

**From:** [jaserles49@gmail.com](mailto:jaserles49@gmail.com)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Horse Heavens Wind Farm Project  
**Date:** Sunday, June 11, 2023 8:52:52 AM

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External Email

We support the effort that the Tri-Cities CARES group is expending in their opposition to the proposed Wind Project. We are some of the fortunate residents in this area that have a panoramic view of the surrounding hills which includes the Horse Heaven Hills in the background. We do not want that view destroyed by the presence of countless rotating wind turbines generating questionable power, most likely not even for the benefit of the local residents, but to be transmitted via the Western Interconnecting Grid to customers 100's of miles away.

Jim and Anne Serles  
3347 River Valley Dr.  
Richland, WA 99354

Sent from [Mail](#) for Windows

**From:** [pixelate@mathsavers.com](mailto:pixelate@mathsavers.com)  
**To:** [EFSEC mi Comments](#)  
**Subject:** HHH (Horse Heaven Hills) wind project, the Tri-Cities CARES (TCC) and Save Our Horse Heaven Hills movement  
**Date:** Sunday, June 11, 2023 3:57:45 PM

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### External Email

Hello EFSEC Director Sonia Bumpus –

Regarding the HHH (Horse Heaven Hills) wind project, the Tri-Cities CARES (TCC) and Save Our Horse Heaven Hills movement:

- First and foremost – I am Against the HHH Wind Farm Project in all its myriad of aspects.
- I fully Support the efforts of the Tri-Cities CARES (TCC) group.
- My name is Patrick D. Grengs II.
- I am the Owner of 40 Acres of land in West Richland located Southwest of Harrington Road:
  - See attached image file:  
BentonCountyGIS\_Sandhill\_ArgentumMatsonColorBoundaries\_20181028v3
  - The satellite image was taken a few years prior to installing the center pivot irrigation and growing of 25 acres of corn / alfalfa.
  - I currently own the 40 acres as depicted with the Red boundary.
  - I used to own the 35 acre parcel (Orange boundary) and sold this to local real estate developer Titan Homes (June 2020).
  - The 40 acres include 12 acres of CID water rights.
  - A portion of the 40 acres is presently being used for the cultivation of alfalfa.
  - The alfalfa crop is part of a business partnership with Garth Hatch, my neighbor who owns 31 acres just south of my 40 acres.
  - Plans include the eventual construction of a personal home on my property.
  - I am also looking at selling a portion of these 40 acres to a local home developer, given a good sale price.
- The Effects that the HHH Wind Project will have on my property:
  - Destruction of over 120 degrees of view, essentially the entire view to the West of my Sandhill property.
  - Reduced value of my property to any future buyer / developer in terms of the despoiled landscape.
  - The wind turbines will generate long shadow flicker for the miles of property that they impact.
  - It is also well known that wind turbines change the climate by altering the surface air temperatures during the day (cooling) and night (heating).
  - Wind patterns will be impacted because of this huge installation and can have damaging effects on the local crops in terms of precipitation patterns.



- There will also be the expected noise pollution because of all the moving parts.
- The winking red lights will despoil the quiescence of the Tri-Cities night.
- There are additional negative impacts that will result if the HHH wind project is implemented:
  - All wind power must be supplemented by hot-standby power (typically natural gas plants).
  - The turbines have an expected life of 15 years (despite the PR material that shows 25 years for the amortization).
  - There will be constant maintenance required for the moving parts on these huge unnecessary wastes of resources.
  - The blades will need to be replaced after 15 years and there is no effective means to recycle the wind blades (they typically end up in landfills located in low-population counties).
  - Washington State already has over 70% of its electrical power provided by safe, quiet, green, paid-for hydroelectric plants.
  - It is interesting that Washington State politicians insist that hydro-power is not green – this designation has been made so that the highly subsidized wind farms can be installed at great cost both economically and environmentally.
  - The wind turbines are a so-called solution to a problem that does not exist – we have safe and effective green power already. More importantly, CO<sub>2</sub> is not a pollutant, it is a necessary ingredient for plant growth.
  - The natural resources and costs to mine the materials, fabricate, ship and install the turbines, maintain and decommission them exceeds the sum of the intermittent power that they generate over their lifetime.
  - The 2500 tons of concrete at the base of a 2MW baseplate turbine (one of the typical turbines with a 200' tower and 100' blades) requires 600,000 pounds of cement – just the creation of that cement generates ~300 tons of CO<sub>2</sub>. This does not even include the costs for the rebar, forms, transportation and installation of the concrete base. The much larger turbines in the HHH project will require significantly more materials and generate a far greater amount of CO<sub>2</sub> (so much for the clean-and-green claims for wind turbines).
- In Summary: I see the HHH wind project as both a criminal waste of resources and the application of unnecessary technology that will destroy the beauty and value of property owned by individuals throughout the Tri-Cities.

Respectfully submitted,

Patrick D. Grengs II / Land owner and farmer of 40 acres in West Richland, Washington

**From:** [Margaret J Merk](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** TriCities CARES  
**Date:** Sunday, June 11, 2023 10:47:42 PM

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External Email

I am a supporter of TriCities CARES and their efforts to intervene in the Horse Heaven Wind Project to avoid the implementation of the project.

Thank you.

Margaret J. Merk  
Richland, WA.

Sent from my iPhone

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Wind turbine farm  
**Date:** Monday, June 12, 2023 8:18:01 AM

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-----Original Message-----

From: Karen Richardson <zimbaz2910@gmail.com>  
Sent: Friday, June 9, 2023 5:51 PM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Wind turbine farm

External Email

By now, I've been writing letters, sending comments, going to meetings, and watching Zoom calls since October 2020!!!

I'm not the only one! Anyone in the Tri-Cities that cares about our area and the "wide open spaces" have been signing petitions, going to meetings at court houses, and donating hard earned dollars to our "TriCities Cares" group.

We have Hanford, our Nuclear area here in Richland, huge dams on our Great Rivers for our "reliable Hydro" power and you still want to squeeze our Community for more!!!!

If we have a smaller voting population and the West side of Wa. State needs more electricity for the "Green Energy Community", put your wind turbines on the West Coast!!!

Electricians in our area, have told us the infrastructure for Electric Auto Charging Stations, are not developed over here. And while you boast about job security, by the time you're done building your turbines, and then building your infrastructure for energy to be transported, the turbines will start disintegrating, throwing blades and spewing oil to start fires in "dry wheat fields" where the turbines are purposed to be erected!!

NO WIND TURBINE FARMS IN THE HORSE HEAVEN HILLS!!!!!!!!!!!!!!

Karen R.

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse Heaven Wind Project  
**Date:** Monday, June 12, 2023 8:18:12 AM

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**From:** Denise Christensen <cjcfarms@msn.com>  
**Sent:** Sunday, June 11, 2023 3:22 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Horse Heaven Wind Project

External Email

EFSEC Committee;

I support the mission of the Tri-Cities CARES (TCC) group in the Horse Heaven Wind project adjudication process. The issues of wildlife, aesthetics, human and domestic animal health, safety, quality of life, lack of local control, etc., that TCC is focused on are of concern of the Tri-City community.

I am a landowner if the Horse Hills and this project will adversely affect my quality of life. Please stop the Horse Heaven Wind project.

*Denise*

Denise Christensen  
509.222.8844  
[cjcfarms@msn.com](mailto:cjcfarms@msn.com)

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Barbera Buckmaster](#)  
**Cc:** [pam minelli](#); [Judy](#); [EFSEC mi Comments](#)  
**Subject:** Re: No Wind Mills  
**Date:** Monday, June 12, 2023 8:50:06 AM

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Thank you for contacting the Washington Energy Facility Site Evaluation Council (EFSEC), if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate EFSEC project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

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**From:** Barbera Buckmaster <bchervy25@gmail.com>  
**Sent:** Saturday, June 10, 2023 11:16:31 AM  
**To:** Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>  
**Cc:** pam minelli <pam\_minelli@hotmail.com>; Judy <goosie1515@aol.com>  
**Subject:** No Wind Mills

### External Email

Dear Director Sonia Bumpus,

I support Tri Cities Cares, and honor their efforts to stop the construction of Wind Turbines.

I am not in favor of Scout Clean Energy's proposed construction of a major wind farm on the ridges of the Horse Heaven Hills. I own a 200 acre farm that borders the base of the HHH where turbines are proposed to be erected. I worry this could lower the value of my property, especially in years to come with urban growth. The flashing lights, the constant thumping of blades, distorting the most beautiful, quite, relaxing, God given serenity of nature, to be sacrificed to the monstrous eyesores (for decades to come), is plain heartbreaking. Truly I worry most about the wildlife itself.

Currently this spring, (now, as I write this) we have two baby Great Horned owls, a family of American Kestrels just born a week ago, a nest of newly born Magpies, along with the just hatched tiny little Killdeer birds, along with a nest of Starlings born a couple weeks ago. Not to mention the Robins, the Cooper Hawks and new family of Coyotes.

I was **strongly** approached by Scout Clean Energy when they first came to our community in 2020 hunting for a pathway to transport the turbines power to the power grid. After Council and much thought, I decided this was not in my interest and **ran** from their offers. It is not, in my opinion in the best interest of our community. This community will for decades be giving up the most gorgeous beauty of our Horse Heaven Hills. May I also interate, we don't need this extra bit of power. We have abundance of hydro power, clean nuclear power and solar power. Again, these turbines are for

the greed of Scout Clean Energy, their investors, and Cities and States far from our community.  
PLEASE SAY NO. If they go up, all I can say to all involved, "SHAME."

With Sincerely,  
Barbara Buckmaster  
509-987-2675

Sent from [Mail](#) for Windows

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Mary Ann Burrow](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** RE: Tri-Cities Cares  
**Date:** Thursday, June 8, 2023 10:41:45 AM

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Thank you for contacting the **Washington Energy Facility Site Evaluation Council (EFSEC)**, if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate **EFSEC** project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

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**From:** Mary Ann Burrow <ma.burrow@yahoo.com>  
**Sent:** Wednesday, June 7, 2023 11:19 AM  
**To:** Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>  
**Subject:** Tri-Cities Cares

External Email

Ms. Bumpus,  
This is to inform you that I support Tri Cities Cares and that they represent me as a resident of the Kennewick and Benton County.

Mary Ann Burrow  
28007 Country Meadows Lane  
Kennewick, WA 99338

(509)438-9903

[Sent from Yahoo Mail for iPhone](#)

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Larry Christensen](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** RE: Save Our Horse Heaven Hills  
**Date:** Thursday, June 8, 2023 10:42:33 AM

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Thank you for contacting the Washington Energy Facility Site Evaluation Council (EFSEC), if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate EFSEC project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

-----Original Message-----

From: Larry Christensen <[larryjchristensen@gmail.com](mailto:larryjchristensen@gmail.com)>  
Sent: Wednesday, June 7, 2023 2:25 PM  
To: Bumpus, Sonia (EFSEC) <[sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov)>  
Subject: Save Our Horse Heaven Hills

External Email

This message is to voice our support for Tri Cities Cares and their efforts to save our Horse Heaven Hills. Their efforts which started with a small group of concerned citizens has grown increasingly important to protect our quality of life here in Eastern Washington. We totally support the work of TCC not only in theory but we have also supported them with a generous donation. We seldom donate to causes such as this but we feel this is a very important effort to protect the future of our environment.

The Horse Heaven Hills wind turbine project will provide very little, if any, benefit for our community. Any economic benefits will be short lived and energy benefits will not be felt locally whatsoever. Instead, we will be left with an eyesore that will impact property values and harm precious wildlife.

We are proud to support Tri Cities Cares and wish them much success going forward.

Larry and Kathi Christensen  
Richland, Washington

Sent from my iPad  
Larry Christensen



**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Lori Judkins](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** RE: Save Our Horse Heaven Hills  
**Date:** Thursday, June 8, 2023 10:43:04 AM

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Thank you for contacting the Washington Energy Facility Site Evaluation Council (EFSEC), if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate EFSEC project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

-----Original Message-----

From: Lori Judkins <[lhjpraisegod@comcast.net](mailto:lhjpraisegod@comcast.net)>  
Sent: Wednesday, June 7, 2023 5:18 PM  
To: Bumpus, Sonia (EFSEC) <[sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov)>  
Subject: Save Our Horse Heaven Hills

External Email

Ms Bumpus,

I just wanted to let you know that I STRONGLY support the work of Tri-Cities CARES efforts to represent the Horse Heaven Wind Project adjudication process. Please make note of my support and full confidence in them to take care of our wishes for all our local residents!!!

Thank you,

Lori Judkins

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Jeffery Banning](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** RE: Tri Cities CARES Representing Community  
**Date:** Thursday, June 8, 2023 10:43:24 AM

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Thank you for contacting the **Washington Energy Facility Site Evaluation Council (EFSEC)**, if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate **EFSEC** project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

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**From:** Jeffery Banning <jbann64@gmail.com>  
**Sent:** Wednesday, June 7, 2023 7:58 PM  
**To:** EFSEC mi Comments <Comments@efsec.wa.gov>  
**Cc:** Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>  
**Subject:** Tri Cities CARES Representing Community

### External Email

As a 25 year resident of Kennewick, WA, I fully support the Tri Cities CARES organization representing myself, my family and the citizens of Benton County, WA opposing the poorly sited and unwanted Horse Heaven Hills Wind and Solar Farm.

The Tri-Cities would be negatively impacted by the construction of such a large scale solar & wind farm so close to so many residential homes as well as the negative impact on wildlife and migratory patterns of many bird species. I completely trust TCC to represent us as residents of the Tri-Cities in their continued efforts of opposition to this project.

Thank you,  
Jeff Banning  
[jbann64@gmail.com](mailto:jbann64@gmail.com)

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [Mark Morton](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** RE: Tri Cities CARES is our representative for HHH Wind Project  
**Date:** Thursday, June 8, 2023 10:44:26 AM

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Thank you for contacting the **Washington Energy Facility Site Evaluation Council (EFSEC)**, if you are attempting to provide comments or input on an energy project this is the incorrect email address. To ensure your comment is received and added to the appropriate **EFSEC** project record, please send your comments to [comments@efsec.wa.gov](mailto:comments@efsec.wa.gov).

For emailing questions to EFSEC, please email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov).

Kind regards,  
EFSEC

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**From:** Mark Morton <helperinkenn@gmail.com>  
**Sent:** Thursday, June 8, 2023 9:12 AM  
**To:** Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>  
**Subject:** Tri Cities CARES is our representative for HHH Wind Project

External Email

Ms Bumpus and EFSEC Committee,

I have interacted a number of times with the Tri-Cities CARES group and believe they have been doing an exceptional job of representing our local communities in the Horse Heaven Wind Project adjudication process. We want to confirm our support for their intervention in the process.

Respectfully,  
Mark & Virginia Morton  
West Richland  
509 727 2929



RECEIVED

JUL 07 2023

ENERGY FACILITY SITE  
EVALUATION COUNCIL

June 22, 2023

Energy Facility Site Evaluation Council  
Washington Utilities and Transportation Commission  
6 21 Woodland Square Loop SE  
Olympia, WA 98504

Dear Council Members:

On behalf of the over 1200 members of the TriCity Association of Realtors, I'm writing to express our opposition to the Horse Heaven Hills Wind Farm project.

Our organization advocates for pro-housing legislation in the TriCities area. In addition to housing issues, we are also champions of property rights for all homeowners.

This is a controversial project, with much opposition including Benton PUD, various environmental groups, and the Yakima Nation. We believe it is our duty to stand alongside these numerous groups as a dissenting voice to this wholly disadvantageous proposal. The harm to the property rights, viewsheds, and future planning for local housing are far too detrimental to our profession and those we advocate for. Although there are countless reasons to not move forward with this project, these 4 points highlight the most glaring opposition:

1. In 2019, Hydro power created over 30,500 megawatts of power - wind pales in comparison.
2. Regarding the Endangered Species Act (ESA) of 1973, wind poses a threat to native birds in our region.
3. Agriculturally, wind can create direct effects on local temperatures that can detrimentally affect our region's output of food and other necessary resources.
4. An alternate location where the windmills could be housed is at the Hanford Site. The location has become an Epicenter for Energy Creation; Nuclear, Small modular Reactors, Solar, etc.

We will firmly support Benton County and all other local jurisdictions and special interest groups in strict opposition to Scout Clean Energy's intent to compromise and exploit our homes and local resources.

We will make ourselves and our resources available in any way that we might help inform, encourage, and engage the community and our members to help bring this project to a halt.

We thank each of you for your time and consideration in this matter.

Respectfully,

TRICITY ASSOCIATION OF REALTORS

Lola Franklin, CAE  
Chief Executive Officer





**Tri-City Association of REALTORS®**

7151 West Clearwater Ave.

Kennewick, Washington 99336-1779

RECEIVED

JUN 28 2023

WASH.UT. & TP. COMM

SPOKANE WA 990

23 JUN 2023 PM 1 L

FIRST-CLASS



US POSTAGE<sup>TM</sup> PITNEY BOWES



ZIP 99336

02 7H

0001357692

\$ 000.60<sup>0</sup>

JUN 22 2023

**Energy Facility Site Evaluation Council**

**Washington Utilities and Transportation Commission**

621 Woodland Square Loop SE

Olympia, WA 98504

98504-



**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: HHH project comment  
**Date:** Thursday, June 15, 2023 3:59:30 PM  
**Attachments:** [Video.mov](#)

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**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Thursday, June 15, 2023 3:59:09 PM (UTC-08:00) Pacific Time (US & Canada)  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH project comment

External Email

3 fires in the HHH at the same time. Wild fires are typical. See pictures.

Sent from my iPhone

From: [EFSEC \(EFSEC\)](#)  
To: [EFSEC \(EFSEC\)](#)  
Subject: F0: 000-000  
Date: Thursday, June 15, 2023 4:08:10 PM

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From: Christina Caprio <ccaprio1@gmail.com>  
Sent: Thursday, June 15, 2023 4:00 PM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Hhh fires







External Email

Sent from my iPhone

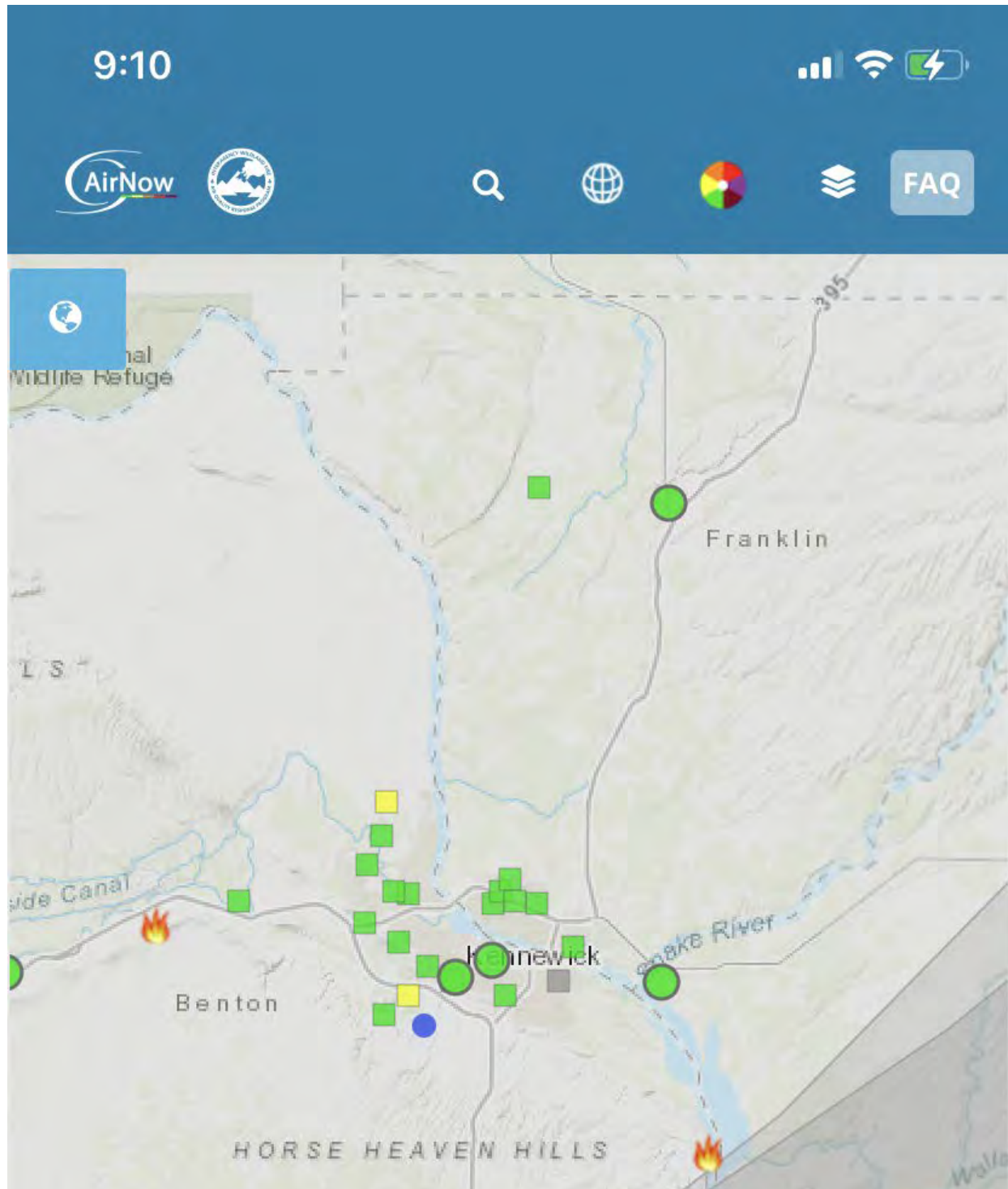


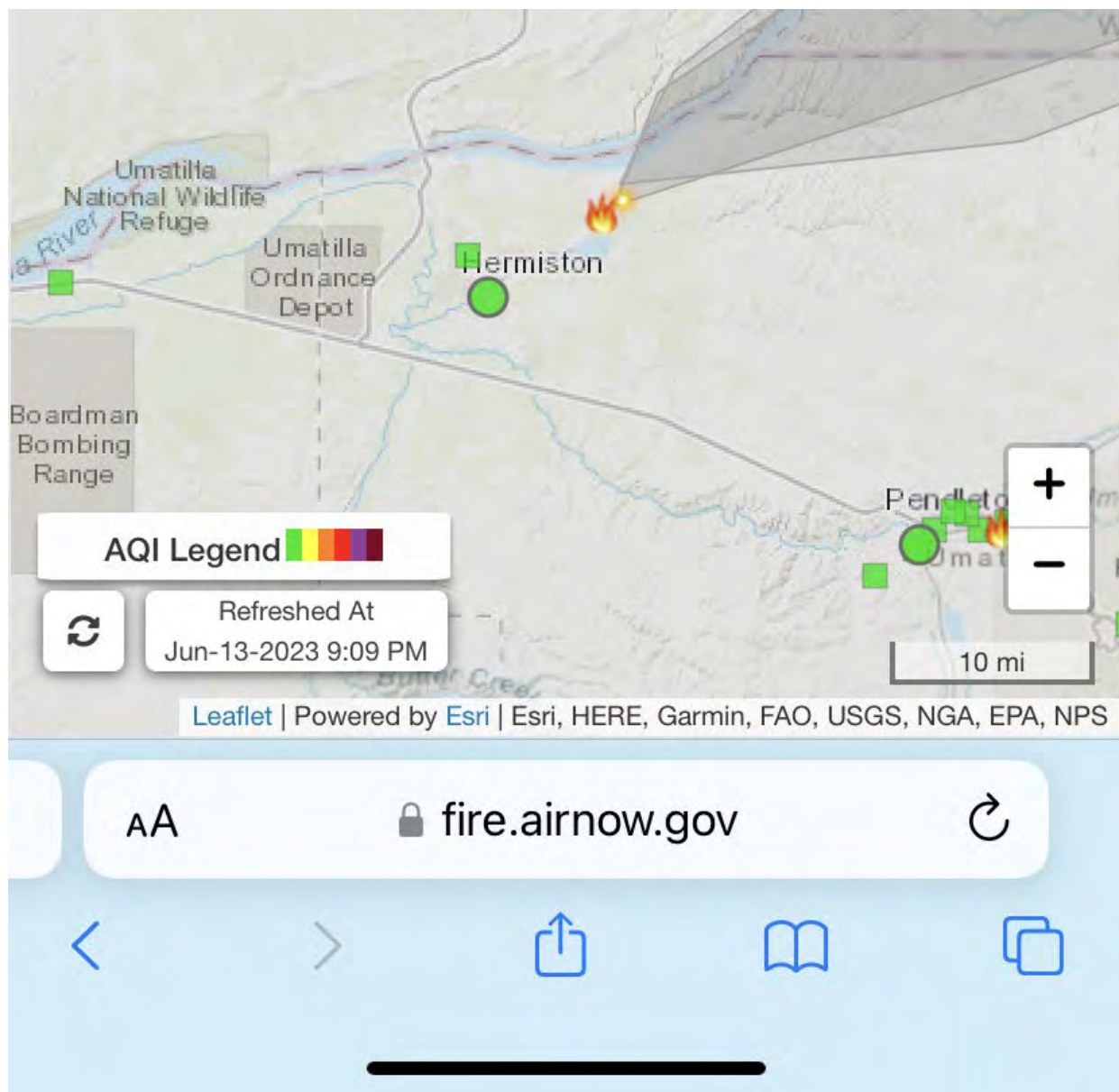
**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Hhh fires  
**Date:** Thursday, June 15, 2023 4:08:45 PM  
**Attachments:** [image0.png](#)  
[Video.mov](#)

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**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Thursday, June 15, 2023 4:01 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Hhh fires

External Email





Sent from my iPhone

From: [EFSEC \(EFSEC\)](#)  
To: [EFSEC mi Comments](#)  
Subject: FW: HHH 3 Fires at the same time  
Date: Thursday, June 15, 2023 4:08:46 PM  
Attachments: [image0.png](#)

**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Thursday, June 15, 2023 4:04 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH 3 Fires at the same time

External Email

4:03

LTE

facebook

Log in

fires are still active and crews are on the scene mopping up hot spots.



