

BEFORE THE STATE OF WASHINGTON  
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of the Application of:

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

Docket No. EF-210011

PREFILED DIRECT TESTIMONY OF  
LEON GANUELAS

"Confidential" status marked in error and removed.

**PREFILED DIRECT TESTIMONY OF LEON GANUELAS**

Q Please state your name and employer.

A My name is Leon Ganuelas and I'm employed with the Yakama Nation Wildlife Resource Management Program ("YN-WRMP") as the program manager. I am also an enrolled member of the Confederated Tribes and Bands of the Yakama Nation ("Yakama Nation").

Q How long have you worked as a Program Manager with YN-WRMP?

A 1 year and 6 months.

Q Are you familiar with the Project at issue in Docket No. EF-210011 ("Project")?

A Yes.

Q What qualifications, education, or certifications do you have to testify regarding the Project's impacts?

A I have a Bachelor's degree in environmental science from Heritage University (2005), a Master's certificate degree in fisheries management (2021) from Oregon State University

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and am currently completing a Master's degree in fisheries and wildlife administration from Oregon State University. I have 19 years of ArcGIS experience and numerous training certificates from the Environmental System Research Institute.

Q Can you please describe YN-WRMP's pronghorn reintroduction program?

A Our purpose is to bring the species back because of their cultural significance to Yakama People. We are working to bring back a traditional food that was taken from us by the progression of settlers in this area when there weren't any resource management goals.

Our people have their seasonal use and we manage resources to avoid extirpation of species. Yakama people move within the seasonal migration pattern themselves and return to each food source in the right time frame once it has recovered from the previous year's harvest. As we move to hunt and gather in different areas the food availability is dependent on timing.

We are working now today with many limiting factors, including renewable energy development.

Our program has a power-point presentation that we have used to educate outside entities on our ongoing work. I have attached a version of the power-point as Exhibit A that I have reviewed and believe to be an accurate reflection of what we know and what we are working on developing for the reintroduction program. We are still working on improvements to our ongoing reintroduction program, despite setbacks from Covid-19

and funding limitations. The power-point has been modified from our prior presentations to reflect information most relevant to this proceeding. I would like an opportunity to discuss the power-point further during the hearing and answer any questions that the Energy Facility Site Evaluation Council (“EFSEC”) has about the work that we are doing for the pronghorn.

Q What documents have you reviewed in preparing this testimony?

A Portions of the Application relevant to this testimony, specifically Appendix K and Appendix L, and the draft environmental impact statement (“DEIS”). Because we did not receive actual GIS data for the Project, from either the Scout Clean Energy, LLL (“Applicant”) or EFSEC, until mid-May, I have worked off of a GIS feature class that Archaeologist Jessica Lally digitized from a rectified map she completed, and we have been using in our analysis at a finer-scale of the Project’s impacts. The feature class data I have been using is also consistent with the GIS data received from EFSEC more recently. For the power-point presentation attached as Exhibit A, I used the most recently received GIS data on slide 20 and digitized the solar array locations based upon the Application map itself since the data were not included with the data provided to us. When we superimposed the GPS collar data we were able to analyze seasonal patterns of pronghorn use within the boundary of the project and identify core habitat areas.

Q After reviewing the Project’s application and corresponding appendices, do you have concerns about the Project’s impacts on the local pronghorn population?

A Yes.

Q What are those concerns?

A The amount of anthropogenic disturbance of green energy development specifically wind turbines and solar arrays is becoming overwhelming in shrub-steppe habitat.<sup>1</sup> Shrub-steppe obligate species such as pronghorn are bearing the burden of green energy development. Most siting locations are in high-value forage areas that are compromising the fidelity of established migratory routes and altering behavioral patterns.<sup>2</sup>

Literature reviews on solar array facilities and the impacts on pronghorn are lacking, and the available studies on solar array impacts on pronghorn exhibit inconclusive results.<sup>3</sup> Solar array sites within the HHH require a chain-link fence six feet in height. The three proposed solar array sites will have direct habitat loss in and around the enclosures. The security fence poses no mortality to pronghorn which is true, but the loss of identified core habitat will have a greater impact by reducing pronghorn fecundity due to the magnitude of the fenced enclosures. Jones et al. 2018 examined barbed wire fence modification to accommodate pronghorn to pass through wildlife friendly fences but the Project construction requires enclosed chain-link fence for the solar components, so wildlife friendly fencing doesn't apply in this case.

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<sup>1</sup> Hall Sawyer, Jon P. Beckmann, Renee G. Seidler, Joel Berger, *Long-term effects of energy development on winter distribution and residency of pronghorn in the Greater Yellowstone Ecosystem*, CONSERVATION SCIENCE AND PRACTICE, Vol. 1, Issue 9 (Sept. 2019).

<sup>2</sup> *Id.*; Megan C. Milligan, Aaron N. Johnston, Jeffrey L. Beck, Kaitlyn L. Taylor, Embere Hall, Lee Knox, Teal Cufaude, Cody Wallace, Geneva Chong, Matthew J. Kauffman, *Wind-energy development alters pronghorn migration at multiple scales*, ECOLOGY AND EVOLUTION, Vol. 13, Issue 1 (January 10, 2023).

