dick Canyon, the North Fork of Whiskey Dick Canyon, Hartman  
6 Canyon, Bryant Canyon and Skookumchuck Canyon. As I observed earlier, these  
7 canyons serve as valuable wildlife habitat, in part because of the springs that are located  
8 at the head of these canyons. The proposed northern string of wind generators will  
9 disrupt critical use of these canyons and springs. Relocating the northern string as  
10 proposed would not eliminate all wildlife impacts, but it would significantly reduce the  
11 magnitude of those impacts by relocating the turbines to a less sensitive area. Concerns  
12 about the proposed re-location raised by some of the Applicant's witnesses are discussed  
13 in more detail below.

14           **QUESTION NO.12: Did you review the Pre-Filed Testimony of Mr. Erickson**  
15 **and, if so, do you have any response to it?**

16           ANSWER: Yes.

17           Mr. Erickson states on page 6 of his testimony that the surveys duration and  
18 scope was greater than "many" studies of other proposed wind projects "with methods  
19 similar to those used elsewhere." There are several problems with this part of Mr.  
20 Erickson's testimony.

21           First - The wildlife surveys were conducted during only one year. The Kittitas  
22 Audubon Society expressed concern about the duration of studies from which to

1 determine wildlife density for a project of this scope and potential impact on wildlife. In  
2 their DEIS comment letter of September 10, 2004, they state a one year study is  
3 insufficient. The duration of one year is not sufficient time to establish adequate baseline  
4 information.  
5

6 Second – The fixed point surveys apparently were not designed to discern  
7 differences in wildlife density between areas in close proximity to springs and other areas  
8 distant from springs. There is for instance, no survey data indicated for sections 1, 35,  
9 and most of 34, which are areas distant from the springs. Without data for these areas,  
10 which do not have springs – effective comparisons to areas which are close to the springs  
11 cannot be made.  
12

13 Further, there is only scant acknowledgement of a relationship between water and  
14 wildlife. For instance, Erickson states “a few small water sources might encourage some  
15 limited bat activity,” but little else on this important subject.  
16

17 The testimony acknowledges “it is probable that some displacement effect may  
18 occur to the grassland/shrubs steppe breeding avian species occupying the study area.”  
19 If turbines are to be placed near springs then sufficient study should be undertaken to  
20 create baseline data which will facilitate appropriate placement of turbines next to  
21 springs. Better still would be the relocation of turbines of the northern string to the  
22 Alternate Areas as proposed by Friends of Wildlife.  
23

24 Regarding possible impacts of the completed project facilities maintenance  
25 activities:  
26

1           On page 9, Mr. Erickson re-states the comment contained in the DEIS that “It is  
2 not known if this human activity {maintenance} will exceed tolerance thresholds for  
3 wintering mule deer and elk”. With additional study of the Alternate Area and the  
4 possible determination that fewer deer and elk exist there, the risk associated with the  
5 unknown tolerance threshold for wintering mule deer and elk could be reduced, perhaps  
6 very substantially. Zilkha should conduct an adequate analysis of this alternative.  
7

8           Page 11 of the testimony discusses the elimination of turbines because of “historic  
9 sage grouse use” and “high relative raptor use.” We applaud such consideration but  
10 once again point to the lack of consideration for the springs which attract avian as well as  
11 terrestrial species. While no studies of the water resources and their relationship to  
12 wildlife have been undertaken – to Mr. Erickson’s credit he states “These water sources  
13 may be important for bird and Big Game species . . .” But then he attempts to minimize  
14 this impact by stating that the springs “have been impacted and degraded by livestock  
15 use.” Degraded by livestock or not – when the water bubbles out of the ground – the  
16 wildlife congregate to drink it. I know. I’ve been there to see it.  
17  
18

19           The testimony points out that turbines “are no closer than 225 meters from the  
20 nearest springs” and “at least 140 meters from The Pines.” A distance of 225 meters  
21 from the springs is equal to 738 feet or 246 yards. In the case of proximity to The Pines,  
22 a distance of 140 meters is equal to 459 feet or 150 yards.  
23