## Southeast Washington Interagency Incident Management Team

7h +

HANSEN, HOVER, & RUPPERT FIRES UPDATE  
SE Washington Incident Management Team 1  
Incident Commander: Walter Escobar / Ryan Nicholls, Trainee  
Date: June 15, 2023 Time: 8:00AM  
Fire Information: (971) 800-0411  
[se.wa.t1.info@gmail.com](mailto:se.wa.t1.info@gmail.com)

Hansen: 6,334 acres / 50% contained / 1 outbuilding destroyed  
Hover: 411 acres / 54% contained / 0 structures destroyed  
Ruppert: 164 acres / 55% contained / 0 structures destroyed

destroyed

Strong winds tested the firelines yesterday and late into the evening producing interior isolated flare ups, but cooler temperatures overnight prevented any new growth. Updated acreage reflects more accurate mapping.


Today, firefighters on the Hansen Road Fire will be

**Connect with Benton County Fire District #1 on Facebook**

**Log in**

Or

**Create new account**

 facebook.com

Sent from my iPhone



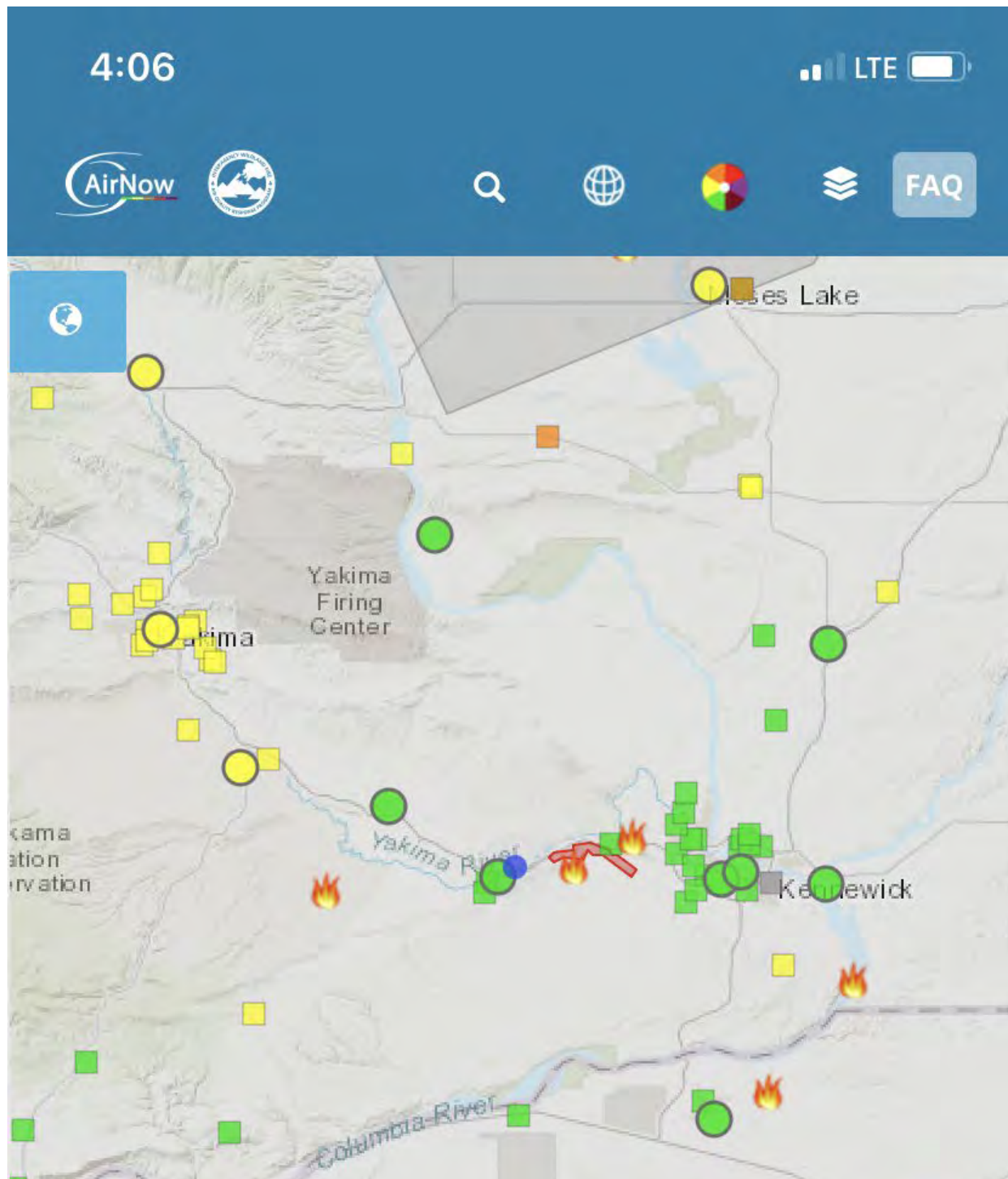


From: [EFSEC \(EFSEC\)](#)  
To: [EFSEC mi Comments](#)  
Subject: FW: HHH Fires  
Date: Thursday, June 15, 2023 4:09:31 PM  
Attachments: [image0.png](#)  
[image1.png](#)  
[image2.png](#)

---

**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Thursday, June 15, 2023 4:08 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH Fires

External Email







# Hansen Road Fire

WILDFIRE

**Total Acres:** 6,309 acres.

**Last Report:** June 15 2023 04:06PM UTC


No previous reports available to calculate growth.

Latest total area burned perimeter shown on map.

[Remove](#)

*Reported data reflects overall fire to date, not currently burning area. Check report date for timeliness; also satellite detections can provide additional information on recently burning areas. [Learn more](#) about fire data sources.*

Close

AQI Legend 




Refreshed At  
Jun-15-2023 4:05 PM



3 mi

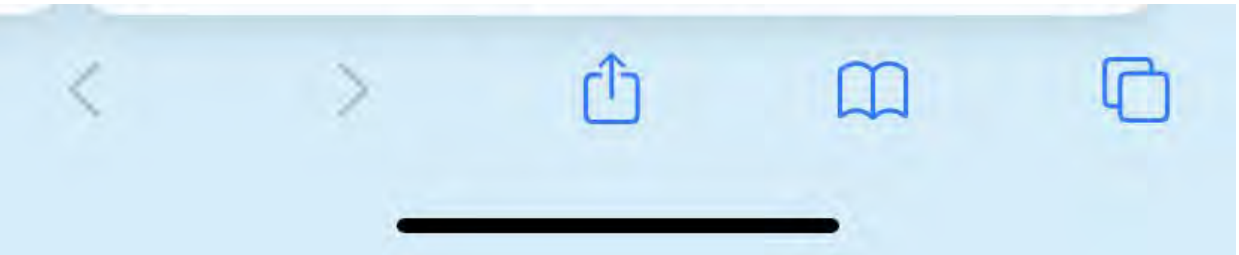
Leaflet | Powered by Esri | Bureau of Land Management, State of Oregon, S...

AA

 fire.airnow.gov



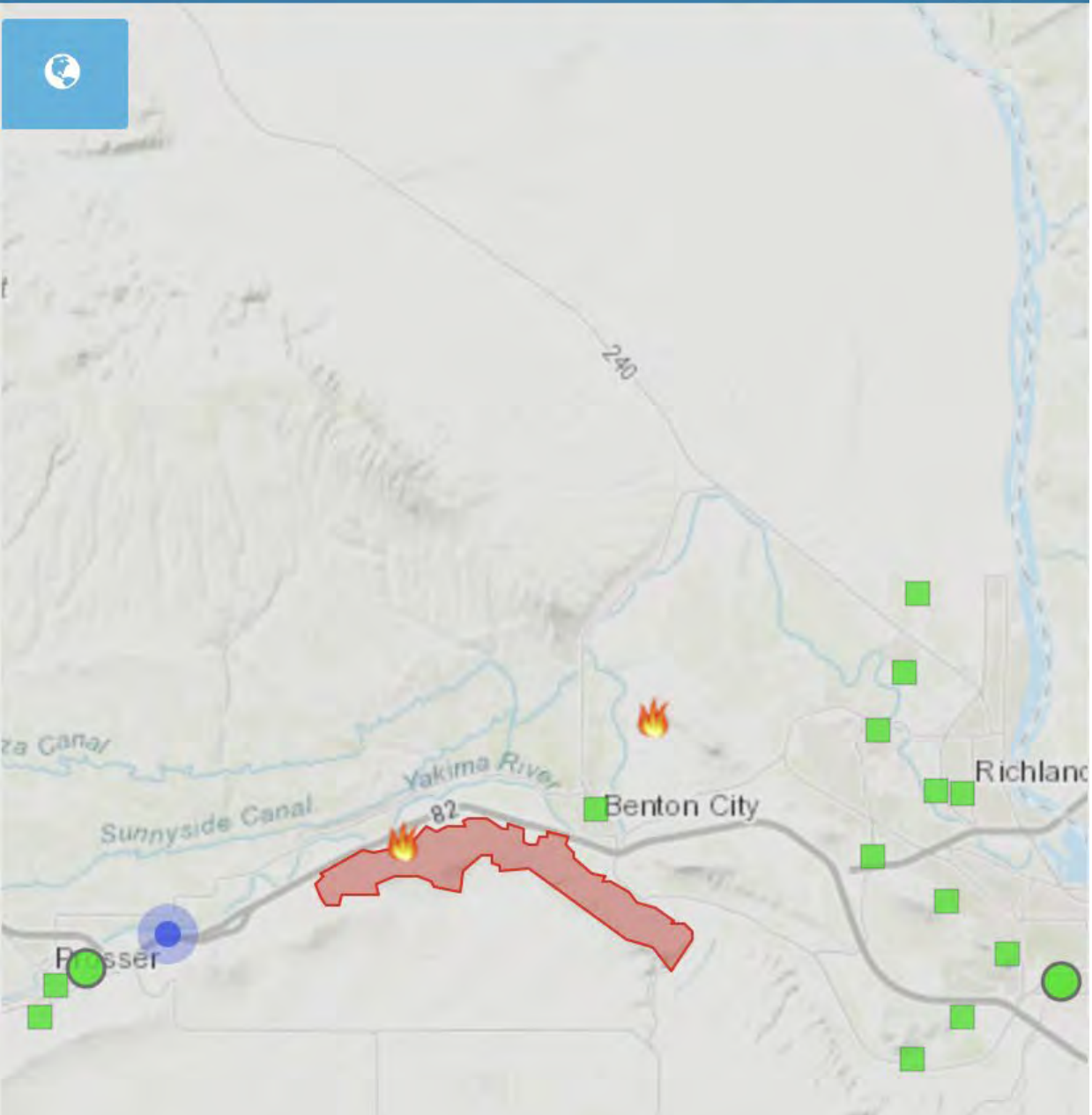


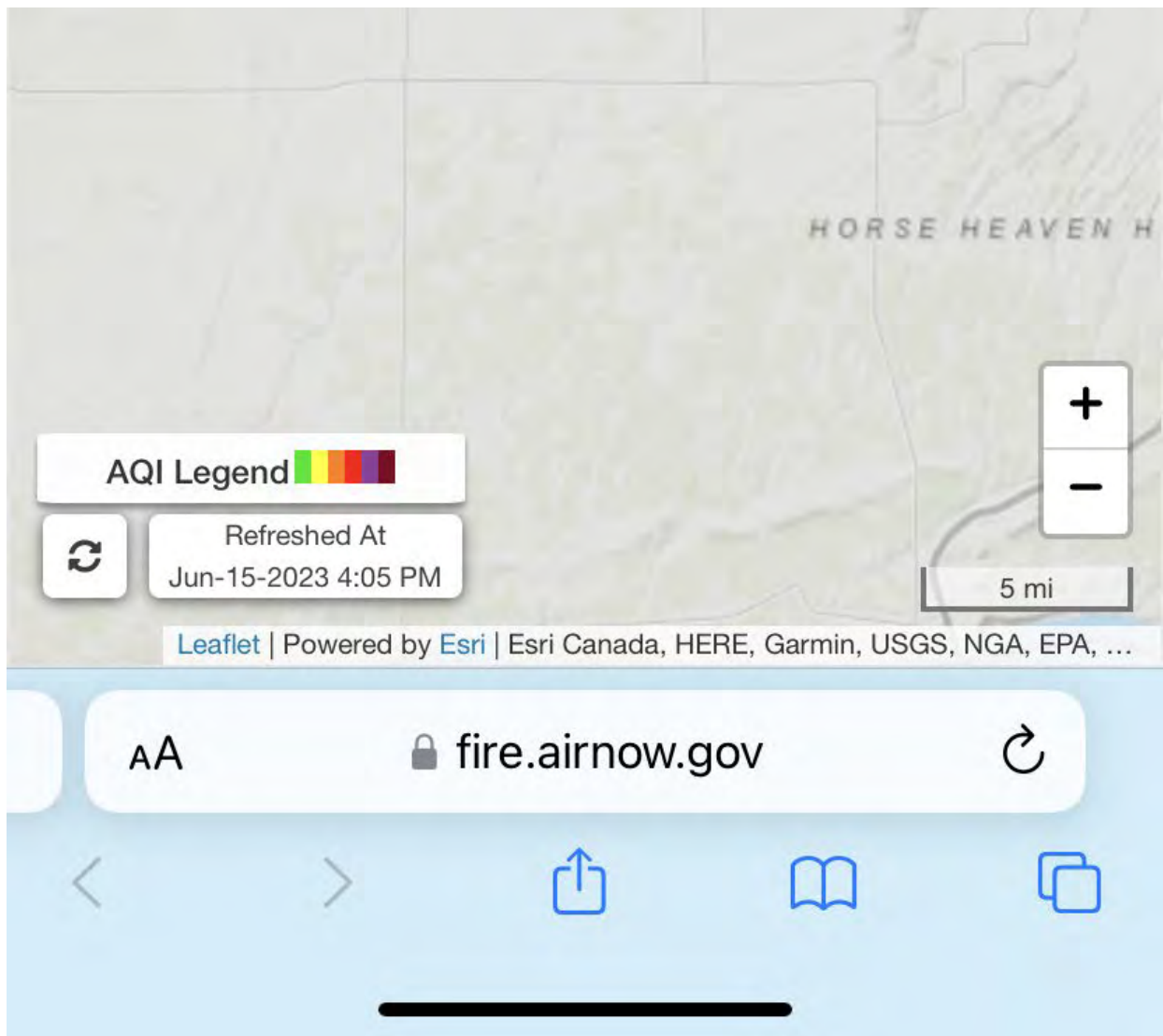


4:06



FAQ





Sent from my iPhone

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Hhh fires  
**Date:** Thursday, June 15, 2023 4:23:51 PM

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-----Original Message-----

From: Christina Caprio <capriotri@gmail.com>  
Sent: Thursday, June 15, 2023 4:22 PM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Hhh fires

External Email

I sent many pictures and videos of the three + fires going on simultaneously in the Horse Heaven Hills which is a typical issue in the greater Columbia Basin area. Windmills are just left to burn. Burning windmills and solar farms would be a real risk. Burning these items would be added fuel and be very toxic to the environment.

Christina Caprio  
NEPA Scientist  
HHH Resident

Sent from my iPhone

**From:** [Bumpus, Sonia \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Fwd: No Windmills  
**Date:** Monday, June 26, 2023 8:01:44 AM

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**Sonia E. Bumpus**  
*Executive Director*  
**Energy Facility Site Evaluation Council**  
Email: [sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov)  
Work mobile: (360) 972-5687

---

**From:** Luke Graesser <[lukeg1229@gmail.com](mailto:lukeg1229@gmail.com)>  
**Sent:** Sunday, June 25, 2023 4:24:06 PM  
**To:** Bumpus, Sonia (EFSEC) <[sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov)>  
**Subject:** No Windmills

External Email

I support Tri-Cities CARES efforts as a resident of the Tri-Cities region. Please no more windmills. Thank you

Luke Graesser

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Hhh fires  
**Date:** Wednesday, July 5, 2023 9:07:40 AM

---

**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Friday, June 30, 2023 5:53 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Hhh fires

External Email

Continued fires



Sent from my iPhone

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: HHH Fires McBee  
**Date:** Wednesday, July 5, 2023 9:07:54 AM

---

**From:** Christina Caprio <caprio\_lv@pocketinet.com>  
**Sent:** Saturday, July 1, 2023 8:11 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH Fires McBee

External Email

See testimony and pictures of HHH fires where windmills are just left to burn in a wildfire centric area.

Sent from my iPhone

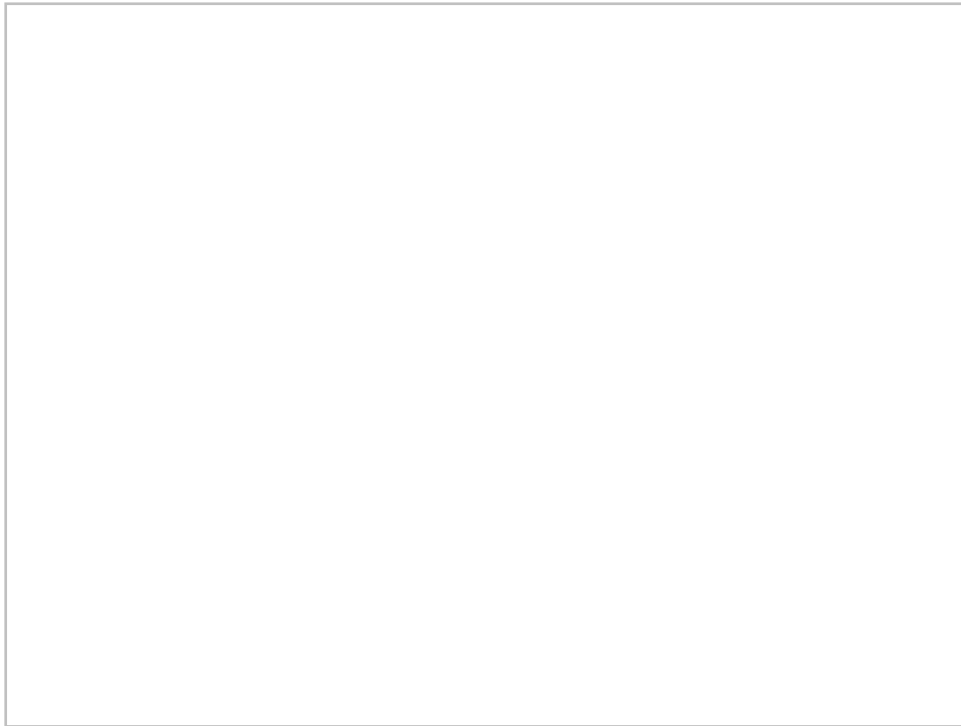
Begin forwarded message:

**From:** Kahryn Campbell <[info@anelare.com](mailto:info@anelare.com)>  
**Date:** June 30, 2023 at 7:25:48 AM PDT  
**To:** [caprio\\_lv@pocketinet.com](mailto:caprio_lv@pocketinet.com)  
**Subject:** Thank you & upcoming concerts!

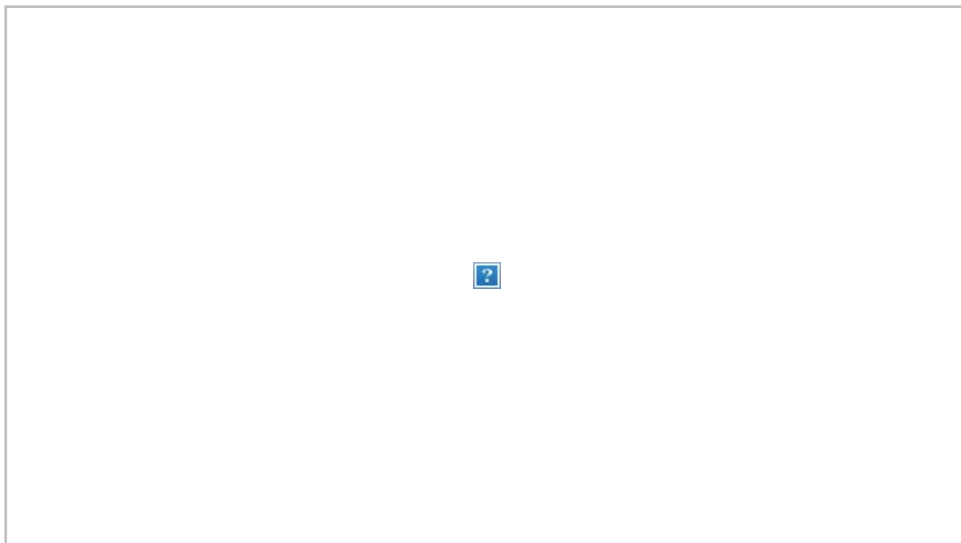


We want to send a big *thank you* for all those who reached out to us regarding the big fire on the McBee hillside. Your love and support means the world to us. It was very scary and emotional, but we made it through!

Tremendous appreciation to our local, state and federal firefighters. Their protection of our home and Anelare was incredible. We are open at Anelare and couldn't be more grateful to see you and share our wines.