<sup>3</sup> Hall Sawyer, Nicole M. Korfanta, Matthew J. Kauffman, Benjamin S. Robb, Andrew C. Telander, Todd Mattson, *Trade-offs between utility-scale solar development and ungulates on western rangelands*, FRONTIERS IN ECOLOGY AND THE ENVIRONMENT, Vol. 20, Issue 6 (April 21, 2022).

Where shrub-steppe once existed, agricultural mosaic landscapes have displaced native habitat and pronghorn as well.<sup>4</sup> It is becoming common practice for project proponents to seek previously disturbed landscapes to site green energy development. The Project acres identified as agricultural lands previously disturbed will have less of an impact on pronghorn because pronghorn commonly avoid high density roads, tall agricultural fields, and anthropogenic developments.<sup>5</sup> Loss of those lands will still have some impact though because when we talk about avoidance of agricultural fields, there is a nuance to that because the pronghorn are more likely to avoid irrigated and taller crops, but will still use and migrate through dryland grain crops. Slides 16 and 19 show, on a large scale, avoidance of irrigated agriculture by the pronghorn. Slide 21 then shows (on a finer scale) irrigated agriculture avoidance, by multiple collared pronghorns, of a section of irrigated agriculture southwest of the Project area.

YN-WRMP pronghorn GPS collar data shown in Exhibit A identifies natural and anthropogenic barriers. The data also identify core habitat areas, and established migratory routes utilized by pronghorn throughout spring, summer, fall, and winter season. The spatial data shown on Slide 18 (using collar data from additional individual pronghorn) shows how the species use smaller canyons and draws but avoid steep large canyons that limit dispersion to more favorable habitat. In addition, anthropogenic

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<sup>4</sup> Paul F. Jones, Mike Grue, Mike Sutor, Darren J. Bender, Cormack Gates, Dale Eslinger, Julie Landry-Deboer, *Variability in the Selection Patterns of Pronghorn: Are they Really Native Prairie Obligates?*, THE PRAIRIE NATURALIST (December 2015).

<sup>5</sup> Katherine S. Christie, William F. Jensen, Mark S. Boyce, *Pronghorn Resource Selection and Habitat Fragmentation in North Dakota*, THE JOURNAL OF WILDLIFE MANAGEMENT, Vol. 81, Issue 1 (January 2017).

barriers such as the extent of the Project would further increase the limitation of how pronghorn utilize the local landscape.

The data referenced by the Applicant's consultant in Appendix K was a collaborative effort with the Washington Department of Fish & Wildlife ("WDFW") to assist YN-WRMP in aerial flights to identify population size and distribution. The Applicant consulted with WDFW to discuss the pronghorn but there has been no direct consultation with YN-WRMP about the Project or its environmental impacts. The Applicant also failed to include the full reports created by YN-WRMP and WDFW in their biological reports for the Project under Appendix K. Those reports are attached as Exhibit B and C.

Q In your opinion, will the Project compromise the ecological connectivity of Benton County.

A Yes.

Q Is ecological connectivity important to the continued success of the YN-WRMP's pronghorn reintroduction program?

A Yes

Q Why?

A Pronghorn require wide open landscapes to feed, migrate and rear offspring.<sup>6</sup>

Disconnection in the landscape by natural barriers, irrigated fields or anthropogenic

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<sup>6</sup> Megan C. Milligan, Aaron N. Johnston, Jeffrey L. Beck, , Kurt T. Smith, , Kaitlyn L. Taylor,, Embere Hall,, Lee Knox, Teal Cufaude, Code Wallace, Geneva Chong, Matthew J. Kauffman. *Variable effects of wind-energy development on seasonal habitat selection of pronghorn*, Ecosphere Vol. 12, Issue 12 (December 2021).

disturbance, has increased the importance of keeping the existing inter-connection of corridors whether fragmented or intact shrub-steppe habitat, this habitat is essential to pronghorn resilience, diversity, stability and the continued success of our reintroduction project and ultimately their existence. Resiliency is critical because if a species becomes less resilient, you will see a population decline due to the lack of adaptability to potential impacts. We would expect to see a decrease in land use due to by lack of connection between different core habitat areas. Essentially, migration along corridors is required to ensure continued diversity.

Q How will habitat fragmentation due to the Project impact the pronghorn population?

A Habitat fragmentation will further disconnect established corridors that pronghorn use and reduce an already fragmented shrub-steppe ecosystem.

Q Have you reviewed the Applicant's biological report by Tetra Tech regarding the Project's potential impacts on pronghorn antelope?

A Yes.

Q Do you have any concerns about that report?

A Yes, first of all the report is based on a limited aerial survey that does not reflect all relevant data. The authors reference an aerial survey conducted by WDFW and YN-WRMP – that is not nearly as comprehensive or helpful as collar GPs data. The aerial survey did not extend east into the Project area and Tetra Tech only included the 2021 survey. One aerial survey is not enough to accurately portray the pronghorn's habitat

use. The surveys weren't comprehensive enough to fully identify individual pronghorn(s) on the landscape or to accurately identify habitat suitability within the Project area. In contrast, by tracking individual pronghorn using collar data, YN-WRMP has identified this area as suitable habitat because of the current usage. Our data also allows us to break down habitat usage by every season.