24           The turbines will be up to 410 feet tall. Imagine a 410 foot tall turbine with a  
25 279 foot diameter propeller, 738 feet away from a source of water for wildlife. It is  
26 difficult to believe Mr. Erickson’s suggestion that that setup will not be a deterrent to

1 terrestrial species and a hazard to avian species to a greater extent than the 2 to 3½ bird  
2 kills per year per turbine which is referred to in the DEIS. Notably, to support his  
3 conclusion, Mr. Erickson does not cite data extrapolated from turbines placed in  
4 proximity to water sources for wildlife. (Neither the DEIS.)

5  
6 The turbines should be moved farther from the springs or, better yet, relocated to  
7 the Alternate Area where they should be less of a hazard to avian species and potentially  
8 less of a deterrent to terrestrial wildlife.

9  
10 Erickson’s testimony speaks to a post-construction monitoring plan which will  
11 provide for fatality counts. Poor placement of turbines particularly in relation to springs  
12 makes fatality counts after construction a futile endeavor and too late for wildlife  
13 preservation.

14 Erickson states that “No . . . springs or riparian areas will be impacted by  
15 construction . . .” But without further study and/or significant shifting turbines away  
16 from the springs, it is not possible to forecast that there would not be significant higher  
17 mortality to avian species than the DEIS suggests and potentially greater impacts to  
18 wildlife which utilize the springs.

19  
20 Mr. Erickson cites the USFWS Guidelines for Sage Grouse 2003 and the follow-  
21 up memo of 2004 wherein the initial recommendation of not placing turbines closer than  
22 five miles is made and then clarified that the guidelines are “voluntary” and not meant to  
23 be “restrictive.” It is recognized in Mr. Erickson’s testimony that sage grouse have  
24 occupied the areas of the northern string previously and the potential exists for the area  
25 to contribute to sage grouse recovery in the future. Sage grouse sightings per Figure  
26

1 3.5-2 of the DEIS place those sightings in proximity to springs which are close to the  
2 northern string of turbines. This lends more weight to the need for further study of the  
3 Alternate Area which per the DEIS appears not to have as great a history of sage grouse  
4 sightings or habitation equivalent to sightings and history of the area of the northern  
5 string.  
6

7 We reiterate Mr. Erickson's testimony that some turbines "were eliminated" in  
8 consideration of sage grouse in the area of the northern string. Mr. Erickson's testimony  
9 reinforces the need for further study and consideration of relocation of the northern  
10 string of turbines to the Alternate Area.  
11

12 Mr. Erickson's testimony posits that relocation of the northern string to the  
13 Alternate Area "may present a far greater impact to the habitat connectivity of the three  
14 areas . . ." but goes on to claim that the project as presently designed "would not appear  
15 to significantly impact movement between the two populations" and that "the Wild Horse  
16 project has been designed to be permeable to wildlife movement" and that "It is not  
17 expected that the project will significantly limit any potential sage grouse movement  
18 across the project area."  
19

20 If the project as presently designed "wouldn't significantly impact movement  
21 between the populations", ... "has been designed to be permeable" and "is not expected  
22 to limit movement across the Sage Grouse Area," those same attributes can be achieved  
23 to address connectivity issues if turbines are re-located to the Alternate Area. This  
24 would spare impacts to wildlife use around the springs and yet, per the applicant's own  
25 testimony, avoid harm to sage grouse.  
26

1           The testimony posits that the Alternate Area proposal spreads the project further  
2 east. While this is true, the configuration is not correctly described in the testimony:  
3 “The relocation of approximately 2/3rds of the project to the Alternate Area would  
4 drastically alter the layout of the project to cover an area roughly 5 miles north and south  
5 and 10 miles east and west spanning an area from the current project location to within 2  
6 miles of the Columbia River to the East.” The description of the Alternate Area  
7 configuration would be more accurately stated “existing project footprint of five miles  
8 north and south would be reduced by approximately two miles from the northern portion  
9 and two miles would be added to the southerly portion of the Alternate Area keeping the  
10 north/south footprint of five miles the same. The present footprint as designed of four  
11 miles would expand approximately 4½ miles east to within 3½ miles of the Columbia  
12 River for a total width of 8½ miles.”