**\*\* A change in one of our upcoming concerts \*\*** On July 7th, we've got Soul Patch minus Ty Bailie. Frazer and Luke have added a percussionist and sax player to fill out the band even more and give the night great soul and texture! Ty had a conflict arise and is very sorry to miss. He will be back, you can count on that! *For those that have purchased tickets, we will refund a portion of the price. We have few tickets left for both evenings, come hang on the patio!*



We wish you a safe and Happy 4th of July! Cheers to the USA, drink some great wine and hope to see you soon! Love, Team Anelare

[EVENT TICKETS](#)

---

\*Club Member Coupon code: ANELAREFAM

**Anelare**  
19205 N McBee Rd  
NW Benton City, WA 99320

T: (509) 303-5869  
[Privacy Policy](#) | [Unsubscribe](#)





Page: 1  
Date: 10/10/2023  
Time: 10:10:10 AM  
User: admin  
IP: 192.168.1.100  
Device: Desktop  
Browser: Chrome  
URL: http://localhost:8080/



Image taken by 00000



**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Hhh fire videos  
**Date:** Thursday, July 20, 2023 11:47:21 AM  
**Attachments:** [Video.mov](#)

---

**From:** Christina Caprio <capriotri@gmail.com>  
**Sent:** Wednesday, July 19, 2023 5:03 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Hhh fire videos

External Email

The huge hhh fire near mcbee road in the benton city area as seen by the highway. Windmills are left to melt. We have a lot of wild fires. That is a lot of capital up in flames, with a huge negative impact on the environment. This fire is near a major winery near a major trail right where proposed windmills are to be.

Christina Caprio  
Environmental Scientist

Video 8of8

Sent from my iPhone

From: [Christina Caprio](#)  
To: [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
Subject: hhh fires  
Date: Friday, July 21, 2023 7:17:39 PM  
Attachments: [image0.png](#)

External Email

The fire season continues in SE Washington. Check out this article from the Tri-City Herald where it states the South Kennewick fire threatens the little tiny Finley windmills that would be left to burn if they caught because that is protocol. I remember moving back to the Hanford area as a third generation Hanford worker from Vegas working on the Yucca Mountain EIS. I remember asking people what the red lights were on our mountains. I said it was an abomination to our HHH. I was told they were new windmills. I will never forget the pollution of sight. I can't imagine my grandparent's disappointment for ruining the vistas. My family has already died from cancer from sacrificing their lives for Hanford work for the betterment of the country to fight WWII. Isn't that enough of a sacrifice to our area? The Department of Energy is reviewing cases to pay families off for their sacrifices of lost family members for working at Hanford. Leave the hills alone. This is not even green energy if we are being honest. It is all political. The energy is not needed. Come on we use green nuclear energy that has a tiny footprint. Use money to actually find green energy technology enhancements.



Brush fire threatens wind turbines south of Kennewick  
[amp.tri-cityherald.com](http://amp.tri-cityherald.com)

7:13

LTE

LOCAL

# Brush fire threatens wind turbines south of Kennewick

BY BOB BRAWDY JULY 20, 2023 2:33 PM





Benton County Fire District 1 firefighters work to stop a brush fire and protect a crew of electrical linemen in the area off Nine Canyon Road south of Kennewick. The fire scorched more than 10 acres near some Nine Canyon Wind Project turbines as more firefighting equipment and crews were called in to help, said a social media post by the first district. The rural road was closed to give firefighters access to the blaze.

BOB BRAWDY

**Only have a minute? Listen instead**






**LEARN A LANGUAGE ONLINE**  
ONLY 10 MINUTES PER DAY



ONE MONTH FREE



Christina Caprio  
Environmental Scientist  
Sent from my iPhone

**From:** [Christina Caprio](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Another hhh fire today  
**Date:** Friday, July 21, 2023 7:30:55 PM  
**Attachments:** [Video.mov](#)

---

External Email

See video of HHH fire right now.

Christina Caprio

Sent from my iPhone

**From:** [Christina Caprio](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Fwd: Another hhh fire today  
**Date:** Friday, July 21, 2023 9:25:37 PM  
**Attachments:** [Video.mov](#)

---

External Email

Update 6000 acres as of earlier today in klikitat county, north if the proposed hhh site.

Sent from my iPhone

Begin forwarded message:

**From:** Christina Caprio <capriotri@gmail.com>  
**Date:** July 21, 2023 at 7:30:45 PM PDT  
**To:** efsec@efsec.wa.gov, EFSEC <efsec@utc.wa.gov>  
**Subject:** Another hhh fire today

See video of HHH fire right now.

Christina Caprio

Sent from my iPhone



**From:** [Christina Caprio](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Hhh comment  
**Date:** Saturday, July 22, 2023 11:23:33 AM

---

External Email

That Klikitat fire is growing. It is at 6,000 acres and threatening homes, fire and wind farms, etc. See attached article. The dry SE side of Washington has wild fires!!!! This is just north of the proposed HHH site. That's a whole lot of capital at risk to be burned. The wind farms are just let to melt down. All those toxins back into the soil, water and air....



6,000-acre brush fire burning in Klickitat County  
[king5.com](#)

Christina Caprio  
Environmental Scientist

Sent from my iPhone

**From:** [Christina Caprio](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Fwd: Hhh comment  
**Date:** Saturday, July 22, 2023 11:48:25 AM

---

External Email

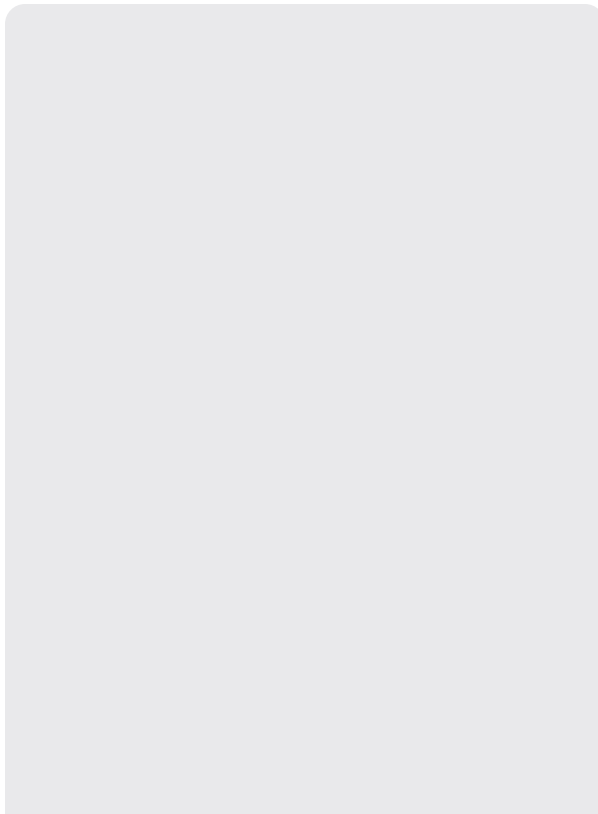
Correction: 30,000 acres and growing

Sent from my iPhone

Begin forwarded message:

**From:** Christina Caprio <capriotri@gmail.com>  
**Date:** July 22, 2023 at 11:23:27 AM PDT  
**To:** efsec@efsec.wa.gov, EFSEC <efsec@utc.wa.gov>  
**Subject:** Hhh comment

That Klikitat fire is growing. It is at 6,000 acres and threatening homes, fire and wind farms, etc. See attached article. The dry SE side of Washington has wild fires!!!! This is just north of the proposed HHH site. That's a whole lot of capital at risk to be burned. The wind farms are just let to melt down. All those toxins back into the soil, water and air....





6,000-acre brush fire burning in Klickitat County  
[king5.com](http://king5.com)

Christina Caprio  
Environmental Scientist

Sent from my iPhone

**From:** [Christina Caprio](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Hhh  
**Date:** Wednesday, July 26, 2023 10:39:42 AM  
**Attachments:** [Video.mov](#)

---

External Email

Pelicans flying over the hhh and a fire in the background.

Sent from my iPhone

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Docket Number EF-210011  
**Date:** Monday, August 7, 2023 2:16:37 PM

---

-----Original Message-----

From: 376rene@everyactioncustom.com <376rene@everyactioncustom.com>  
Sent: Friday, August 4, 2023 10:11 PM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Docket Number EF-210011

External Email

Dear Director Sonia Bumpus,

I am writing to ask that the Final EIS for Horse Heaven Hills Wind Project in Benton County take a stronger and more specific look at how the project can be designed to avoid impacts to the environment.

I support Washington's 100% clean energy target to combat the climate crisis. Audubon's science suggests that we may lose 389 species of N. American birds if warming climbs to 3 degrees Celsius above pre-industrial levels. We are also in a biodiversity crisis. Conservation and clean energy must go hand in hand.

The Horse Heaven Hills Wind Project will be the largest renewable energy project in our state's history. As currently proposed, the project may cause unacceptable harm to state-listed Ferruginous Hawk and create barriers for landscape connectivity for shrub-steppe wildlife across a 113-square mile area. But the project could be considerably improved with more clarity on conservation measures and an alternative design.

The final EIS must include the following information and analysis to uphold our state's commitment to, and appreciation for, our wildlife and the connected landscapes they need. The final EIS must:

- Identify specific design features, mitigation measures and associated performance standards that will avoid adverse impacts related to wildlife movement and habitat connectivity within the Project Lease Boundary and at the regional level.
- Commit to how the proposed Project will avoid significant impacts to the Ferruginous Hawk population at the regional level by avoiding turbines within two miles of all documented nests and mitigating for direct and indirect loss of core and range habitat for all nests within six miles of the project.
- Include an alternative for analysis that features an explicit design for and commitment to turbine siting and other project components that minimizes impacts to the state-listed species and wildlife connectivity.
- Use the best available science to evaluate the magnitude and scale of impacts to birds due to turbine operation.

The build-out of renewable energy in Washington can be achieved in a way that honors the legal and sovereign rights of Treaty Tribes and balances the needs of both people and wildlife. We look to this Council and its staff to provide the leadership needed to achieve this vision.

Sincerely,  
Ms Linda Rene  
467 W Beach Rd Eastsound, WA 98245-9339 376rene@gmail.com

**From:** [Richard Yrjanson](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Against Horse Heaven Hills  
**Date:** Saturday, August 12, 2023 9:30:15 AM  
**Attachments:** [Scan\\_20220115 \(2\).png](#)  
[Screenshot \(224\).png](#)  
[Scan\\_20220114.png](#)  
[Scan\\_20220113.png](#)

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### External Email

The picture of Mt. Rainer shows the beginning of the ruining the beauty of west side of the State which I took from my home in Centralia along with their blinking red lights during the evening. Scout and other solar and wind installation companies have ruined the beauty of the state and country, the time has come to stop the tax excemption installation of this unreliable source of electrical power. Now they want to put them in the Washington ocean coast. Stop the increased cost of our electricity to the end users not approve the Horse Heaven project and any further installations.

Richard Yrjanson  
212 EB Browning Drive  
Centralia, WA 98531

Email: [dyrjanson@hotmail.com](mailto:dyrjanson@hotmail.com) Ph:509-492-6691

Sent from [Mail](#) for Windows







Richard E. Yrjanson Retired

5207 W. 14<sup>th</sup> Ave

Kennewick, WA 99338

Phone:509-783-2994 email [dyrjanson@hotmail.com](mailto:dyrjanson@hotmail.com)

County Commissioners and related agencies

Scout Clean Energy taken over by Quinbrook a global investment manager located In England I believe, as such it appears that any revenue collected after taking tax advantages and other government write offs, which was set to end this year will be extended by the present elected party and the "green" party of this state.

I am against the approval of the Scout Wind, Solar, and Battery Storage Complex being approved. It is not needed for the following reason:

1. It only produces 30 % of its stated capacity (1,150 megawatts) it is not able to provide peak services and needs backup by dams, nuclear, etc. We are paying extra cost for our elec. Bills due to the low performance. Our taxes also increased due to subsidies and tax benefits Scout enjoys. "A very expensive way to generate quite unreliable electricity."
2. Visual eye pollution: You can't drive 180 miles without seeing the 400 foot towers: " we worked hard to eliminate bill boards near the highways, and we replaced them with wind generators".



3. Winds unpredictability means it truly has no generating capacity value. Wind is simply an additional capital cost which increases the cost to the rate payer twice as much.

4. We are here today to discuss wind power, costs, reliability, and other critical approval processes. The minute we begin to fear the opinions of others and hesitate to tell the truth that is in us, and from motives of policy are silent when we should speak, the divine floods of light and life no longer flow into our souls. And I THANK YOU for the opportunity to speak.

# On wind turbine plan, Inslee should listen to Tri-Cities

BY THE TRI-CITY HERALD  
EDITORIAL BOARD

The thought of turning our beloved Horse Heaven Hills into a pin cushion for massive wind turbines breaks the hearts of most Tri-Citians.

Yet, in the end, will our sadness be a factor when Gov. Jay Inslee decides whether to approve Scout Clean Energy's application for its wind project?

That's the big question.

Inslee is known for his clean-energy goals, and while we support fighting climate change and reducing carbon emissions, many of us in Eastern Washington are tired of feeling like we're the sacrificial spot for that agenda.

We realize wind projects are bound to be built in our state, but must a project of this magnitude

be constructed so close to a major population center?

And, we might add, it's a population center that relies heavily on the wine industry and the tourism that it brings. Beautiful vineyards, rolling hills and spectacular vistas are what bring people to Tri-Cities' wine country.

No one will be impressed by a skyline scarred by monolithic structures. More wind turbines will most certainly ruin the view.

At a two-hour public hearing held with Benton County commissioners Tuesday, citizens complained repeatedly that the turbines would be an eyesore and an atrocity in our backyard.

As discussion of this project moves forward, we would like to remind the governor that there is a precedent for heavily

weighing the affect wind turbines have on a scenic landscape.

In 2004, the Whistling Ridge Energy Project would have placed wind turbines on a prominent ridgeline near the town of White Salmon, a community along the Columbia River.

While not in the boundaries of the Columbia River Gorge National Scenic Area, the proposed wind farm was near the line.

Opposition to the plan was fierce, and in the end Washington state decided the project must be scaled down, which eventually led project managers to abandon the plan altogether.

The arguments against the Whistling Ridge wind project were that it would "mar world-class scenery" with "little to no benefit to

the state of Washington's citizens," according to the Friends of the Columbia Gorge. It also would "harm the local tourism economy and negatively affect property values in surrounding communities."

Sounds a lot like the same arguments Tri-Citians are making.

The Friends of the Columbia Gorge also say that: "Icons of the Pacific Northwest, like the Columbia River Gorge, Mount Rainier, and the Olympic Mountains, should be off-limits to large-scale energy development. We can combat climate change without having to sacrifice our most special places and our core values."

We completely agree.

Eastern Washington is not devoid of natural beauty. To Tri-Citians, the

Horse Heaven Hills are a special scenic area. Why should it be valued any less than other remarkable sites in Washington state?

To add to the concern, the wind turbines planned by Scout Clean Energy are massive. The Colorado-based company is considering two options — and both include wind turbines comparable to the height of the Seattle Space Needle, where the observation deck is at 520 feet.

One proposal puts 244 turbines at almost 500 feet tall over about 10 square miles. The other option would be to install 150 turbines at 670 feet tall. The leased farm land for the project stretches about 24 miles from south of Finley to the south of Benton City.

If the application were up to Benton County officials, it likely would be dead on arrival. At the public hearing, Commissioners Shon Small and Will McKay voiced opposition to it before the meeting even started.

But the decision won't

be made at the local level.

Scout Clean Energy has filed its application with the Washington state Energy Facility Site Evaluation Council instead.

Company officials claimed the scale and scope of the project would create a burden on county staff, but to Tri-Citians it feels like an end-run around the local community.

The final decision on whether to allow the project will be decided by the evaluation council and Inslee. The state council plans its own public hearing on the Scout Clean Energy plan on Tuesday, March 30. To register to comment, call 360-664-1345 before the meeting or email [efsec@utc.wa.gov](mailto:efsec@utc.wa.gov).

And then hope that council officials and Gov. Jay Inslee pay attention and truly listen to local input.

The views of the citizens who will be most affected by their decision should not be easily dismissed.



**R**enewable energy sources - solar and wind - can't be the basis for a resilient, reliable and affordable electric system, which is necessary for a modern economy.

Both solar and wind are intermittent. Industries can't plan production if electric power depends on the weather.

Blackouts are unavoidable with solar and wind because the wind can stop blowing strongly, sometimes for weeks, and the sun sets daily and may be blocked by clouds for many days consecutively. Massive storage to date cannot fill in for more than a few hours at anything like an acceptable cost. Blackouts can cost electric customers their lives.



And in just about every case where a large percentage of electricity is generated by solar and wind, the cost of electricity to consumers has risen dramatically, and more and more people struggle to pay their energy bills.

Solar and wind also pose problems for the environment. Wind especially, but also solar, require absurdly large tracts of land, disrupt animal habitats, kill hundreds of thousands of birds and bats, and despoil natural landscapes. Extraction of materials for these technologies has scarred lands around the world. Disposal of toxic solar panels and enormous turbine blades are a growing problem.

175

Yet politicians, especially green U.S. politicians, don't seem to have gotten the message. New York is pressing ahead with a near-term goal of 70 percent renewable electricity by 2030. President Biden, Sen. Bernie Sanders (I-Vt.) and others seek a similar kind of renewable energy commitment for the nation.

Why risk lives, immiserate the poor, disrupt economic life? There are several reasons, but one seems especially relevant: After almost half a century of government support, there are now too many people and organizations within government, industry and academia invested in solar and wind. That means a great deal of money and influence are at stake, which the current winners would not want to give up without a fight.

Of course, solar and wind proponents say we need renewables to save the planet from a global catastrophe that could wipe out life on Earth. The goal must be to greatly reduce the emission of greenhouse gases (GHG), especially carbon dioxide, which are released by burning fossil fuels. GHGs are changing the Earth's climate.

Biden calls climate change "an existential threat." And this catastrophe, it's alleged, can happen soon. Without a massive switch to renewables



Though catastrophists say they "believe in science" they seem not to have noticed that most scientists, including the Intergovernmental Panel on Climate Change (IPCC), regard such a threat as barely plausible. So that means at least that there's more time than eight or even 20 years to transition to a system that produces fewer GHGs than we produce today.

Still, renewable energy proponents have every incentive to push catastrophic scenarios, and that claim has gone on for decades. Lobbying for renewables has had a great deal of success. Solar and wind have had U.S. government support since the 1970s; they have been supported especially vigorously since the early 1990s.

Politicians are constrained from making major changes in policy by an army of lobbying proponents. But they must also face the reality that there are many institutions reflecting longtime policies that make any new initiatives a hard sell.

Social scientist Richard Rose observed years ago that "inherited commitments of past government must be accepted as givens. The legacy that office holders inherit from past policy choices is carried forward by institutional commitments grounded in laws, organizations and budgets."

Inherited policies can structure government itself and the relationships of government to outside entities. "Policies may create incentives that encourage the emergence of elaborate social and economic networks," political scientist Paul Pierson has argued, "inhibiting exit from a current policy path."

Once the policy direction has been set, it may remain unchallenged even when shown to be deeply flawed. Often the response to failing policies is to increase funding in the hope that more funding will somehow make them succeed or simply to keep them going to force the hard decisions onto future presidents and congresses.

Then again, a legislative legacy provides cover. Accepting what has been is a lot safer politically than demanding something very different. A member of Congress or president today can hardly be blamed for continuing a policy passed 30 years ago by a different Congress and signed by a different president. That in fact describes the main subsidy program for wind, which was enacted as a temporary measure in 1992, signed by President George H.W. Bush, but has been renewed afterward by presidents and legislators from both parties with no end in sight.

175

Yet one question lingers: Assuming we want to reduce GHG emissions, if not wind and solar, what energy technologies will help us achieve that?

First, as the U.S. has shown, replacing coal-fired generation with natural gas reduces emissions significantly. But the next step is clearly nuclear power, the major electric generating technology that is scalable, independent of the weather and GHG-free. The next generation of nukes is likely to power the future (perhaps along with nuclear fusion), but even the current generation should be considered for development.

And for heaven's sake, don't shutter still serviceable nuclear power plants as they're doing in Germany (and have done in New York State). That's a way to increase GHG emissions, not reduce them.

Any transition away from fossil fuels will take generations. It's a fantasy to think it can be accomplished in a decade or two. But an even greater fantasy is to believe that windmills and solar panels will save the planet.

*Peter Z. Grossman is the author of several books on energy policy including "U.S. Energy Policy and the Pursuit of Failure" (Cambridge 2013).*

**From:** [byjemany](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Wind farm  
**Date:** Sunday, August 13, 2023 11:57:45 AM

---

External Email

We own property within 1-3 miles from House Heaven Hills. The thought of having huge wind mills obstructing our view is abhorrent!! In addition, the efficiency of these apparatus to produce power vs. the affect they have on birds is questionable.  
Phyllis Maynard

Sent from my U.S.Cellular© Smartphone

Verbal comment taken over the phone from Robert Benedetti 509-551-4400 on Horse Heaven Wind Farm

Note: Commenter was difficult to hear/understand and we got disconnected while I was reading back his comment. Comment is not verbatim.

Scout Clean Energy not shown the total picture, the project is not as being described. Concerned about the wind, solar and battery storage system. 100 megawatts 15 square mile to produce the same energy. 45 square miles (?). Not being shown complete picture. Concerned about untouched land. Why not put small nuclear reactors on that site. Save our countryside.

**From:** [Paul Krupin](#)  
**To:** [EFSEC mi Comments](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Horse Heaven Wind Farm - Stricken Testimony on Aerial Firefighting Mark Baird  
**Date:** Saturday, October 21, 2023 7:27:32 AM  
**Attachments:** [Mark Baird resume EXH-5913\\_S.pdf](#)  
[BAIRD EXH-5910\\_S Supplemental Testimony with maps.pdf](#)

---

External Email

We are submitting the Supplemental Testimony provided by Mark Baird on aerial firefighting as public comments.

This Supplemental Testimony was submitted by Tri-Cities CARES on September 5, 2023 and was stricken from the Horse Heaven Hills Adjudication by Judge Torem on September 22, 2023.

Tri-Cities CARES filed a Motion for Reconsideration.

Three attachments

EXH-5910\_S Testimony Statement

EXH-5913\_S – Resume of Mark Baird

Appreciatively,

Paul J. Krupin, BA, MS, JD  
Board Member on behalf of TRI-CITIES C.A.R.E.S  
Visit: <http://www.TriCitiesCARES.org>  
509-531-8390 cell 509-582-5174 landline Paul@Presari.com

1 TCC  
2 Supplemental Testimony  
3 Mark Baird  
4 EXH-5910-S

5 BEFORE THE STATE OF WASHINGTON  
6 ENERGY FACILITY SITING EVALUATION COUNCIL

7 In the Matter of the Application of:

DOCKET NO. EF-210011

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

SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS MARK BAIRD

10  
11  
12 Q: Please state your name and address.