Q The Applicant's report states that "Based on the data available, there does not appear to be high directionality in seasonal movement, and no distinct migratory corridors have been identified." Do you agree with that statement?

A No, we have seen migratory corridors based around seasonal use since first reintroducing the pronghorn. One illustration of that corridor usage is shown on slide 14 of the attached PPT presentation "Pronghorn Habitat Utilization – 2017."

Q The Applicant's report also states that "To our knowledge, the Project would not be an impediment to Pronghorn (or other big game) access to water features that are crucial for Pronghorn during all seasons (Yoakum et al. 2014)." Do you agree?

A. Not entirely. The Project extent would not fully impede Pronghorn, but the large, fenced enclosures would displace Pronghorn in core habitat areas within the extent of the Project boundary.

Q Is it possible that the Project, once constructed, will become a barrier to any pronghorn movement east of the Project's western boundary?



A We do not have enough information to conclusively say that the pronghorn will fully avoid the area because the wind turbines will still be located within winter foraging habitat. They can use the habitat around the turbines, but the noise and movement of the machines may become a deterrent unless overtime pronghorn become normalized to them.<sup>7</sup> The actual construction of the project will be more of a deterrent in the migration corridors, which also has the chance to potentially strand some individuals on the East side of the project.<sup>8</sup>

The map on Slide 20 of the attached power-point uses collar GPS data to show the movement of just two pronghorn individuals within the Project area across multiple seasons in 2018 and 2019. This GPS collar data illustrates the way that the Project's construction has the ability to fragment established corridors and habitat core areas. Because pronghorns mostly move in groups, we can see how the Project will have more of an impact that the Applicant acknowledges in its biological report and certainly more than EFSEC is currently acknowledging in the DEIS. This slide was created specifically for presentation to EFSEC as a part of my testimony so I added a key to help illustrate the data points. I am available to provide further explanation of any slides in the power-point through supplemental testimony. If EFSEC would like copies of the underlying data points, disclosure of that data can be arranged with our legal counsel.

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<sup>7</sup> Milligan et al. 2023, *supra* fn 2.

<sup>8</sup> *Id.*

Q You said that you have reviewed Appendix L to the Application. Do you have any concerns about the mitigation proposals specific to the Pronghorn?

A Yes.

Q What are those concerns?

A First of all, the mitigation plan does not include any mitigation for the Project's impacts to the pronghorn. They are not even mentioned within the mitigation plan, despite their documented presence in the area.

Both the mitigation plan and the DEIS state that adaptive management will be implemented for the project but they fail to provide sound mitigation measures, alternative approaches, standardized protocols, and best management practices ("BMP"). YN-WRMP recommends researching alternative approaches to fence enclosures for the solar fields, consistent with BMP, including but not limited to:

1. Provide angles in the fence enclosure to reduce the footprint,
2. Subset solar arrays into smaller enclosures to further reduce footprint and
3. Provide corridors between the subset enclosures at <50m, in theory allowing migration through the enclosures and possible stopovers.

These approaches are BMP that the Applicant and EFSEC should take into consideration the recommendations at an experimental approach.<sup>9</sup> Additional restoration efforts such as planting shrub-steppe species (e.g., sagebrush plugs) are not identified in the Applicant Commitments section although it does state low-growing grasses and forbs will be planted.

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<sup>9</sup> Sawyer et al. 2022, *supra* fn 3.

Q What additional mitigation for impacts to the Pronghorn is necessary to address your concerns and fully mitigate impacts to that specific species?

A No Action would be the best option.

Appendix L memorializes WDFW's recommendation to the Applicant to consult with Yakama Nation regarding the pronghorn as the managers of this reintroduction program. YN-WRMP holds the most informed knowledge about pronghorn use of the Project area and the Project's detrimental impacts. We were never consulted by the Applicant or EFSEC on the mitigation plan detailed in Appendix L. Even based upon the incomplete data provided in the Applicant's biological report, it is clear that the Project will have some impact on the pronghorn. As manager for the program responsible for reintroducing this historically and culturally significant species, I believe that more must be done by the Applicant and EFSEC to decrease the Project's detrimental impacts on the pronghorn that we are working hard to re-establish to this area following its extirpation.

Aside from mitigation for the Project's direct and indirect impacts, EFSEC should require the Applicant to fund long term monitoring and evaluation of the reintroduced pronghorn population to better understand the impacts. This should be done separate and above avoidance and mitigation for the Project's impacts.

I declare under penalty of perjury that the above testimony is true and correct to the best of my knowledge.



Leon Ganuelas

6-8-23

Date

**Pre-filed Direct Testimony of Leon Ganuelas Exhibit List**

Exhibit No.	Witness	Party	Description/Title
TYN-4009	Ganuelas, Leon	TYN	Pronghorn Reintroduction Powerpoint
TYN-4010	Ganuelas, Leon	TYN	2019 and 2021 Pronghorn Abundance Survey Reports