13  
14  
15           Mr. Erickson’s testimony with respect to a negative effect of the Alternate Areas  
16 impact on connectivity of elk to “the three areas” is not understood. We believe the  
17 Alternate Area plan promotes connectivity for mule deer and elk by eliminating an  
18 obstruction to migration and habitat through the area of the presently designed northern  
19 string and the springs contiguous to it. Highway 10 and Interstate 90 border the southern  
20 boundary of the Whiskey Dick Wildlife refuge and the Alternate Area. The turbine  
21 strings placed in the Alternate Area would merely parallel Highway 10 and be placed  
22 between it and the Whiskey Dick Mountain ridgeline to the north. Dependent upon final  
23 turbine layout and also referring to the corrected description of the alternate area  
24 previously clarified, there may be more spaces between turbines to facilitate  
25  
26

1 “permeability.” Particularly given as Mr. Erickson posits--that a project can be designed  
2 with permeability--the Alternate Areas need further study.

3 **QUESTION NO.13: Did you review the Pre-Filed Testimony of Mr. Taylor**  
4 **and, if so, do you have any response to it?**

5 ANSWER: Yes

6  
7 Mr. Taylor summarizes the reasons Friends of Wildlife’s proposal may not be  
8 feasible, however, he acknowledges that any final analysis should only be preceded by  
9 further study. Friends of Wildlife endorses further study wholeheartedly.

10  
11 Mr. Taylor asserts several reasons our alternative may not be feasible. I respond  
12 to each below.

13 1. LOWER ELEVATION AND LESS WIND POTENTIAL.

14 Response: Attached as exhibit 100.7 is a wind resource quality map produced by  
15 Northwest Seed. Friends of Wildlife has been advised by representatives of the National  
16 Renewable Energy Laboratory that the attached map represents the assembly of wind  
17 resource data from a multitude of sources including meteorological towers and numerical  
18 models. NREL states that the map depicts “the high end” of wind resource mapping.  
19 We are told further that more accurate information can be developed only after  
20 placement of additional meteorological towers and data gathering.  
21

22  
23 The attached map indicates the wind resource in our proposed Alternate Area to  
24 be of higher quality than the wind resources in the area of the northern string of turbines  
25 as presently designed.  
26

1           2.       THE PROPERTY IS OWNED BY WDFW AND DNR AND IT IS  
2 UNKNOWN IF THEY WOULD CONSIDER OFFERING IT FOR WIND POWER.

3           RESPONSE: Doesn't hurt to ask. WDFW and DNR may very well consider a  
4 land swap if it is found after further study that the areas of the northern string and the  
5 Alternate Area differ in wildlife density and that re-location would result in fewer  
6 impacts to wildlife. There are many indications that the impacts would be less if the re-  
7 location occurred. The lands of the Alternate Area are more open; do not possess the  
8 deep riparian corridors favorable to wildlife; have pre-existing higher levels of exposure  
9 to human contact due to proximity to Highway 10 and the configuration of existing  
10 roads; and, to Friends of Wildlife knowledge, possess only one active spring which  
11 produces water (Lone Star Spring at the easterly end of the area). Additionally WDFW  
12 and DNR, we presume, would enjoy the prospect of revenues or royalties in exchange  
13 for the contribution of their lands and the effect may mean significantly less impact on  
14 wildlife.  
15  
16  
17

18           3.       "IT COULD TAKE YEARS TO WORK THROUGH THE POLITICAL  
19 PROCESS, OBTAIN PERMISSION, UNDERTAKE THE STUDIES TO COMPARE  
20 ENVIRONMENTAL IMPACTS."