13 A: Mark Baird, P.O. Box 842, 4716 Mill Creek Rd, Fort Jones CA 96032.  
14

15 Q: Please briefly state your work experience and qualifications.

16 A: I have over 23,000 hours of flight experience, 17,500 in the DC-10.

17 I hold the following airman certificates: ATP multi engine land with type ratings in  
18 B-744, DC-10, MD11. I hold an Airframe and Power plant mechanic certificate, and  
19 an advanced ground instructor rating. I have 15 years experience as an instructor  
20 pilot in the DC-10, and 7 years experience as a pilot engaged in aerial firefighting  
21 using the DC-10 fire tanker.  
22

23 Q: Did you review information about the Horse Heaven Hills project location and  
24 terrain?  
25  
26

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

MARK BAIRD - 1

LAW OFFICES OF  
J. RICHARD ARAMBURU, PLLC  
705 2<sup>ND</sup> AVE., SUITE 1300  
SEATTLE 98104  
Telephone (206) 625-9515  
FAX (206) 682-1376  
aramburulaw.com



1 A: Yes, in preparing for my testimony, TCC member and witness Paul Krupin utilized  
2 CalTopo to assist in familiarizing me with the fire history and topography of the area.

3 These materials included the following maps and photographs:

4 Page 6 is the Fire map created by the South East Washington Interagency  
5 Team for the Hansen Road – Rupert Road Fire that occurred on June 16, 2023. The  
6 map shows the location and the extent of the fire perimeter. The area is located south  
7 of Interstate 82 south of Benton City, WA. The Hansen Road fire is approximately 12  
8 miles in length east to west and one to two miles wide north to south.

9 Page 7 is an aerial photo taken out the window of one of the DC-10's dropping  
10 fire retardant on the Hansen Road – Rupert Road fire, on June 16, 2023, showing the  
11 extent of the fire and the fire perimeter.

12 Page 8 is a CalTopo digital Geographic Information System map  
13 (www.Caltopo.com) showing the fire history data layer on the lands to the north of the  
14 Horse Heaven Hills project area. The fire history in this area covers events from the  
15 year 2002 to present roughly 20 years). The black dots show the proposed Horse  
16 Heaven Hill project wind turbine locations. The orange and red zones are the  
17 individual fire events with their name and the date they occurred. The fire perimeters  
18 in red show the extent to which the fire burned. This map depicts an area south of  
19 Interstate 82 south of Benton City and Kennewick in Washington State.

20 Page 9 is a CalTopo digital Geographic Information System map  
21 (www.Caltopo.com) showing the slope angle shading data layer using 40-foot contour  
22 lines to visually enhance the steep slope terrain in and north of the Horse Heaven Hills  
23 project area.

24 Page 10 is a CalTopo digital Geographic Information System map  
25 (www.Caltopo.com) showing the road map data layer to visually enhance the  
26

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

MARK BAIRD - 2

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1 identification of known vehicular access roads in the area and terrain in and north of  
2 the Horse Heaven Hills project area.

3       Pages 11 and 12 are CalTopo digital Geographic Information System maps  
4 (www.Caltopo.com) showing the USGS Topographic Map data layer showing the  
5 detailed contour lines to aid in the interpretation of rugged and steep terrain in the  
6 area of the fire and in and north of the Horse Heaven Hills project area. Page 11 is the  
7 western section and page 12 is the eastern section of the burned area north of the  
8 Horse Heaven Hills Project area.

9       Page 13 is a CalTopo digital Geographic Information System map  
10 (www.Caltopo.com) switched from a topographic map to an aerial photo layer (NAIP  
11 from the USDA Farm Service) showing the 40-foot contours on top of the ground  
12 surface. This map can be used to visually enhance the identification of known ground  
13 surface features including irrigation, wineries, residences, roads, and highways and  
14 much more. This figure covers the area in and north of the Horse Heaven Hills project  
15 area.

16       Page 14 is a CalTopo digital Geographic Information System map  
17 (www.Caltopo.com) showing the slope shading contours and the fire history data  
18 layers simultaneously. Four-mile radial circles were drawn around six selected fire  
19 perimeter locations, and a polygon was then drawn around the external perimeter of  
20 these circles. The polygon identifies a potential restricted airspace zone needed to  
21 ensure the safety of aerial firefighters.

22       Page 15 is a CalTopo digital Geographic Information System map  
23 (www.Caltopo.com) showing the slope shading contours and the fire history data  
24 layers simultaneously. Two-mile radial circles were drawn around six selected fire  
25 perimeter locations, and a polygon was then drawn around the external perimeter of  
26

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MARK BAIRD - 3

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1 these circles. The polygon identifies a smaller potential restricted airspace zone  
2 needed to ensure the safety of aerial firefighters.

3  
4 Q: Please describe your observations and comments on the Horse Heaven Hills  
5 Wind Farm and how it relates to aerial firefighting operations.

6 A: The Horse Heaven Wind project as mapped and described in the information I  
7 received would, for all intents and purposes, be indefensible by air. The communities  
8 and structures adjacent to, or nearby, the project would also be indefensible using  
9 fixed wing aircraft. Aerial firefighting efforts would either be impossible or rendered  
10 totally ineffective due to the height and spacing of the turbines in addition to their  
11 placement on the higher ground, which negates the ability to prevent fire from running  
12 uphill or "backing behavior," which is typical in terrain described and illustrated in the  
13 project maps.

14 Aerial assets are also prohibited from dropping retardant on electrical  
15 infrastructure and any watercourses in the fire area, further reducing the capability of  
16 the aircraft to assist in building effective fire lines. Fire retardant weighs nine pounds  
17 per gallon. Dropping at between 150 and 160 knots at low altitude would cause  
18 catastrophic damage to any of the proposed infrastructure were it to be hit during  
19 routine fire fighting activity.

20  
21 Q: Please describe your opinion on how close the turbines can be located if  
22 airspace must be restricted to ensure that aerial firefighting operations can be  
23 conducted safely.

24 A: Turbine location, blade turbulence, tip vortex, quantities and spacing of turbines,  
25 and proximity to water courses, communities and other structures impact aerial  
26

firefighting capability and effectiveness of aerial tankers, particularly LATS (Large Air Tankers) and VLATS (Very Large Air Tankers). Blade turbulence and tip vortex also impact helicopter operations.

Between three and four nautical miles spacing would at least make aerial firefighting possible in order to save lives and property. FAA TERPS, and ICAO Pan Ops dictate maneuvering minimum radius of turn for large aircraft as well as minimum climb rates to avoid known obstacles in approach and departure corridors where obstructions are known and accurately mapped; 2.7 nautical miles is the minimum radius of turn for category E aircraft with maneuvering speeds of 168 plus knots. A climb of 200 feet per nautical mile is the minimum for most departure procedures. If the ridge top is 2000 feet msl and it has a 500-foot tower on top of it, climb capability would be exceeded quickly.

Based upon the above information it is my opinion that turbines would require spacing of three to four nautical miles to provide aircraft with the ability to safely and effectively fight fire.

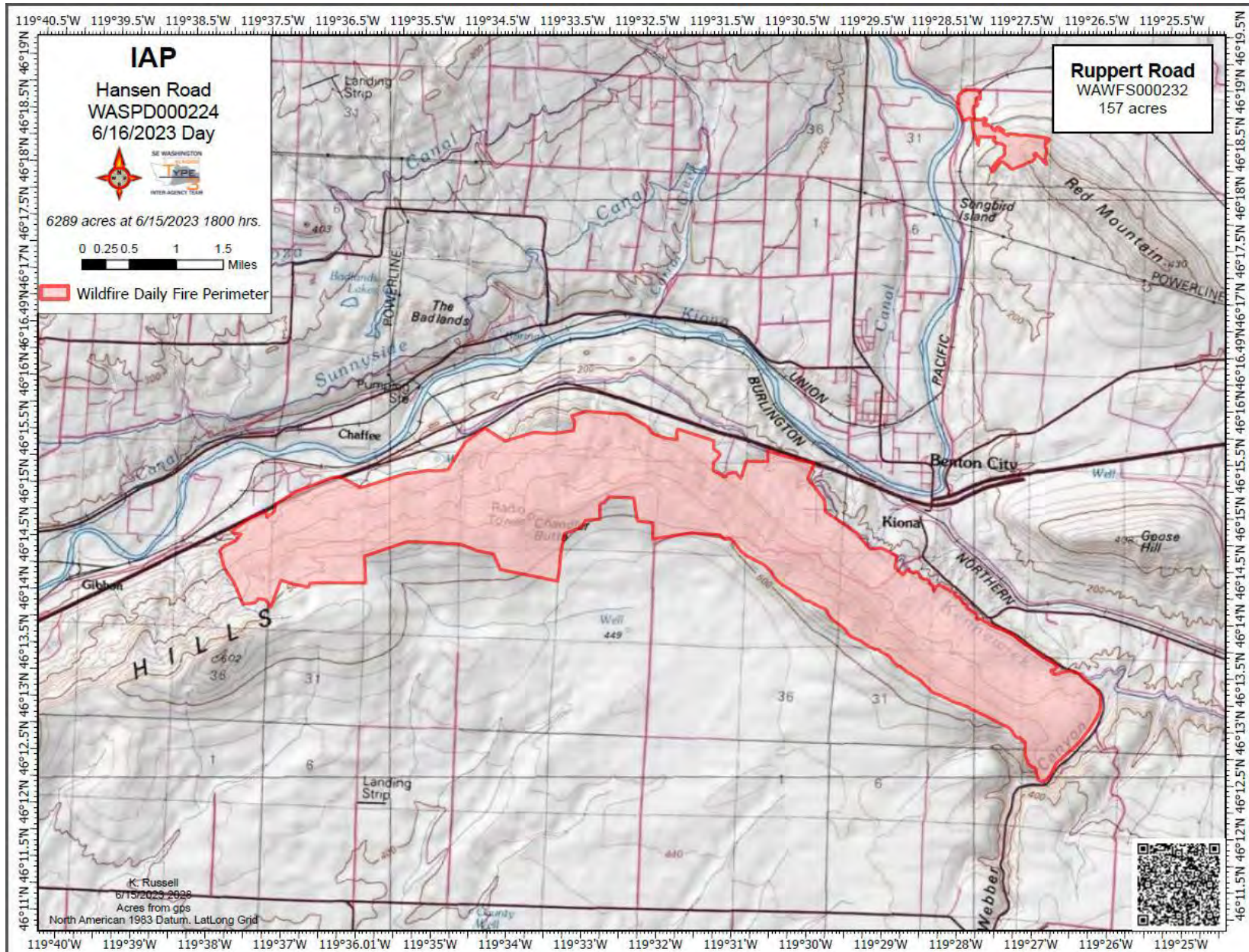
Q: Are you providing photographs?

A: Yes, attached.

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

Signed this 3<sup>rd</sup> day of September 2023 in Fort Jones California

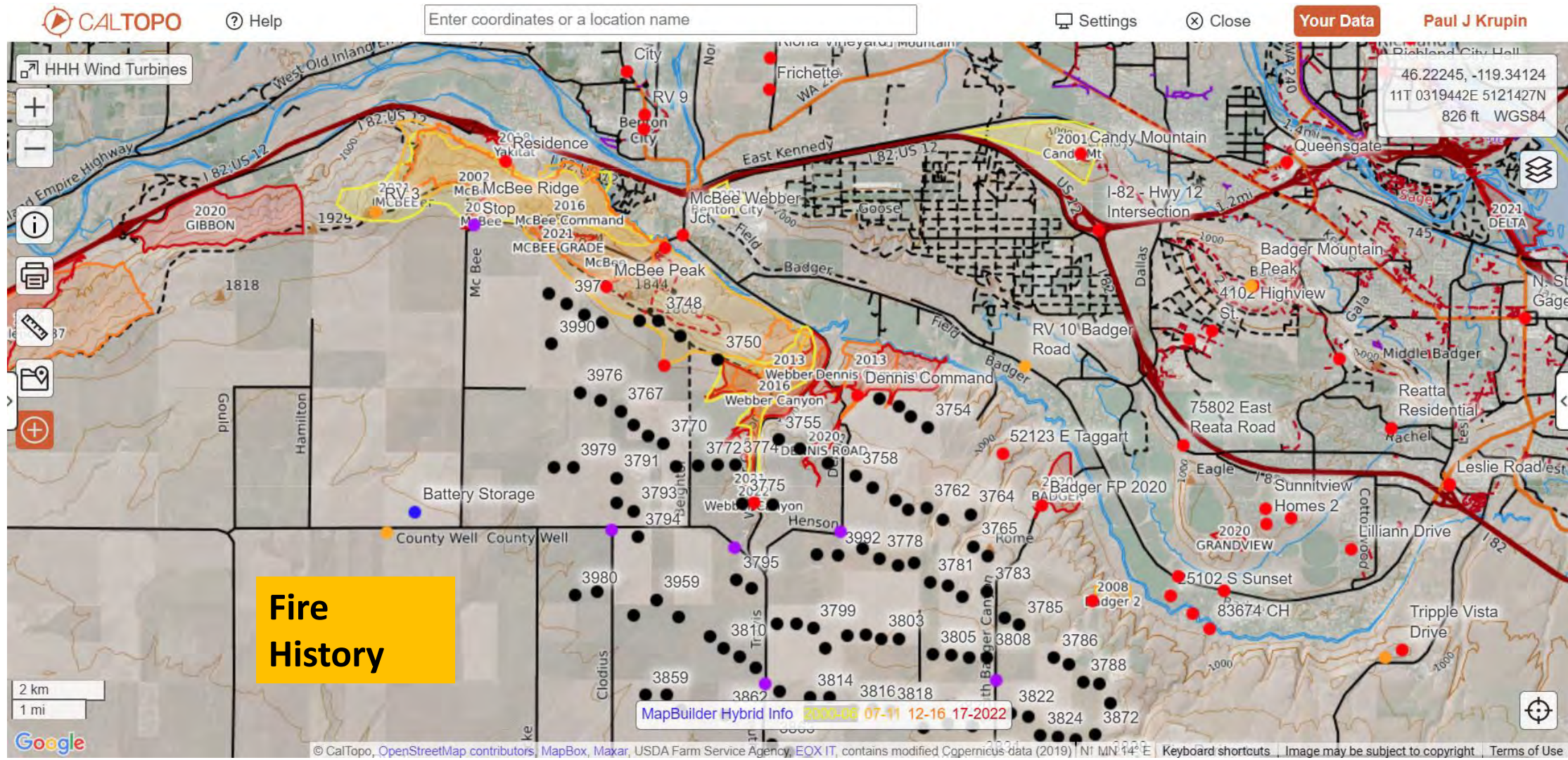
Mark Baird /s/







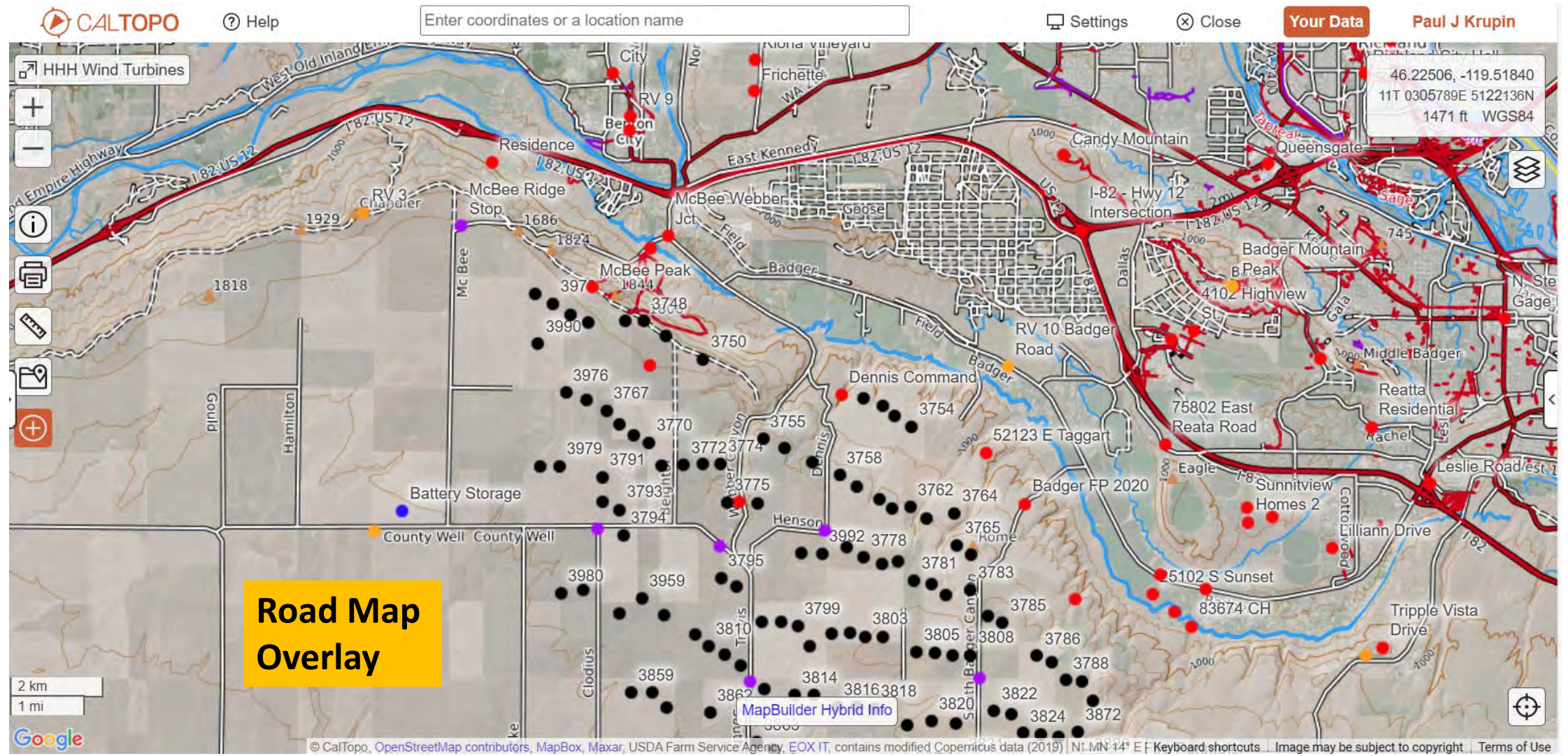








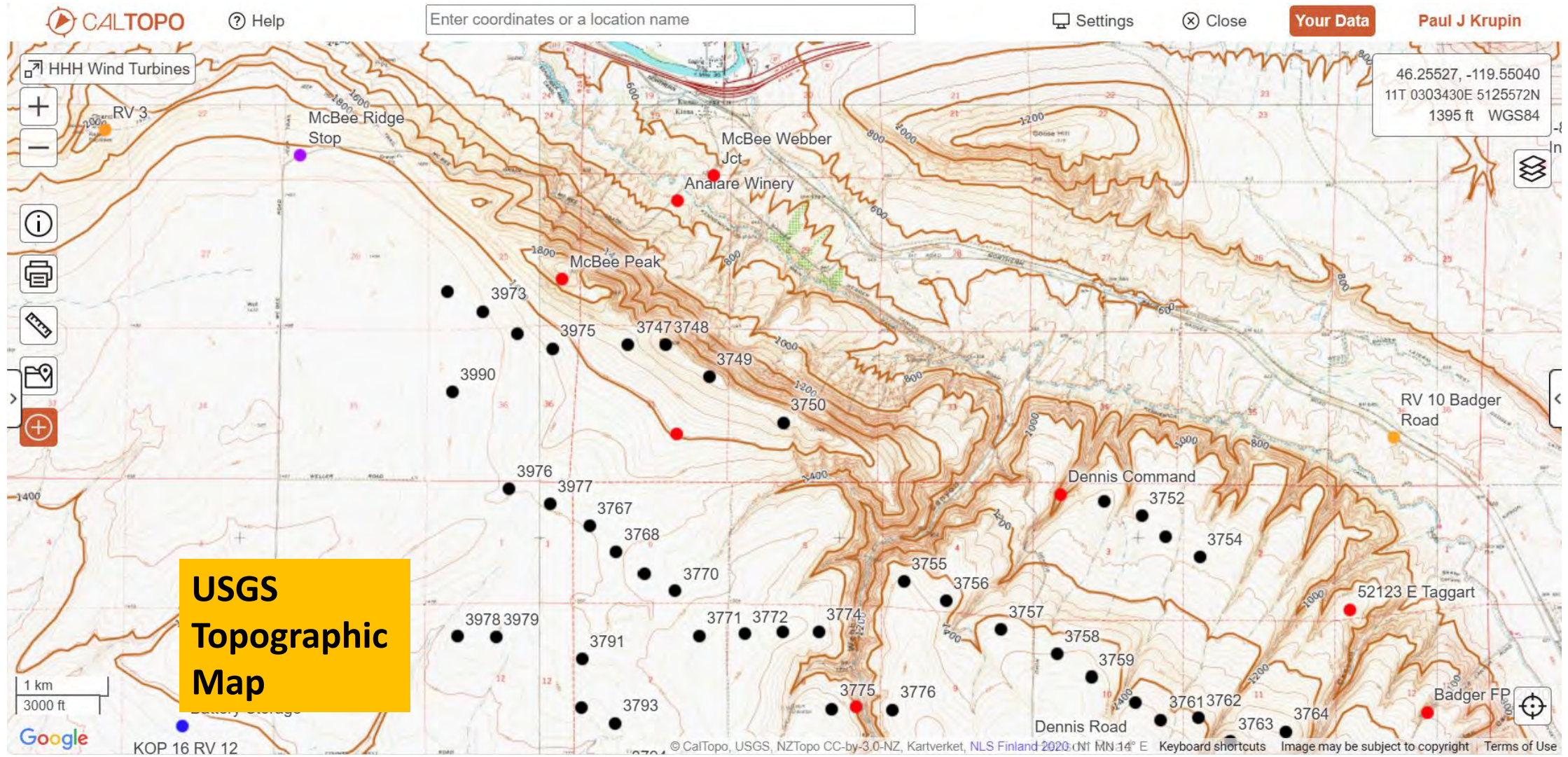




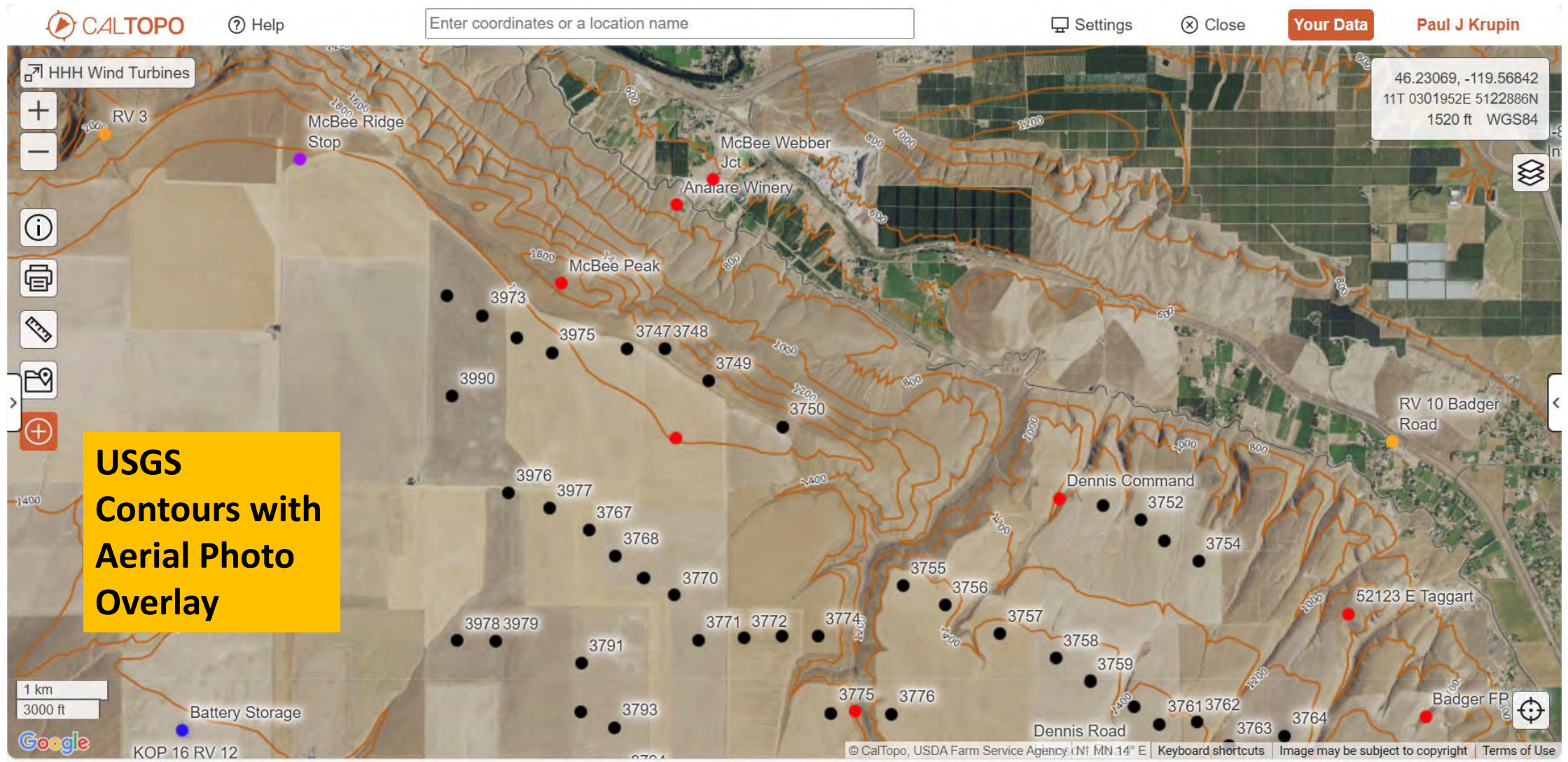




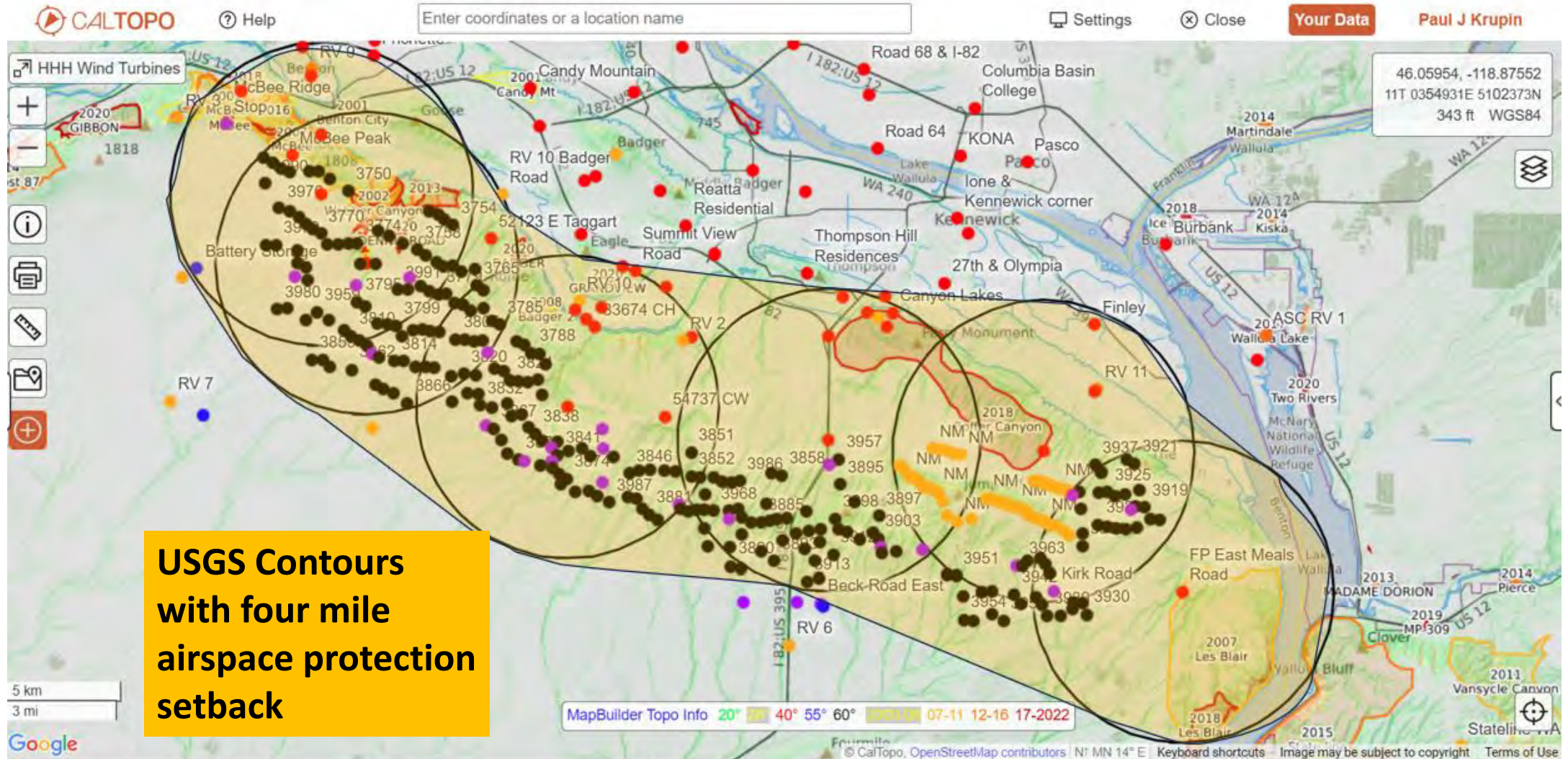


















Resume of:

Mark A Baird P.O. Box 842 Fort Jones CA 96032

Employment History 1970-1972 United States Army Helicopter Door Gunner, Republic of Vietnam  
1700 hours, low level helicopter Aircraft maintenance

1972-1975 Airframe and Power Plant Mechanic World Airways Maintaining DC-10, DC-8, B747-200,  
B707, L188

1975- 1989 Charter Pilot for Executive Air Charter; California Air Charter On Demand Charter  
Service 6000 hours+/- 400 series Cessna, Piper Cheyenne, Navajo, Aztec,

April 1989- April 2014, World Airways. (Company ceased operations).

747-400 Check Airman, 2009-2014 DC-10 Check Airman 1995-2008 Line Capt. 1991-1995 First  
Officer 1989-1991 Total Time 23,000 + hours DOB 5/31/1952

Airline Transport Pilot, Multi-engine land, Commercial Pilot Single Engine Land, Airframe and Power  
plant Mechanic, Advanced Ground Instructor ratings, Instrument instructor ratings. Type Rated for  
B747-400, MD-11, DC-10 Qualified for CAT I/ II/IIIb, Lower than Standard CAT II, GPS approach  
qualified, VOR, NDB, LOC, Vnav/Lnav approach qualified. Qualified for Polar Ops Qualified NAT,  
Mid Atlantic, South Atlantic Qualified North Pacific, Mid Pacific, South Pacific I have also conducted  
South American route Qualifications as well as Africa, Asia,  
Central and Eastern Europe, CIS States, China, and Middle East including Afghanistan and Iraq. I have  
been a Check Airman, Simulator Instructor and Line Captain on Two Heavy Airplane Types, with one  
of the largest Military Contract Airlines. I am very comfortable at high altitude airports (747-400 in  
and out of Quito, Ecuador, high temperatures, high gross weight (875,000lbs), and short runways (DC-  
10-30, in and out of 5,700 foot runway in Punta Arenas, Chile). We operated under some of the worst  
weather conditions in the world. Prior to World Airways I had approximately 6000 hours of light  
multiengine and turbine experience in Piper Cheyenne, Cessna 400 series, Beech 18, and various other  
types of light aircraft both single and multi-engine.

2017-present, air tanker pilot for 10Tanker Air Carrier. VLAT air tanker operator primarily contracted  
to USFS but we have operated for the New South Wales Fire Service in Australia and in Chile engaged  
in initial attack aerial firefighting.

2012- 2019 : Reserve Deputy Sheriff, Siskiyou County

#### Personal History

I live with my wife, on our ranch in Siskiyou County California. We raise horses and Buffalo. My  
interests are civil war history with emphasis on Cavalry. I also enjoy astronomy.

Contact Information Mark A Baird mcbair@icloud.com 530-2276729 cell 530-468-5967 home P.O.  
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**From:** [Paul Krupin](#)  
**To:** [EFSEC mi Comments](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Horse Heaven Wind Farm - Stricken Testimony on Visual Aesthetics Analysis and Impacts Dean Apostol  
**Date:** Saturday, October 21, 2023 8:51:28 AM  
**Attachments:** [EXH-5105\\_S Dean Apostol.pdf](#)  
[EXH-5106\\_S Dean Apostol maps graphics.pdf](#)

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External Email

We are submitting the Supplemental Testimony provided by Dean Apostol on Visual Aesthetics Analysis and Impacts as public comments.

This Supplemental Testimony was submitted by Tri-Cities CARES on September 5, 2023 and was stricken from the Horse Heaven Hills Adjudication by Judge Torem on September 22, 2023.

Tri-Cities CARES filed a Motion for Reconsideration.

Three attachments

EXH-5105\_S Testimony Statement

EXH-5106\_S – Dean Apostol Maps & Graphics

Appreciatively,

Paul J. Krupin, BA, MS, JD  
Board Member on behalf of TRI-CITIES C.A.R.E.S  
Visit: <http://www.TriCitiesCARES.org>  
509-531-8390 cell 509-582-5174 landline Paul@Presari.com

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.

SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS DEAN APOSTOL

Supplemental Testimony

**Revised 9/1/2023**

Dean Apostol

The following includes additional information that responds to issues raised at the adjudication session on August 24. Questions came up from the EFSEC Advisory Panel covering three areas:

1. What is the value of scenery to people?
2. What are appropriate public outreach approaches to determine community scenic values, including BIPOC communities?
3. What are possible mitigation or impact reduction/avoidance strategies that could lessen visual impacts of the HHH project?

**Value of scenery**

Much research has been done on the many values of scenic landscapes to people. Numerous research studies have documented positive reactions in people viewing scenic landscapes, or while out in nature. While it may be obvious that people value scenic views, it may not be obvious why. But a reasonable summary is that it makes people feel better physically and

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

DEAN APOSTOL - 1

1 mentally. It relaxes them, lowers blood pressure, lowers stress, improves vitality, and even  
2 helps in healing.

3 People make significant efforts, and go to great expense, to visit scenic landscapes. Grand  
4 Canyon, Yosemite, the Rockies, Yellowstone, Mt Rainier, Mt Hood, the San Juan Islands, the  
5 Columbia Gorge, and the Oregon Coast are some examples. These are our most outstanding  
6 landscapes, and they are often protected by federal or state governments. They usually exhibit  
7 some combination of complex land form, water, natural vegetation, seasonal colors,  
8 harmonious cultural features, and often afford panoramic large scale views. People take photos  
9 and share them with friends, though the photos rarely can capture the scale and grandeur.

10 Other landscapes are attractive, containing some, but fewer of the elements listed above. They  
11 are important close to home views for many people. Some regional examples include; Forest  
12 Park in Portland, the Blue Mountains, (Southwest Washington), parts of the Willamette Valley,  
13 the Sierra foothills, and Southern Puget Sound. These are locally or regionally important, but  
14 often times are unprotected, or only partially protected. The Horse Heaven Hills fits into this  
15 category. They are an important part of local identity. People enjoy these areas day to day, but  
16 might not travel far to experience them.

17 A third tier of landscapes are sometimes called “ordinary”, or common. Usually they have low  
18 lying or level terrain, lack large water bodies, and may be more agricultural than natural. They  
19 often have some scenic value based mainly on their undeveloped condition, but because there  
20 are a lot of similar landscapes, little effort is made to protect them. They are taken for granted.

21 Local people may object to development or change, but may have difficulty gaining allies  
22 unless there are other values, such as wildlife, wetlands, or archeological sites.

23 Because the Horse Heaven Hills are locally important for scenic values, proposals to develop  
24 them with renewable energy should respect them and make an effort to avoid, minimize, or  
25

26  
SUPPLEMENTAL TESTIMONY OF TCC WITNESS

DEAN APOSTOL - 2

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mitigate visual impacts. If this is not done, an important source of well being will be lost or compromised, with hidden costs that may not be readily apparent or easy to calculate.

### **Sample References on the Value of Scenery**

Lothian, Andrew. 2017. *"The Science of Scenery."* Available Through Amazon Books.

This book includes a comprehensive account of scenery, and scenic beauty. It takes a scientific approach, meaning an objective way of understanding scenery and scenic values. It includes chapters on how humans view scenic beauty, including as art, as travelers, as economic value, for its health benefits. Chapter 13 is *"The Doctor's Eye: Restorative and Health Benefits of Landscape."* This chapter cites and describes hundreds of studies that show that views of nature or natural areas have multiple health benefits to people: reduced stress, reduced blood pressure, greater sense of relaxation, tranquility, happiness, vitality, more rapid restoration from mental fatigue, faster recovery from illness, lower levels of aggression, fewer stress related illnesses, better overall health.

Dr Lothian maintains a web site with valuable information, references, and links on this topic.  
<https://scenicsolutions.world/>

Kaplan, Stephen. September 1995. *The Restorative Benefits of Nature. Journal of Environmental Psychology.* Volume 15, Issue 3. Pages 169-182.

Kaplan's theory is that viewing natural scenes improves health due to "Attention Restoration Theory." People spend our days focused on completing tasks, which leads to mental exhaustion, which can be remedied by spending time observing or being in a natural setting. Aesthetically pleasing environments are restorative. They engage us and hold our attention effortlessly. The Horse Heaven Hills, because they are so visible from such a large part of the Tri Cities area, probably does this for many people, at little or no cost.

Hyunju Jo, Chorong Song, and Yoshifumi Miyazaki. 2019. Physiological Benefits of Viewing Nature: A Systematic Review of Indoor Experiments. *International Journal of Environmental*

Research and Public Health. On line publication.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6926748/>

This paper is a review of the results of 37 articles that present evidence of positive physiological effects of viewing nature and natural scenes. Accumulation of scientific evidence of the physiological relaxation associated with viewing elements of nature are useful for preventive medicine by providing nature therapy.

Kate E. Lee, Kathryn JH Williams, Leisa D Sargent, Nicholas SG Williams, Katherine A Johnson. 2015. 40 *Second Green Roof Views Sustain Attention*. Journal of Environmental Psychology, Vol 42, June 2015, pp 182-189.

This study found that micro breaks (a few minutes) viewing a flowering green ecoroof boosts sustained attention, results in fewer cognitive errors, improves response to tasks.

Seresinhe, Canuki Illushka, Tobias Preis, & Helen Susannah Moat. 2015. *Quantifying the Impact of Scenic Environments on Health*. In Scientific Reports.

[www.nature.com/scientificreports](http://www.nature.com/scientificreports)

This study used data from “*Scenic or Not*,” a British website that crowd-sources ratings of “scenicness” for geotagged photographs across Great Britain, and combined this with reported health from the Census for England and Wales. The results provide evidence that the aesthetics of the environment may have quantifiable consequences for well being.

White, Mathew P., et al. 2019. *Spending at least 120 Minutes a Week in Nature is Associated with Good Health and Well Being*. Scientific Reports. PDF. June 2019.

Ulrich, Roger S. 1979. *Visual Landscapes and psychological well-being*. Landscape Research. Volume 4, 1979.

Dr Ulrich did pioneering research in the health benefits of natural scenery. He showed how individuals feel significantly better after visual exposure to natural scenes compared to those dominated by urban elements. Views of nature increased “positive affect,” reduced fear

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

DEAN APOSTOL - 4

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1 arousal, and production of pleasurable feelings. In other research Ulrich showed how viewing  
2 nature aided in healing. Ulrich says people “feel” positive emotions about natural scenes before  
3 we rationalize them. His work influenced the development of “healing gardens” in the health  
4 care industry.

### 5 **Community Outreach**


6 A second question that came up during my oral testimony was about what can or should be  
7 done to improve community outreach on the Horse Heaven Hills project, in particular to the  
8 BIPOC community of the Tri Cities area. I had made the observation in written testimony that  
9 Scout Energy did not appear to have done much with respect to asking the community to help  
10 identify key viewing areas. Additionally, they do not appear to have asked people what they  
11 value about the Horse Heaven Hills, or how they feel about how the project impacts them,  
12 except through standard input channels required by EFSEC.

13 In my book, *The Renewable Energy Landscape* (Routledge Press 2016) Chapter 10 (Richard  
14 Smardon and James Palmer) addresses the question of engaging communities in siting and  
15 designing renewable energy projects. They argue that participatory processes are essential  
16 components in the success of siting renewable projects. Key factors include; participation in  
17 planning, trust and confidence in the developers **and decision makers**, equity of impacts, and  
18 economic benefits. Various participatory processes are explained and applied. While most  
19 people in the USA and elsewhere generally support renewable energy, including wind, there  
20 are widespread concerns about landscape impacts. In some countries, like Great Britain, new  
21 land based wind projects have all but been abandoned in favor of offshore. And regarding  
22 offshore, the public is telling developers and the government to get projects as far offshore as  
23 possible. If possible get projects over the horizon.

24 In Australia, a comprehensive study was done by Andrew Lothian to try and determine where  
25 to site wind projects to reduce visual impacts. This study asked people what landscapes they  
26

1 most valued, and showed images of them with wind development. It showed that people care  
2 most about landscapes (and seascapes) they consider to be scenic. The loss of scenic quality  
3 after wind was added was significant. There was much less concern about developing wind on  
4 less scenic, mostly agricultural lands, with little or no loss of scenic value after adding wind.  
5 People and communities get very frustrated when public involvement is or is perceived to be  
6 “token.” That is, if the community is given no genuine opportunity to say what is of value to  
7 them, or to affect the siting or design of the project, then people become dissatisfied, as should  
8 be expected.

9 In 1969, in the days before public involvement was a legal requirement for many large  
10 projects, the social scientist Sherry Arnstein described a “ladder of public participation, which  
11 looks like the image below:

12  Arnstein's Ladder (1969)  
Degrees of Citizen Participation

13 Number one and two, at the bottom, are called “manipulation” and “therapy.” A plan is  
14 presented. It is said by its proponents to be great. A public relations campaign tries to sell the  
15 project. There is no meaningful opportunity for input, though there may be some pretense of  
16 input. “Informing,” a bit higher up, is when a community is told about a project, but as a one  
17 way flow of information. This project is coming to you, like it or not. Nothing you can do  
18 about it, but we thought you might want to know. Consultation and Placation are the next  
19 levels up. A larger effort may be made to solicit input. But any input that actually challenges  
20 the project, or tries to substantively alter it are rejected out of hand. People are consulted, but  
21 what they have to say is not important to the outcome. The level of “Partnership” occurs only if  
22 and when there is genuine negotiation. Power over the decision is shared, not held entirely by  
23 the project proponent or agency that administers the approval process. Community input  
24 meaningfully matters at this level and above.  
25  
26

1 To be meaningful, there needs to be genuine outreach, and the community needs to have a  
2 chance to express its values and make its case. The design of the turbine layout needs to reflect  
3 these values. Up until now it has not. It is simply an optimal capture of wind energy by placing  
4 as many turbines as possible within the perimeter of the project area, leaving a few gaps where  
5 there are resources that have higher levels of protection than aesthetics (cultural sites, some  
6 sensitive habitats, flight paths). . A Washington Supreme Court case put it well: “The right to  
7 be heard implies the reasonable hope of being needed. *Smith v. Skagit County*, 75 Wn.2d 715,  
8 741 (1969)

9 As for how to engage people, the best approach I have seen is to ask them how they want to be  
10 engaged, then design outreach around that. Some people will prefer field trips, others face to  
11 face meetings, and some will be fine with on line opportunities. The key to success is to listen  
12 to what people have to say, and if there is a community consensus around what level of visual  
13 protection the Hills should have, then the project should be redesigned to meet that objective.

#### 14 **A Path Towards Effective Mitigation**

15 Questions were raised at the hearing on August 24 regarding visual impact reduction and/or  
16 mitigation. It appears the project as designed takes up every, or nearly every possible turbine  
17 space available, given other facilities like solar, transmission lines, battery storage, and  
18 substations. With the 13 turbine removals Scout proposed in the Moon memo, there remain  
19 231 proposed turbines, arrayed east to west spanning some 25 miles, and north to south in  
20 bands that take up about 4 miles.

21 Both visual assessments; the ASC and the Draft EIS, using different methodologies, conclude  
22 that visual impacts will be high from most key viewpoints. Since these viewpoints are  
23 presented as “representative,” EFSEC should presume that this means high impacts will be  
24 widespread, well beyond the viewpoints analyzed. It is important to note that in both cases  
25 “high” is the top of the scale, because neither method included a “very high” or “unreasonably  
26

high” category, which are used by other methods, including the one recently developed by Bureau of Energy Management to assess impacts from offshore development beyond three miles distance. My opinion is that “high” understates the visual impacts. **The project as proposed, with maximum or near maximum turbine development, should be considered to have unreasonably high visual impacts.**

The reasons are not hard to understand, but can be summed up as follows:

- There are **tens of thousands of high sensitivity viewers** who will view the project from countless viewpoints across the Tri Cities region every day, or nearly every day.
- The Horse Heaven Hills are a **high quality, high visibility, and highly valued** landscape feature.
- The **distance from the viewers to the turbines is close**. The term “Middleground” significantly understates the problem. Robert Sullivan at the Argonne National Lab demonstrated that **wind turbines are visually dominant at 10 miles distance**. Sometimes more.
- Height of turbines is a problem. Breadth of the layout compounds the problem. **Because the turbines stretch across the entire ridge east to west they leave virtually no “gaps”**. Everywhere, from virtually any vantage point with a view of the hills, people will see turbines.
- **Visual density is also a problem**. From elevated viewpoints, particularly Badger Mountain (VP 5), a popular hiking area, one will see all or most of the layers of turbines, front to back. This introduces a “busyness” to the view, creating a **cluttered landscape that completely loses its natural qualities**.
- The impacts are somewhat less at the east and west ends of the project, and **highest when viewing from and towards the center**. The reason is there are many more turbines in view from more central locations.
- It is important to reemphasize that **the simulations presented to EFSEC and the public understate the impacts**. They will often be viewed at too small of a scale, they lack panoramas, that take in the full view, they lack blade movement (a limitation of relying on still photos), lack lighting, lack visible ground disturbance (pad grading, roads, vegetation removal), and many have poor lighting or haze that reduces visual contrast below what it will be in the field.

The book I co-authored, “The Renewable Energy Landscape (Routledge Press 2016) includes a chapter, “Improving the Fit of Renewable Energy Projects.” It was written to help decision

1 makers like EFSEC better understand ways large, commercial wind projects can be improved  
2 visually, particularly where visual impact concerns are high.