21           RESPONSE: We agree. In consideration of the magnitude of the Wild Horse  
22 project and its impact on wildlife (regardless of the form the project takes), the additional  
23 investment in further study is well worth the possibility that project modifications will  
24 result in more well-founded and wiser decisions which will lessen impacts on wildlife.  
25 Isn't that the purpose of EFSEC's review process? While we support wind energy  
26

1 development, haste makes waste. Wildlife should not have to endure decades of impacts  
2 that might have been avoided if another year or two were taken at the front end to make  
3 sure siting decisions minimized and avoided those impacts where possible.  
4

5 4. "THIS PHASE OF THE SITE INVESTIGATION PROCESS .... COULD  
6 COST HUNDREDS OF THOUSANDS OF DOLLARS":

7 RESPONSE: We agree. Mr. Taylor forecasts a fiscal magnitude for the project  
8 of \$235 million dollars. If additional studies cost \$500,000 this represents .002% of that  
9 total. We suggest this would be a wise investment.  
10

11 5. "CLOSER PROXIMITY TO THE COLUMBIAN RIVER MAY EXPOSE  
12 EAGLES AND SENSITIVE RAPTOR SPECIES":

13 RESPONSE: Possibly. But this is one reason additional studies will be useful.  
14 Friends of Wildlife's Proposal suggest the easterly end of turbines would be no closer  
15 than 3½ miles to the Columbia River.  
16

17 6. "CLOSER PROXIMITY TO THE GINGKO STATE PARK AND  
18 GREATER VISUAL IMPACT CONCERN FOR PARK USERS"

19 RESPONSE: Visual impact will occur no matter where turbines are placed. We  
20 suggest, however, that the topography of the easterly end of the proposed Alternate Area  
21 may be found to actually conceal turbines from view of the Gingko Park. The visual  
22 impact to park users would, in any event, be no greater than the severe visual impact  
23 precipitated by placement of the northern string as currently designed.  
24  
25  
26

1           7.        **SPEADING THE PROJECT FOOTPRINT ACROSS ROUGHLY FIVE**  
2 **MILES [NORTH TO SOUTH] BY 10 MILES (VS. 4 MILES BY 5 MILES ) COULD**  
3 **RESULT IN GREATER IMPACTS TO HABITAT CONNECTIVITY”**  
4

5           **RESPONSE:** Perhaps. Scientific data presently available indicates the strong  
6 possibility that highways provide barriers to connectivity. This is mentioned in Mr.  
7 Erickson’s testimony. Highway 10 and Interstate 90 separate sage grouse connectivity  
8 and it may be found after further study that this impairment will exist regardless of the  
9 design footprint and configuration of the Wild Horse project.  
10

11           The project footprint of the Alternate Area would be the same as presently  
12 designed north to south (5 miles) by 8½ miles (east to west) vs. 4 miles.

13           The testimony of Mr. Erickson suggests that a project can be designed which is  
14 permeable and through which sage grouse and other wildlife can move freely. We  
15 suggest these attributes – if achievable - can be implemented then under either design  
16 scenario.  
17

18           8.        **“WITH IMPLEMENTATION OF MITIGATION MEASURES, THERE**  
19 **WILL BE NO SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS.”**

20           **RESPONSE:** We disagree. This assertion ignores the number and magnitude of  
21 impacts to wildlife and visual impacts as well which are described in the ASC and the  
22 DEIS and also the impacts not adequately outlined in the DEIS as contained in this  
23 testimony. Despite that information, the applicant proposes to provide a meager 600  
24 acre parcel in section 27 as mitigation for those impacts. The applicant’s proposal for  
25 mitigation diminishes the proposals credibility.  
26

1           Meaningful mitigation would include the protection of wildlife values on  
2 acquisition of all private lands surrounding the project site (approximately 20,000 acres).  
3  
4           Additionally, the applicant and the new owner of the project (Puget Sound Energy)  
5 should agree to protect wildlife values on all lands within the proposed project footprint  
6 upon decommissioning of the project. Meaningful and appropriate mitigation could thus  
7 be achieved.

8           **Thank you.**

9  
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11           fowwp/pft (kruse)  
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