3 From the answers to questions at the hearing by Scout's visual impact expert, **it is clear that**  
4 **Scout Energy never asked its visual impact team to produce any alternatives or**  
5 **mitigation strategies for this project.** In our book we state:

6 *"Where conservation of visual resources is desired, energy facilities should be designed to fit*  
7 *within the land or seascape as much as possible, avoiding wholesale changes that obliterate or*  
8 *overwhelm desired attributes."*

9 We go on to recommend a set of "Best Practices" that should be applied to all renewable  
10 energy projects, as follows:

- 11 • **Identify and avoid areas of high aesthetic value**, including in some cases entire  
12 viewsheds. Avoidance means placing a higher value on the landscape **aesthetic**  
13 **benefits of some areas** over their renewable energy benefits. (i.e. no one would accept  
14 wind turbines on the rim of the Grand Canyon).
- 15 • **Analyze landscape character before designing the project.** While Scout Energy's  
16 visual impact team did a landscape character analysis, it does not appear that any part  
17 of that analysis was used to help design the project or mitigate impacts. It appears likely  
18 that the analysis was only done after the project was designed. Design decisions were  
19 made, as Mr Poulos testified, based on the parameters of meteorology and engineering,  
20 not in response to landscape character.
- 21 • **Site facilities away from most prominent land features.** The character analysis  
22 should have identified the most important visual features, where these are located, and  
23 how they are viewed. The project should have avoided impacting them. For example,  
24 the Horse Heaven Hills ridgeline has high and low points, complex and simple terrain.  
25 It is irregular, not uniform. The turbines could have been arranged to maintain the best,  
26 most interesting areas by leaving sufficient visual gaps around them.
- **Site new facilities in already disturbed landscapes.** The Horse Heaven Hills project  
includes both cultivated agricultural land and undisturbed sagebrush steppe and  
grasslands. Visually and ecologically the latter have far higher value. The project could  
have avoided steppe habitats, which would have the added benefit of avoiding  
disturbance of archeological sites, wildlife, and recreation areas.
- **Increase distance to reduce visual dominance.** Distance is a critical factor in the  
visual impact of wind turbines. In nearly all cases, the farther away, the lower the  
impact. Large turbines can be visually dominant at 10 miles distance or more. The



1 location of this project, adjacent to a large urban area, does not allow for the amount of  
2 distance we would normally want. However, there is an opportunity to limit turbines to  
3 the greatest distance the site permits, which may reduce impacts at least modestly.

- 4 • **Locate facilities in less prominent locations and away from focal points.** This is  
5 similar to what was stated above. It requires that the visual team work hand in hand  
6 with the meteorologists and engineers to call out the most visually prominent features  
7 and areas and build those into the design.
- 8 • **Use site specific features to reduce visibility.** In some cases turbines can be partially  
9 or fully “hidden” from view behind small hills or higher points of the ridgeline. You  
10 can see this in the Horse Heaven project by noting that few turbines are visible from  
11 Benton City thanks to a high point in the ridgeline and the viewing angle, which hides  
12 many turbines that lie behind the ridge. Additional places could be identified that  
13 provide topographic screening.
- 14 • **Provide visual order and avoid chaos, clutter, and disarray.** Turbines are inherently  
15 dominant visual features. Some can be hidden, but many cannot be. This means that the  
16 way turbines are seen from key viewing areas is important. If the pattern of turbines  
17 appears chaotic, or cluttered, this adds to the visual impact. And as the (imperfect)  
18 simulations from Badger Mountain illustrate, there is a lot of chaos and clutter in the  
19 view. Reducing this is crucial to lowering impacts. If turbines can’t be moved to less  
20 impactful locations, some may need to be removed to reduce this effect.
- 21 • **Break long lines of turbines with open, undeveloped spaces.** The current (take it or  
22 leave it) design of 231 turbines creates a visual wall along the ridgeline, east to west,  
23 running nearly parallel with the community to the north, with no substantial visual  
24 breaks anywhere. Some turbines should be removed from the center part of the project  
25 area to open one or more large visual gaps that provide relief from the monotony of  
26 turbine after turbine lining up for 25 miles.
- **Have turbines off to one side rather than in the center of the view.** Clearly, the  
existing design does the opposite. Most of the turbines are right smack in the center of  
the view. It would be far better to have a group of turbines to the east, and one to the  
west, with a large opening in the center.

22 The above list shows that there are ways to reduce the visual impacts of this project. The horse  
23 Heaven Hills are clearly an important visual feature, and EFSEC should require the applicant  
24 to go back to the drawing board. The best approach would be to set a goal that the project can  
25 have only “moderate” visual impacts from most viewpoints to the north, in the Tri Cities area.  
26 Various alternatives could then be explored. All would most likely involve removing turbines,

1 either from the front (northernmost) to back (south), or by creating sufficient visual gaps, and  
2 taking turbines off of visually prominent features. A number of iterations are possible. These  
3 can be quickly tested using computer visualization technology.

4 **We offer EXH-5106\_S as an illustration of a redesign that follows the principles listed**  
5 **above.** This uses the map from the Moon Memo and includes views from the Badger Mountain  
6 area. Turbines are removed from the central part of the project area, leaving two large clusters,  
7 one to the northwest, and one to the southeast. Because the ridge is highest in the northwest,  
8 many of the turbines in this area will be hidden from view, as illustrated in the cross sections  
9 provided in EXH-5106\_S at pages 3-7. The turbines in the southeast would lie behind the  
10 existing Nine Canyon project, adding to turbine visual density in that area, but avoiding less  
11 developed areas. All or most of the turbines we leave (approximately 61) will be on already  
12 disturbed, cultivated land, thus minimizing habitat and perhaps, cultural resource impacts.  
13 There may be other alternatives. There may be ways to allow more turbines, or more solar  
14 arrays, in this design. The way to find out is to see what it looks like from representative  
15 viewpoints, and analyze the results. My opinion, without further analysis, is that an alternative  
16 like this would significantly reduce visual impacts, particularly from the Tri Cities region.  
17 Localized impacts, those nearest the remaining turbines, might remain high.  
18 Ultimately it is best for the community to be the judge of the visual impact. By that I mean  
19 they should be able to say whether a given alternative sufficiently reduces or mitigates the  
20 impact they will have to live with. Failing that, an independent panel of visual resource  
21 experts, beholden to EFSEC, not Scout Energy, could be appointed to view alternatives and  
22 recommend one or more.

23 I can't emphasize enough how important it is to get this project right visually (and otherwise).

24 **As far as I am aware, this is the first large scale wind project in the United States that lies**  
25  
26

1 **adjacent to a major metropolitan area.**<sup>1</sup> If it is done badly it can set the wind industry back  
2 by years, as it will be used as an example of what goes wrong when a developer and regulators  
3 fail to take account of visual impacts to an important landscape. It could be a black eye that  
4 follows wind energy around the country, delaying or stopping projects in many places, at a  
5 time when the climate cannot afford this.

6 Conversely **there is an opportunity to demonstrate how to respond to visual concerns and**  
7 **use design and technology to create a plan that is widely accepted.** People in the Tri Cities  
8 can feel they were heard, and that this project, while it will no doubt have some impacts, may  
9 be an acceptable compromise. This is doable. Yes, some turbines will need to be removed to  
10 make it work. But a project of this scale will still produce significant amounts of renewable  
11 energy. EFSEC should seek a balanced solution and give this proposal a chance.

## 12 **Some additional thoughts (optional)**

13 From the Science of Scenery:

14 *"Regarding community acceptance of wind power schemes, the visual evaluation of the impact of wind*  
15 *power on the values of the landscape is by far the most dominant factor in explaining opposition or*  
16 *support. Type of landscape fully overshadows other attitudinal attributes, as well as other visual and*  
17 *scenic factors such as the design of wind turbines and wind farms, and the number and size of turbines."*

18 There are considerable uncertainties regarding the planning of wind farms but (Ian) Bishop  
19 concluded the following:

---

20 <sup>1</sup> The visual analysis prepared by EFSEC for the Kittitas Valley wind project in the FEIS:

21 ([https://www.efsec.wa.gov/sites/default/files/180298/00021/20070201\\_3\\_9\\_Visual.pdf](https://www.efsec.wa.gov/sites/default/files/180298/00021/20070201_3_9_Visual.pdf)) recognized the difference between a dense urban  
22 community and rural community at page 3.9-1:

### 23 **3.9.1 Study Methodology**

#### 24 **Visual Sensitivity Assessment**

25 Each of us views the outdoor environment differently based on who we are as individuals. Although visual impacts are challenging  
26 to gauge quantitatively, there are some common qualitative characteristics of beautiful (and not-so-beautiful) scenery on which  
most people can agree.

Assessing visual sensitivity involves predicting a general impact on the quality of views from a given viewpoint. A combination of  
three factors determines how sensitive a landscape scene is: • The number and type of viewers;

- The viewing conditions; and
- The quality of the view.

For example, a dense residential area with unobstructed views of a regionally important and memorable scene would be very  
sensitive to objects or structures that would impede views. Conversely, a view from a seldom-traveled rural road where motorists  
have only distant, oblique views of wind turbines in an unremarkable setting would likely qualify as an area of low sensitivity.

- Aesthetic impacts are less the further the viewer is from the turbines (although we have no clear idea of the shape of the distance-impact curve);
- Contrast with the surroundings and background should be **low**;
- **Wind farms should not be located in highly valued landscapes**;
- The distribution and design of the turbines should have regard for aesthetic factors such as complexity and continuity;
- Protected sites should be avoided;
- **Less dissent arises through involvement of the local population in the siting procedure, transparent planning processes, and a high information level**;
- Familiarity with existing small-scale projects is likely to increase later acceptance of further projects.

Hindmarsh (2010) analyzed the extent of community engagement in wind farm planning in Australia and, not surprisingly, found it inadequate. He suggested:

- *"A more promising approach is the collaborative approach, which can also facilitate social mapping of local community qualifications and boundaries about wind farm location alongside technical mapping of wind resources. This is needed to identify the most socially, economically and technically viable locations to locate wind farms to ensure effective renewable energy transitions."*
- The prevailing paradox of visual impacts of wind farms is that their benefits accrue to the wider community but the local community bears their dis-benefits.
- The crucial issue for wind farm location is their acceptability to the community. What is the threshold level when a wind farm shifts from being acceptable to unacceptable? In a hand book on visual impacts, Buchan (2002) noted:
- *"Ultimately, significant is whatever individuals, people, organizations, institutions, society and/or policy say is significant – it is a human evaluative and subjective judgement on which there may or may not be consensus. It is therefore important that two separate but critical characteristics of all effects – magnitude and significance – are clearly distinguished."*

In applying such criteria, the level of landscape quality prior to the development needs to be considered. **The visual impact of a development in a landscape of 4 or 5 rating will be far less objectionable than a development in a landscape of 6, 7 or especially 8 rating** as we saw in the South Australian inland example above. The thresholds in landscapes of high quality will be considerably less than the thresholds for landscapes of low quality. **A reduction from 8 to 7 will be far more objectionable than a reduction from 5 to 4.** Thus two factors need to be considered in establishing visual thresholds, firstly the rating of the

1 subject landscape, and secondly, the reduction in landscape quality that results from the  
2 development.

3 \*Note: I don't believe the analysis by TetraTech or SWCA rated the Horse Heaven Hills  
4 landscape before the developer placed the turbines. I believe that, on a 10 scale, HHH would  
5 rate 7-8 for most people. Which means a lowering of visual quality will be objectionable.  
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## SUPPLEMENTAL TESTIMONY OF TCC WITNESS

DEAN APOSTOL - 14

LAW OFFICES OF  
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# Horse Heaven Wind Project



## Overview Map Turbine Layout Option 1 BENTON COUNTY, WA

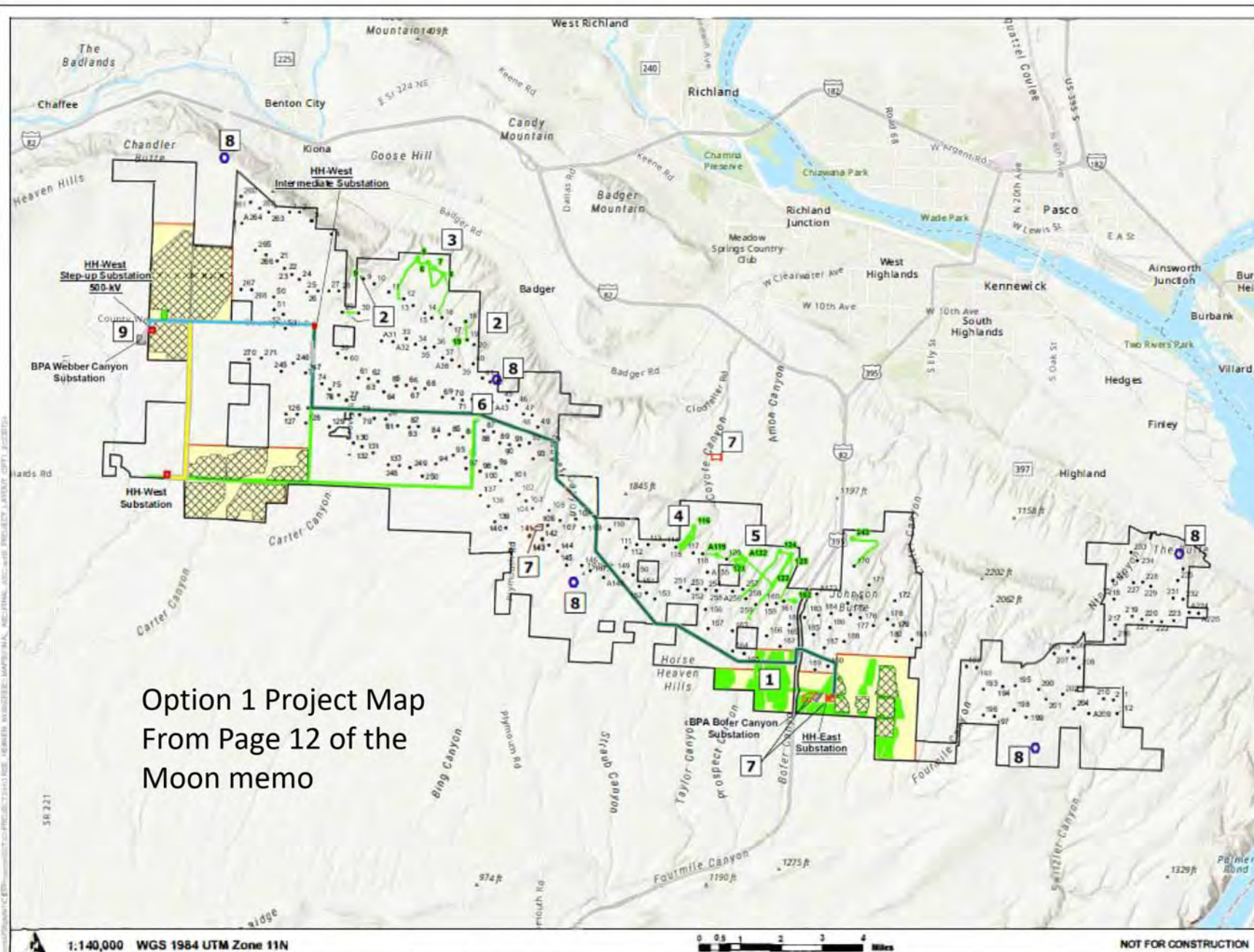
- Project Lease Boundary
- Option 1 Turbine Layout
- 230-kV Interline Transmission Line
- County Well Road 500-kV Transmission Line
- Solar Interline 500-kV Transmission Line
- County Well Road 500-kV Transmission
- Project Substation
- BPA Substation
- Solar Array
- Solar Siting Area
- Laydown Yard
- Radar Tower
- Features Removed from Current Design



### Reference Map



Option 1 Project Map  
From Page 12 of the  
Moon memo

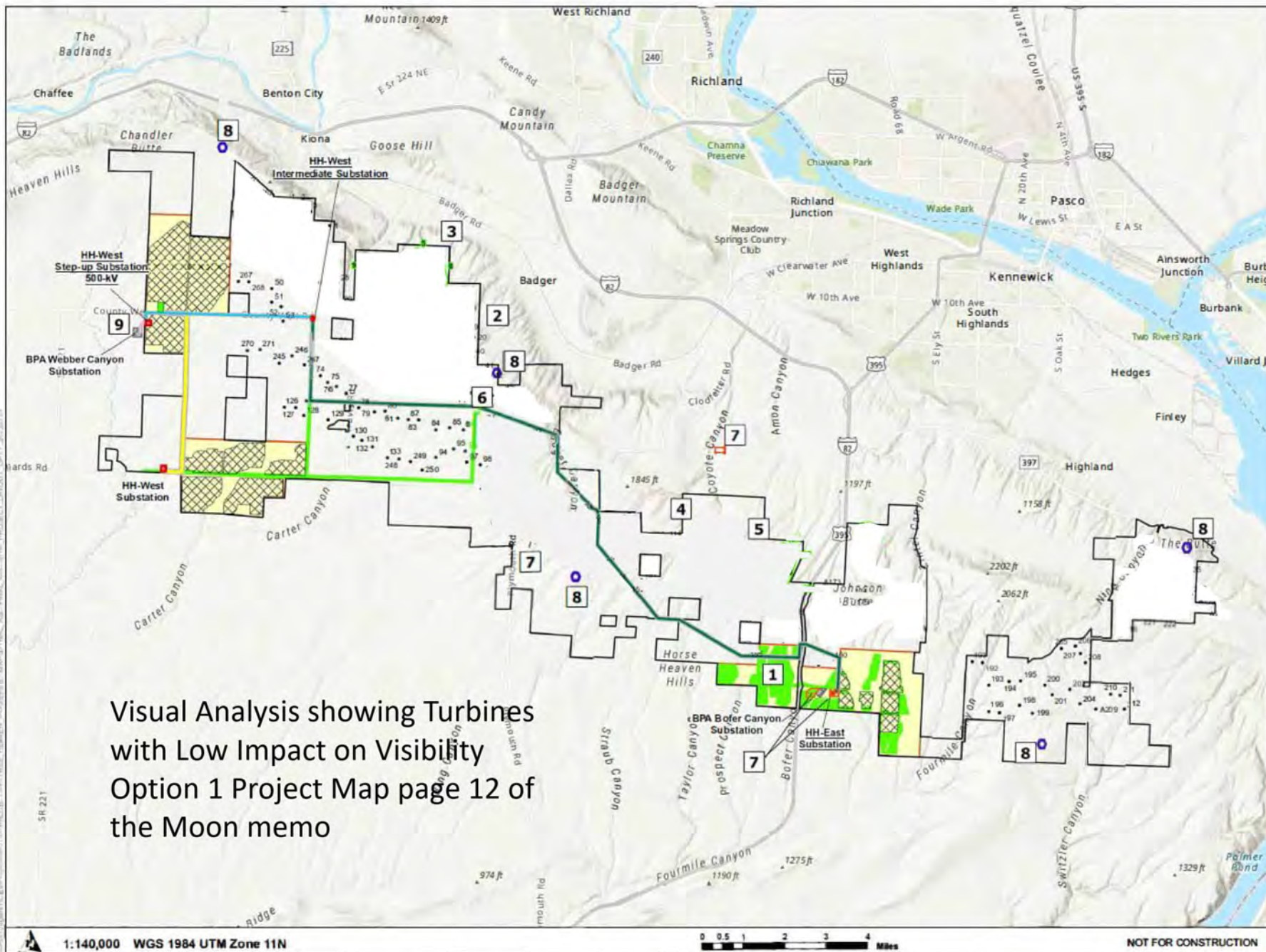


1:140,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION





# Horse Heaven Wind Project

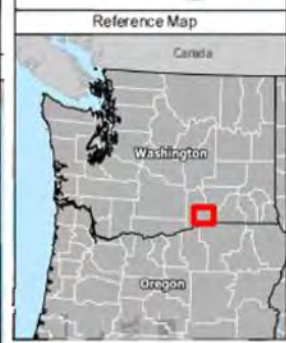
## Overview Map

### Turbine Layout Option 1

BENTON COUNTY, WA



- Project Lease Boundary
- Option 1 Turbine Layout
- 230-kV Interline Transmission Line
- County Well Road 500-kV Transmission Line
- Solar Interline 500-kV Transmission Line
- County Well Road 500-kV Transmission
- Project Substation
- BPA Substation
- Solar Array
- Solar Siting Area
- Laydown Yard
- Radar Tower
- Features Removed from Current Design



Visual Analysis showing Turbines with Low Impact on Visibility  
Option 1 Project Map page 12 of the Moon memo



# Horse Heaven Wind Project



## Overview Map Turbine Layout Option 1 BENTON COUNTY, WA

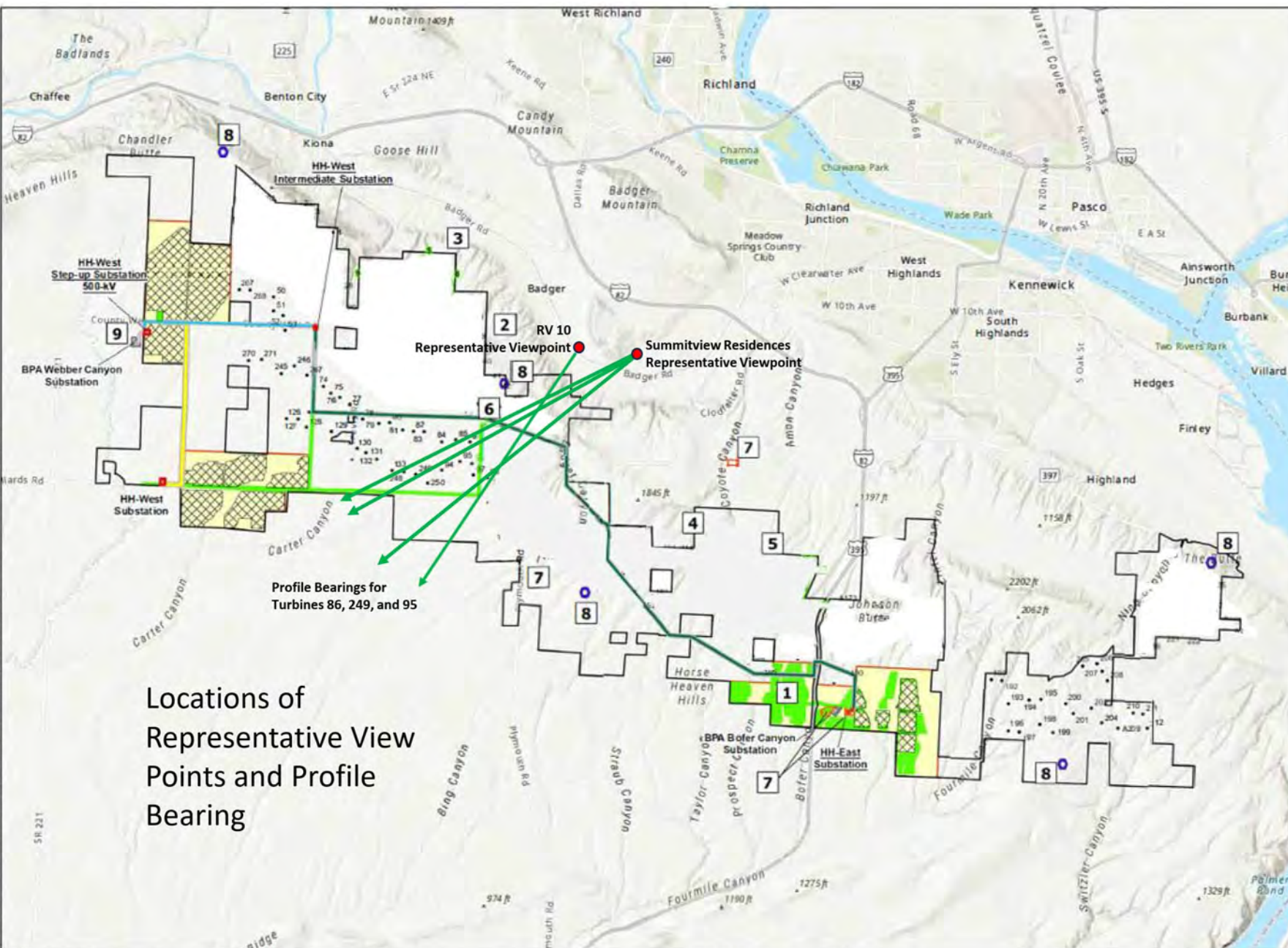
- Project Lease Boundary
- Option 1 Turbine Layout
- 230 kV Interline Transmission Line
- County Well Road 500 kV Transmission Line
- Solar Interline 500 kV Transmission Line
- County Well Road 500 kV Transmission
- Project Substation
- BPA Substation
- Solar Array
- Solar Siting Area
- Laydown Yard
- Radar Tower
- Features Removed from Current Design



### Reference Map



Locations of  
Representative View  
Points and Profile  
Bearing



1:140,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION

# Horse Heaven Project Proposed Mitigation-61 Turbines

## Turbine Numbers-Moon Memo Data Request 9

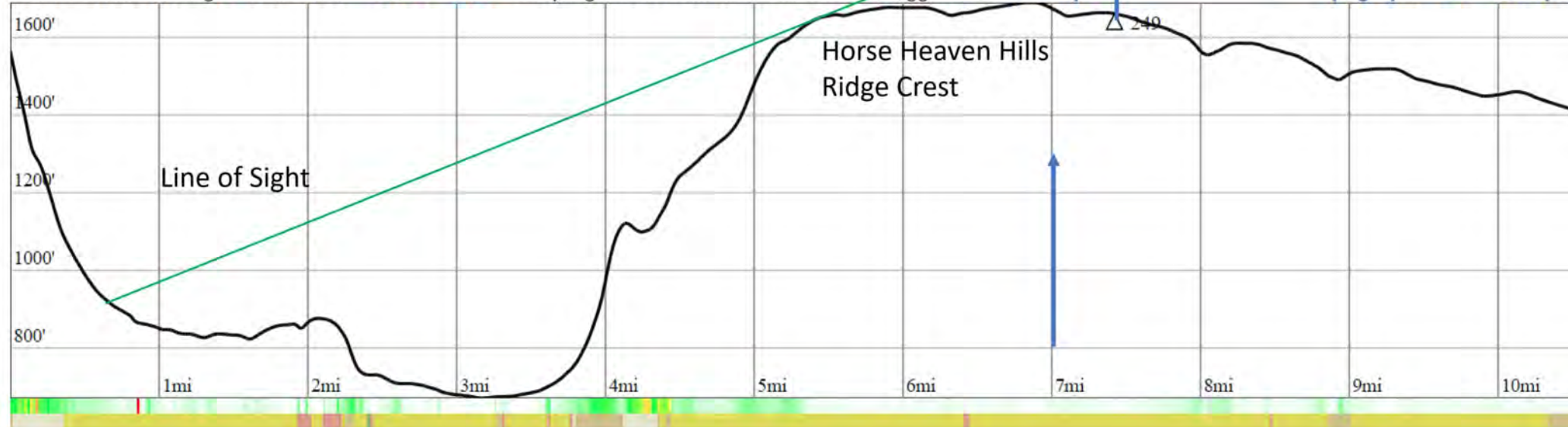
West Phase 2	East Phase 1
Modified Project Turbines-By #	Modified Project Turbines-By #
267	191
268	192
50	193
51	194
52	195
53	196
270	197
271	198
245	199
247	200
74	201
75	202
76	204
77	205
78	206
79	207
80	208
81	A209
82	210
83	211
84	212 & 216
85	22
86	Count
126	
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248	
249	
250	
94	
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96	
97	
98	
39	
Count	

Summitview Residential Community  
Representative View Point  
Profile Bearing SW to Turbine 249

499 ft high wind turbine partially  
visible below line of sight

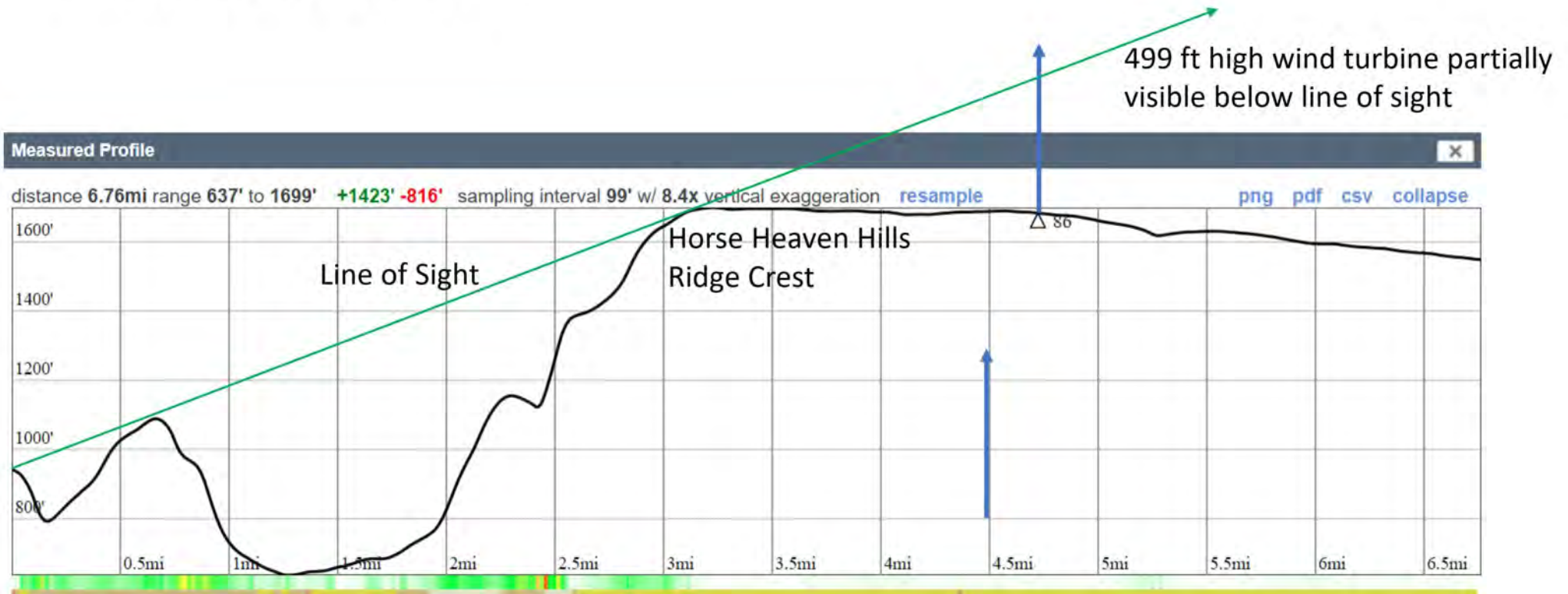
### Measured Profile

distance 10.64mi range 671' to 1690' +1222' -1385' sampling interval 100' w/ 13.8x vertical exaggeration [resample](#) [png](#) [pdf](#) [csv](#) [collapse](#)



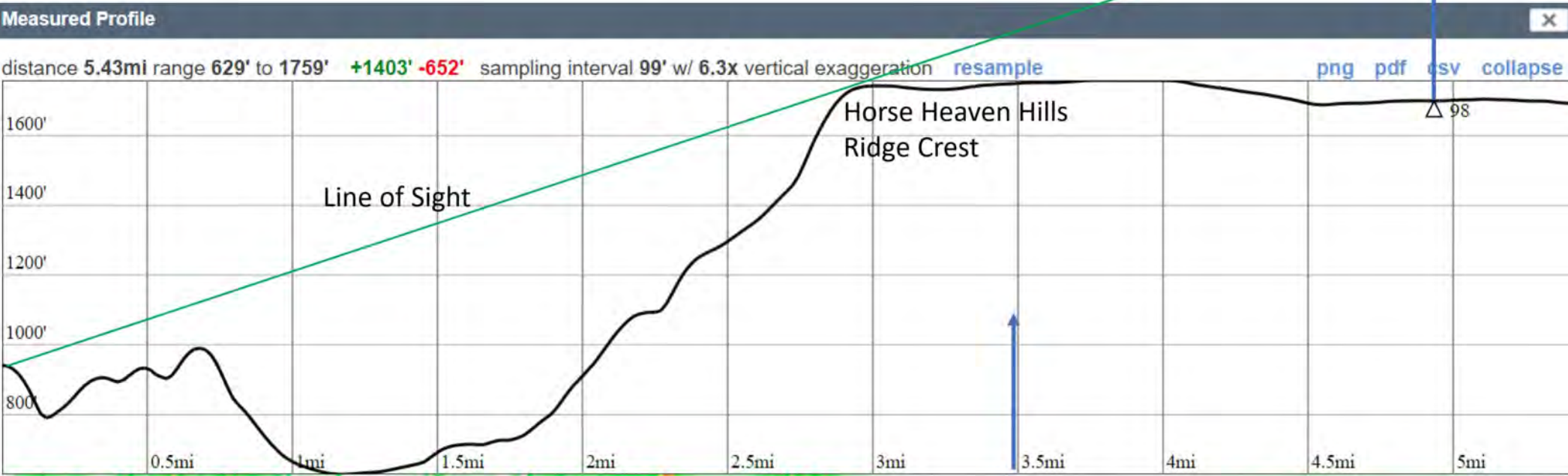


Summitview Residential Community  
Representative View Point  
Profile Bearing SW to Turbine 86



Summitview Residential Community  
Representative View Point  
Profile Bearing SW to Turbine 98

499 ft high wind turbine not  
visible below line of sight



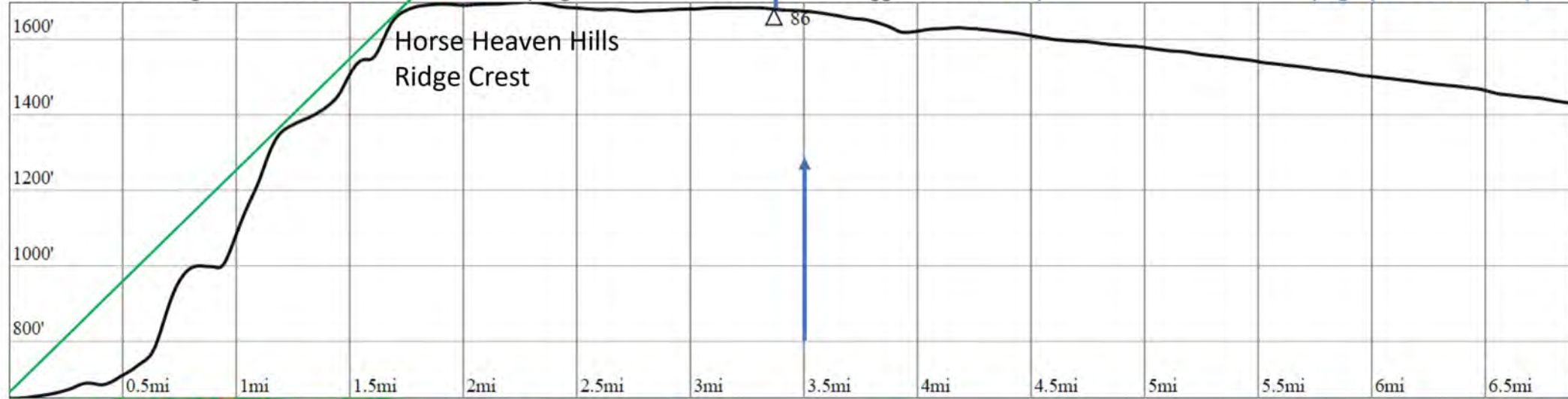
Badger Valley Road Communities  
Representative View Point RV 10  
Profile Bearing SW to Turbine 86

Line of Sight

499 ft high wind turbine not  
visible below line of sight

Measured Profile

distance 6.89mi range 648' to 1698' +1089' -307' sampling interval 100' w/ 8.7x vertical exaggeration [resample](#) [png](#) [pdf](#) [csv](#) [collapse](#)



RV 10

**From:** [Paul Krupin](#)  
**To:** [EFSEC mi Comments](#); [EFSEC \(EFSEC\)](#)  
**Subject:** Horse Heaven Wind Farm - Stricken Testimony on Air Quality Fugitive Dust Impacts Paul Krupin  
**Date:** Saturday, October 21, 2023 9:03:03 AM  
**Attachments:** [Paul Krupin EXH-5915\\_S \(revised\) Supplemental Testimony.pdf](#)

---

External Email

We are submitting the Supplemental Testimony provided by Air Quality Fugitive Dust Impacts as public comments.

This Supplemental Testimony was submitted by Tri-Cities CARES on September 5, 2023 and was stricken from the Horse Heaven Hills Adjudication by Judge Torem on September 22, 2023.

Tri-Cities CARES filed a Motion for Reconsideration.

Attachment

EXH-5915\_S Supplemental Testimony Statement

Appreciatively,

Paul J. Krupin, BA, MS, JD  
Board Member on behalf of TRI-CITIES C.A.R.E.S  
Visit: <http://www.TriCitiesCARES.org>  
509-531-8390 cell 509-582-5174 landline Paul@Presari.com



1 TCC  
2 Supplemental Testimony  
3 Paul Krupin  
4 EXH-5915\_S

5 BEFORE THE STATE OF WASHINGTON  
6 ENERGY FACILITY SITING EVALUATION COUNCIL

7 In the Matter of the Application of:

DOCKET NO. EF-210011

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

SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS PAUL KRUPIN

10  
11  
12 Q: Please state your name and address.

13 A: Paul Krupin, 2404 South Lyle St., Kennewick WA 99337.  
14

15 Q: Please briefly describe your work experience and qualifications.

16 A: My education and resume were provided in EXH-5301\_T and in EXH-5305\_S.  
17

18 Q: Please describe what you are providing in this submittal.  
19

20 A: I am providing supplemental testimony regarding the fugitive dust impacts that will  
21 be caused by the proposed wind farm project and in response to questions that were  
22 raised by Council members in the adjudication hearing on August 23, 2023.  
23  
24  
25  
26

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

PAUL KRUPIN - 1

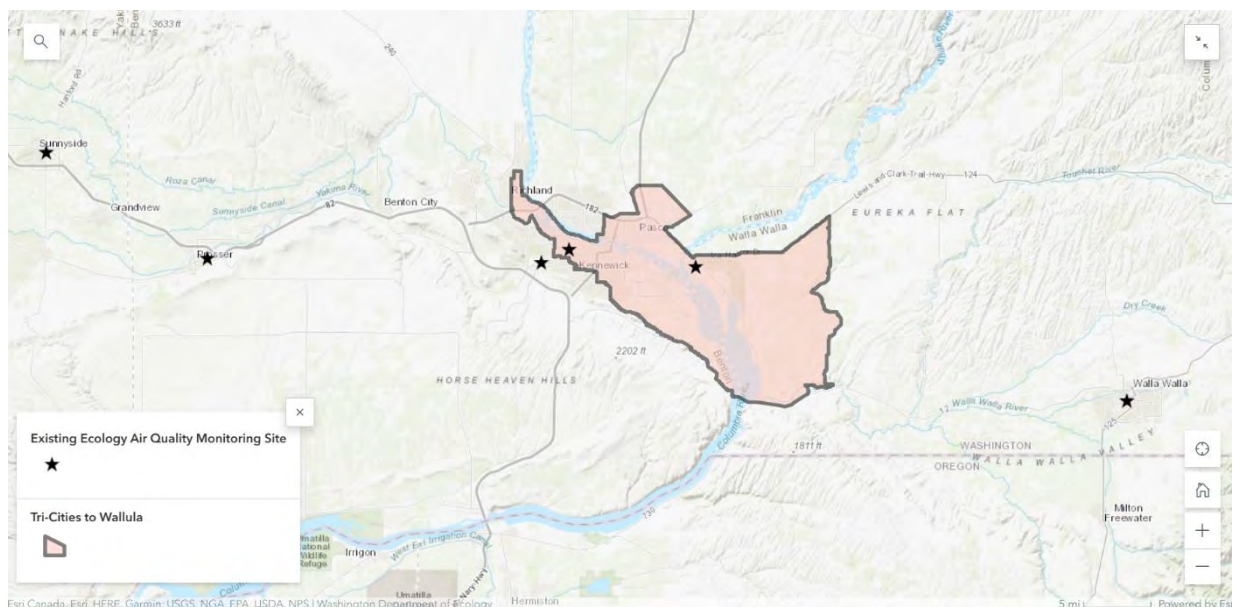
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Kennewick WA is designated as an overburdened community highly impacted by air pollution.<sup>1</sup>

[RCW 70A.65.010](#) (54) defines “Overburdened Communities” as:

*“a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts or risks due to exposure to environmental pollutants or contaminants through multiple pathways, which may result in significant disparate adverse health outcomes or effects.”*

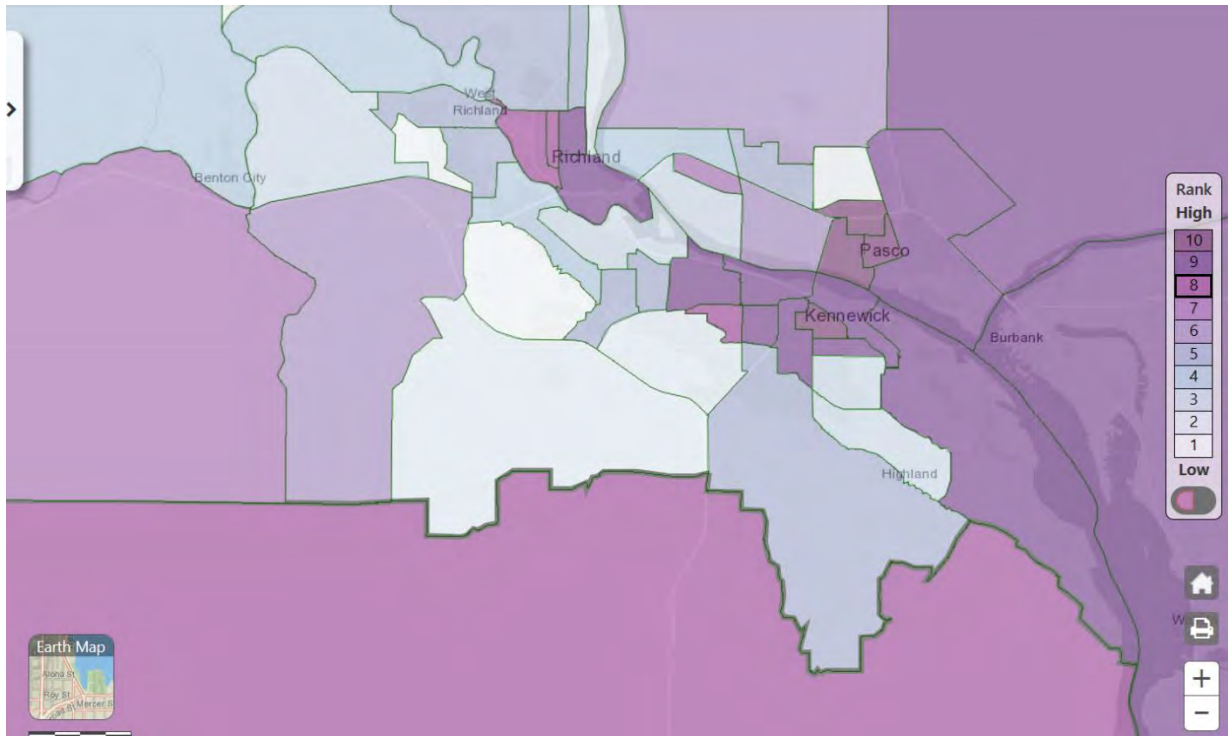
The following map identifies overburdened communities in Washington State:



The map shows the location of the existing air quality monitoring stations.

The Washington State Department of Health publishes an Environmental Health Disparities Map that states that the Tri-Cities are identified as among the worst

<sup>1</sup> Reference: Overburdened Communities Highly Impacted by Air Pollution (arcgis.com)  
<https://storymaps.arcgis.com/stories/c10bdbfc69984a9d85346be1a23f6338>



overburdened communities exposed to poor air quality with associated health impacts.<sup>2</sup>

The area is already impacted severely by air pollution from fugitive dust. It is classified in the highest categories for environmental health disparities compared to the rest of the state of Washington. The Ecology report describes this area in pertinent part as follows:

“At approximately 173 square miles, this is the largest overburdened community highly impacted by air pollution by area that has been identified so far. However, the pollutants of concern are primarily regional in scale. Ozone forms in the atmosphere on hot summer days when two forms of air pollution – nitrogen oxides (NOx) and volatile organic compounds (VOCs) – react with sunlight. NOx and VOCs come from many sources, but cars and trucks are the largest contributors. Conditions in the Tri-Cities area, including prevailing winds, push ground-level ozone up against the Horse Heaven Hills, where it can become concentrated in the basin over more populated areas. PM 10 and PM 2.5 also collect in the basin, and come from sources like windblown dust from construction, agriculture, or open lands, outdoor and agricultural burning,

<sup>2</sup> Washington Environmental Health Disparities Map <https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/washington-environmental-health-disparities-map>

1 residential wood burning, wildfires, mobile sources like cars and trucks, and  
2 industrial sources.”

3 This area also is subject to occasional “exceptional events” for air quality like  
4 windblown dust storms, which can lead to temporary exceedances of the national  
5 ambient air quality standards for particulate matter and unhealthy air quality.  
6

7 I am concerned that the project application fails to identify and adequately  
8 characterize the air quality impacts. I believe that they are underestimating the  
9 the amount of fugitive dust that will be created during construction of the wind farm  
10 project. <sup>3</sup>  
11

12 The Horse Heaven Hills Wind Turbine Project proposes over 100 miles (200 acres) of  
13 gravel and dirt road to the area immediately adjacent to and upwind from the Tri-Cities  
14 They do not present any alternatives at all to reduce and eliminate access roads and  
15 reduce the potential for dust generation.  
16

17 The application underestimates the dust that will be generated in the highly erodible  
18 fine grained glacial soils – the loess that covers the agricultural land the project is  
19 located on. The blowing dust created by the 100 miles of proposed roads will be well  
20 beyond anything identified by the project in the Application.  
21

22 I am concerned that they will not be able to control the dust with water due to the  
23 evapotranspiration rates, over 50 inches per year, found in this area. Their declaration  
24 that a Dust Control Plan will satisfy requirements is not rational and the statement they  
25

---

26 <sup>3</sup> Updated ASC at page 3-59 and 3-60. Table 3.2-2 Emissions Totals by Project Phase.



1 will mitigate the dust is without scientific foundation. They fail to recognize a well-  
2 documented fact. That the water applied to the roads to attempt to achieve dust  
3 control simply and quickly evaporates into the air.  
4

5 There are several scientific studies that indicate that fugitive dust emissions from  
6 construction activities will be greater than that identified by the project.  
7

8 Major dust storms may occur several times a year. Exceedances of the US Federal  
9 Air Quality Standard for PM10 occurred 20 times between 2000 and 2010 in the city of  
10 Kennewick, WA, which is located immediately downwind of the HHH. <sup>4</sup>  
11

12 The highest daily PM10 concentration measured in Kennewick during this time period  
13 was nearly ten times the concentration allowed by law. All of these PM10  
14 exceedances were attributed to windblown dust.<sup>5</sup>  
15  
16  
17  
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19

---

20 <sup>4</sup> Sharratt, B.S., and G. Feng. 2009. Windblown Dust Influenced by Conventional and Undercutter Tillage within  
21 the Columbia Plateau, USA. Earth Surface Processes Landforms 34: 1223–1332.

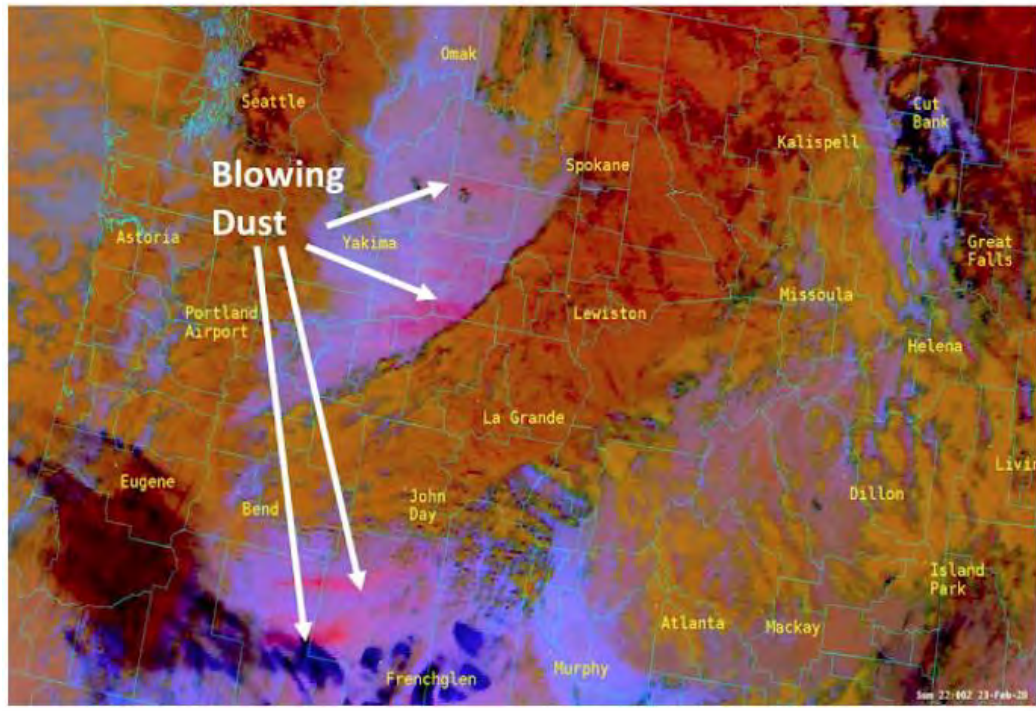
22 Sharratt, B., G. Feng, and L. Wendling. 2007. Loss of soil and PM10 from agricultural fields associated with high  
winds on the Columbia Plateau. Earth Surface Processes Landforms 32: 621–630

23 Sharratt, B.S., and R. Edgar. 2011. Implications of Changing PM10 Air Quality Standards on Pacific Northwest,  
Communities Affected by Windblown Dust. Atmospheric Environment 45: 4626–4630.

24 <sup>5</sup> Best management practices for summer fallow in the world's driest rainfed wheat region - Washington State  
25 University (wsu.edu), Page 2.  
26 [https://rex.libraries.wsu.edu/esploro/outputs/99900502854201842?skipUsageReporting=true&recordUsage=false  
&institution=01ALLIANCE\\_WSU#file-0](https://rex.libraries.wsu.edu/esploro/outputs/99900502854201842?skipUsageReporting=true&recordUsage=false&institution=01ALLIANCE_WSU#file-0)

1 This GOES 17 weather satellite image highlights the dust on a windy dusty day in  
2 February 2020. <sup>6</sup>

### 3 GOES 17 – Blowing Dust Detection



16 This same article by Dr. Mass also contains a satellite photo showing the project area  
17 impacted by the dust and discussing car crashes that sent some people to the hospital  
18 and closed Interstate 82 for several hours.

19  
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26 <sup>6</sup> : [Cliff Mass Weather Blog: Post Feb 20, 2020 Dust Storm Season Begins in Eastern Washington and Oregon](#)



I am concerned that the dirt and gravel roads constructed for the Horse Heaven Hills Wind Farm project will dramatically increase the sources and quantities of dust in the air that will blow and be deposited in the Tri-Cities.

Without an adequate source of water for dust control, there is no practical effective way to mitigate this impact. The project will make a very bad situation much worse.

The dust blowing into the Tri-Cities and the effects of PM10 and PM2.5 particles on our communities need to be adequately identified, fully and properly evaluated and reliably mitigated to prevent significant impacts to people in the Tri-Cities.

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

PAUL KRUPIN - 7

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1 This photo taken in the Spring of 2023 shows the dust from the HHH plateau blowing  
2 into Badger Valley during a dust storm event from the Summit View area in south  
3 Kennewick.



14 The applicant fails to identify and evaluate specifically that 100 miles of micrositng  
15 corridors on powdery thick soils that will be the sources of the dust that will cause  
16 significant impacts to fugitive dust emissions. The applicant fails to propose or even  
17 contemplate any remedy if it entails turbine elimination or relocation.

19 The Washington Department of Ecology's Comprehensive 2014 County Emission  
20 Inventory shows that emissions from agricultural activities are the largest source of  
21 PM10 in both the maintenance area and the HHH. The report states:

22 "For Benton County, emissions from agriculture were second only to construction dust  
23 as shown in Table 2. (Ecology, 2018)." <sup>7</sup>

25 <sup>7</sup> Reference: Publication 19-02-005 11 April 2019 High Wind Fugitive Dust Mitigation Plan (wa.gov)  
26 <https://apps.ecology.wa.gov/publications/documents/1902005.pdf>



**Table 2: Maintenance Area 2014 PM<sub>10</sub> by source type in each county portion, pounds and percer pounds per season day.**

Source Type	Category	Benton, lbs. per season day	Benton, % lbs. per season day	Walla Walla, lbs. per season day	Walla Walla, % lbs. per season day	Maintenance Area Total
<b>Point</b>	≥ 70 Tons PTE	0	0%	2,485	35%	35%
<b>Point</b>	< 70 Tons PTE	66	1%	140	2%	3%
<b>Nonpoint</b>	Ag. Burning	0	0%	0	0%	0%
<b>Nonpoint</b>	Ag. Tilling Dust	247	4%	2,133	30%	34%
<b>Nonpoint</b>	Ag. Harvesting Dust	114	2%	211	3%	5%
<b>Nonpoint</b>	Construction Dust	393	6%	307	4%	10%
<b>Nonpoint</b>	Paved Road Dust	68	1%	344	5%	6%
<b>Nonpoint</b>	Unpaved Road Dust	343	5%	104	1%	6%
<b>Onroad</b>	Mobile	7	0%	50	1%	1%
<b>All Sources Total</b>		1,238	19%	5,774	81%	100%

The applicant does not provide for adequate air monitoring and does not identify and commit to any increased monitoring of PM 10 and PM 2.5. There is no existing baseline on the smallest and most dangerous dust particles (PM2.5). The closest air monitoring station for PM 2.5 is in Toppenish 40 miles north and west of the project. I am concerned about the lack of monitoring of the air quality impacts that will result from the project. The project has not proposed any new air quality monitoring at all. Additional monitoring of the air quality impacts caused by the project is needed to protect the health and safety of the public.

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

PAUL KRUPIN - 9

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aramburulaw.com

1 I declare under the penalty of perjury under the laws of the State of Washington that  
2 my testimony and reports are true and correct to the best of my knowledge and belief.  
3

4 Signed this \_\_\_\_3\_\_ day of September, 2023, in \_\_\_\_Kennewick WA  
5 \_\_\_\_\_.

6  
7 \_\_\_\_\_PAUL KRUPIN\_\_\_\_\_ /s/ \_\_\_\_\_

8 Printed Name  
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SUPPLEMENTAL TESTIMONY OF TCC WITNESS

PAUL KRUPIN - 10

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**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Turbines #'s 60, 61, and 62 Marked for Removal in FEIS Presentation  
**Date:** Tuesday, October 24, 2023 3:41:23 PM

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External Email

Follow-up to October EFSEC Meeting FEIS presentation.

I am writing this as a private citizen and resident impacted by the project.

David Sharp  
89417 Summit View Drive  
Kennewick, WA 99338

Are we to the point of "Theater of the Absurd" to mitigate turbines that are not impactful and leave those that are? Was it just a mistake, or is the Applicant proposing this mitigation?

The FEIS presentation, Page 6, shows a group of three turbines identified for removal. The picture was taken from KOP #3, Chandler Butte, and are assumed to be turbines 60, 61, and 62 as identified on the Moon memo marked up project map. The reasoning given in the presentation was that they were visually prominent and too close to the KOP, and they were objectionable for a number of other reasons to multiple parties (if I remember correctly). To my knowledge, there has not been one specific objection to those three turbines; **NONE**.

These turbines are approximately 2.6 miles from Chandler Butte KOP. That KOP is lightly used. More accurately, no one can access the Chandler Butte viewpoint without breaking the law. It is behind a locked gate.

The most objectionable ridge turbines are #'s 1-4, which are built next to a ridge trail that overlooks Benton City and the Yakima Valley. These ridge turbines are shown in KOP 9. of Appendix Q in the Revised ASC. Notice how much more prominent the KOP 9 turbines are to Benton City and the Valley population than the KOP 3 turbines in the photo. The ridge turbines rise vertically about 2000' above Benton City, and are much closer to foraging raptors, population, businesses, wineries, highway traffic, and recreators than the Chandler Butte KOP. These KOP 9 ridge turbines are viewed by more people in one hour than the turbines from Chandler Butte in 5 years.

These turbines were the subject of more specific diverse public comments than any other turbines in the project. The objections are not just view related. Some of the

topics of comment:

- Degradation of the existing BLM managed Class 2 View area. Leaving the ridge turbines would change it to Class 4 (the lowest rating).
- Concerns about increased fire risk for Benton County residents at the base of the escarpment magnified by the loss of aerial firefighting methods.
- Visual impact to public areas 1 mile away, and Benton City limits in general 1-4 miles distant. **\*Note 1**
- Benton City Mayor and Council Impact on BC retail area development at the Interstate exit.
- A winery owner about 1 mile distant with a public view area, viewsheds to wineries on Red Mountain.
- Introduction of danger to the public while a public facility. **\*Note 2**
- Restriction of recreation opportunities and experiences. **\*Note 3**
- Birds of prey forage all along and above the ridgeline.
- Kiona Ridge Trail will be essentially lost for a 2-mile stretch. See project maps 1 and 4 in the presentation. From the width of the micro-siting corridor it appears the ridge will be leveled for the turbine installation. This trail has been there for millennia, well before European settlers arrived and should be preserved. It is visually obvious to anyone looking at the drawing how close the turbines are to the trail. These turbines will be built largely over habitat, and not on land used for agriculture.
- Loss of an iconic landmark viewed widely from Benton City, the Yakima Valley and the Tri-Cities.

**\*Note 1:** The public record shows numerous public comments about lack of appropriate visual representations of turbines impacting local communities. As a result EFSEC requested unobstructed panoramic vistas, one of which was the Benton City area that became KOP #9. The record also shows that the Applicant provided a handpicked photo to use that did not provide the unobstructed views and panorama that was requested by EFSEC. For whatever reason, EFSEC accepted that photo. The photo is now KOP 9 and is being used as the foundation of a house of cards portraying Kiona Ridge as a common (nothing special) resource, and only moderately impacted by the project. As a result of where the photo location was chosen this KOP received the lowest visual impact overall rating despite having high viewer sensitivity, and including residential, commercial, and travel impacts. The public pointed out this discrepancy and even provided examples of views from the Benton City area that had unobstructed views. The record also shows that EFSEC requested additional locations for KOP's for the Benton County area in Data request #8 over 7 months ago, with no record of response.

**Note 2:** Recreators can actually be "**under the rotor swept area**" while on the established trail. This presents a danger to the general public in the event of ice throw or mechanical malfunction. This will affect all users, not just paragliders.



It fits within the definition of "significant" impact, having "a severe adverse impact to environmental quality, even if its chance of occurrence is not great." (WAC 197-11-794).

**Note 3:** In the proposed configuration, the Applicant will likely, after receiving a Site Certification, restrict public access. More than paragliders will be affected. That will have the effect of putting restrictions to the public while accessing an existing Federal recreation resource. There has been no EFSEC precedent to my knowledge where a project has physically restricted use of an existing recreation resource. Imagine being a hiker stopping to enjoy the ridge views with rotating blade tips 35 feet overhead. However, it will be a unique experience, like none other in the US.

My understanding is that EFSEC is the Lead Agency responsible for accuracy of the FEIS and it should represent a true and accurate picture of the relative environmental impacts. If the three-turbine removal was initiated by the Applicant, it may be noble, but what are the relative benefits vs the impacts along Kiona Ridge. There have been substantial and significant changes to the project made since the public comment period ended for the Draft EIS. If EFSEC does not have the staff to objectively review the final EIS for accuracy, extra review and development time should be allowed, or it should be opened back up to the public for comment.

The voting Council deserves better.

EFSEC is urged to review the genesis of how this juxtaposition happened. The right thing to do is to stipulate that turbines #'s 1-4 be mitigated based upon public comment and environmental impact.

**Point of information!** An 1150mw nameplate project operating at 30% average capacity factor can generate for the owner nearly \$850 million in Federal production tax credits over 10 years. That figure will be adjusted upward for inflation and does not include State tax incentives.

**From:** [Dave Sharp](#)  
**To:** [FESEC mi Comments](#)  
**Subject:** Ferruginous Hawk Nests and Distance from Turbines  
**Date:** Thursday, October 26, 2023 10:05:22 AM

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External Email

Followup to October Meeting FEIS presentation.

I am writing this as a private citizen and resident impacted by the project.

David Sharp  
89417 Summit View Drive  
Kennewick, WA 99338

This is being written without having seen the FEIS, but portions of discussions in the FEIS presentation to the Council were troublesome. The FEIS should inform the Council how many turbines are impacted by the two-mile exclusion zone from Ferruginous Hawk nests discussed in the presentation. Every turbine within that buffer should be clearly identified. The FEIS presentation relies on the Moon memo which does not do that.

For example, the Moon memo item Section 1.5 that has wording that needs to be read carefully:

*"Including Turbine 116, removal of Turbines 119, 121, 122, 123, 124, 125 would reduce approximately 30% of Turbines located within the 3.2 km [2 mi] core area of the Coyote Canyon ferruginous hawk territory".*

This statement is saying **only 30% of turbines within 2 miles have been removed**. Another way of saying this is there are ~24 turbines within 2 miles and only 7 have had mitigated by removal. If the remaining 70% are within 2 miles, why has the developer not marked them as removed? The assumption is made that this is an active nest.

From Section 1.7:

*"1.7 Add/modify construction laydown areas Planned modification: Add locations for Phase 1 and Phase 2 construction laydown; add interim Turbine component laydown area (see area '7' on attached overview map)".*

Incredibly, the Applicant appears to be proposing a staging/laydown/batch plant area that is in the vicinity of the same Ferruginous Hawk nest discussed above. That will most likely be the most active, noisiest and dustiest place on

the project. EFSEC staff needs to validate the exact location coordinates with the nest coordinates to determine the exact location and distances. If this area is within 2 miles of the nest, or an appropriate distance, based upon the activity, noise, etc. the construction laydown area should be relocated.

The information presented does not give the Council complete and accurate information. It is estimated that many more turbines will be within a two-mile zone than what is shown in the Moon memo and subsequent information provided.

An updated map showing every turbine within the project that is within 2 miles of either an active or inactive nest should be included in the FEIS; proposed for removal or not. Anything less would be a disservice to the voting members of the Council. The Council members need to understand the basis of their vote decision.

**Wildlife**-Wildlife and Habitat is a key issue for this EIS. Is EFSEC going to punt the football on this? Key rewrite topics in the EIS were identified as:

- *Expansion of Wild-1 mitigation regarding the TAC, monitoring plans, and adaptive management.*
- *Spec-5 now creates a 2-mile avoidance buffer around all ferruginous hawk nests with active habitat.*

Wildlife and Habitat is a key SEPA issue for this project and not appropriate for a Technical Advisory Committee. Just the word "Advisory" is problematic. What entity does the Committee advise: EFSEC, or the Applicant? What is the makeup of the committee(s)? Are they volunteers, or paid? Who pays them? Are any of them employees of the Applicant, or consultants hired by the Applicant? What is the definition of "active habitat"? Or more appropriate, what is the definition of "inactive habitat"?

A TAC approach should not be utilized for key environmental issues, especially controversial decisions associated with the Ferruginous hawk. Those go to the heart of SEPA issues on this project. And there is no bigger environmental issue for this project than preserving an endangered species. The TAC approach can be defined with one word: "Advisory". The TAC would not be a neutral committee. This was the topic of several public comments during the DEIS period.

### **Point of Information.**

Wilbur and Orville Wright made the first powered flight in 1903. Chuck Yeager broke the sound barrier in 1947, only 43 years later. Man first set foot on the moon in 1969 only 22 years later, and only 66 years after man's first flight. Imagine the leaps of technology that made those feats possible.





**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Docket Number EF-210011  
**Date:** Wednesday, November 1, 2023 8:27:32 AM

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From: Penelope Loucas <phloucas@gmail.com>  
Sent: Wednesday, November 1, 2023 2:40 AM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Docket Number EF-210011

External Email

I am writing to express my support for the Horse Heaven Clean Energy Center and the role it will play in helping Washington achieve the ambitious decarbonization goals we set for ourselves with the passage of the Clean Energy Transformation Act (CETA) in 2019. I believe strongly in impact mitigation and value EFSEC's process, but know that Washington's ability to realize a carbon-free future will depend on permitting large-scale clean energy projects in a timely manner just like the Horse Heaven Clean Energy Center. This is a good project with appropriately identified mitigation measures, and backed by an experienced team that will produce up to 1,150 MW of renewable energy through a combination of wind, solar, and battery storage technology.

With the passage of CETA, Washington established itself as a leader in the fight to curb global emissions. The state now has a responsibility to ensure the clean energy transition can be achieved in the necessary timeframe to facilitate fossil plant retirement, and in doing we can set an example for the rest of the nation to follow.

Thank you for your consideration.

Sent from my iPhone

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Wind turbines on Horse Heaven Hills.  
**Date:** Thursday, November 2, 2023 8:15:52 AM

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**From:** Ira Johnson <johnsonira967@gmail.com>  
**Sent:** Wednesday, November 1, 2023 10:45 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Wind turbines on Horse Heaven Hills.

External Email

I have pointed out to you that I'm against this project. That you are getting ready to make a decision.

I wanted to point out to you that states like Hawaii, New Jersey, and other states that have them are abandoning them. Electric transportation buses are catching fire, electric cars are catching fire or when the batteries get wet they have to be replaced. This going all green is crashing around us.

WA. The state needs to be smart and not join the bad choices that CA., NJ and Hawaii have made.

Sincerely  
Ira Johnson

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Wind Turbines in Horse Heaven Hills  
**Date:** Monday, November 6, 2023 11:33:22 AM

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**From:** Ira Johnson <johnsonira967@gmail.com>  
**Sent:** Monday, November 6, 2023 11:28 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Wind Turbines in Horse Heaven Hills

External Email

There is an interesting article on the internet today about US Offshore Wind is Holed and Sinking. by David Blackmon. I encourage you to read the article. Shows why we should not install anymore Wind Turbines period.

Sincerely  
Ira Johnson

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: HHH Turbine Wind Project - Please use common sense in your decision. Thank you  
**Date:** Wednesday, November 8, 2023 8:14:22 AM  
**Attachments:** [video.mp4](#)

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**From:** Judy <goosie1515@aol.com>

**Sent:** Tuesday, November 7, 2023 9:32 PM

**To:** Moon, Amy (EFSEC) <amy.moon@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>;  
Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>; Drew, Kathleen (EFSEC)  
<kathleen.drew@efsec.wa.gov>

**Subject:** HHH Turbine Wind Project - Please use common sense in your decision. Thank you

External Email

See attached Video:





**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: HHH Windfarm  
**Date:** Monday, November 13, 2023 8:09:14 AM

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**From:** d <jantkids@aol.com>  
**Sent:** Friday, November 10, 2023 4:28 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH Windfarm

External Email

The Community, municipalities, Benton County, BPUD, Wildfire strike teams, the Yakama Nation have all expressed that this is not in anyone's best interest for wild life, quality of life or tribal treaties. The simple fact that this committee may go against what the majority of everyone this will effect, is extremely scary to me. The concept of constituents having a say is not mere lip service, this committee is bound to take into consideration the needs, wants and livelihood of those this windfarm will impact, not our Governor that sits in his house on the West side of our state, and his misguided political ideas, or you the members of the committee that have no stake in this. Windfarms are NOT green, the amount of fossil fuels, oil, gas and cement, making of the steel, transporting it and the water needed for this project make this worse than a coal fired plant! This windfarm is not needed for our part of the state, our dams and Hanford are more than ample suppliers for our needs here. We are not to be subjected to something so someone else can brag they created a green project that is just dishonest and disingenuous.

The best use of this land is left for what our urban growth is.

Please do not approve or suggest that our governor approves this, you have received ample testimony that this project is in NO ONES best interest except Scout and that is not who you are representing!

This project should not be approved.

Janice Taylor  
720 Shockley Rd  
Richland, WA 99352

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: EFSEC review of Horse Heaven Hills Wind Farms Project - Feedback from West Richland - Obviating a Disaster  
**Date:** Monday, November 13, 2023 8:09:24 AM

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**From:** pixelate@mathsavers.com <pixelate@mathsavers.com>  
**Sent:** Saturday, November 11, 2023 8:09 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** EFSEC review of Horse Heaven Hills Wind Farms Project - Feedback from West Richland - Obviating a Disaster

### External Email

Greetings EFSEC Administrators, Trustees and Associates –

I am writing with respect to the proposed Horse Heaven Hills Wind Farm and Solar Project to be located to the southwest of the TriCities in Eastern Washington State. This project must not be constructed for many reasons, specifically:

- Solar and wind power are neither renewable nor economically viable -- they are both first order derivatives of hydrocarbon fuels.
- The sunlight and wind are renewable; the machines used to “harvest” the sun and wind are not. These so-called green energy solutions break down and require continued maintenance and ultimately, they must be taken down and be replaced.
- The total energy necessary for the mining, refining, manufacturing, transportation, installation, maintenance and decommissioning of a wind turbine far exceeds the energy generated over its service life.
- This project will crater property values in the area. Nobody wants to live next to or see a power plant in close proximity to their home or business. This power operation will extend over 25 miles and be visible to much of the 250,000 people living and working in the TriCities.
- This project is a disastrous misallocation of resources and will destroy the landscape and beauty of the Horse Heaven Hills.
- Washington State already receives over 70% of its electricity from efficient hydroelectric power. The plan to tear down existing dams on the Snake River while constructing an economically and environmentally damaging power station is beyond absurd.

Construction of the HHH Wind “Farm” would be a disaster for the environment, citizens of the TriCities and anyone that enjoys to relocate to the area.

Thank you for taking the time to read and understand my position.

Regards,

Patrick D. Grengs II / Farmer in West Richland (owner of 40 acres)

**From:** [Masengale, Lisa \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse Heaven Final ASC Appendices  
**Date:** Monday, November 13, 2023 12:55:57 PM

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Forwarding public comment, below.

Lisa Masengale (*she/her*)  
Forms and Records Analyst Supervisor  
Energy Facility Site Evaluation Council  
Phone number: (360) 485-1591  
EFSEC phone number: (360) 664-1345  
[www.efsec.wa.gov](http://www.efsec.wa.gov)

---

**From:** kmbrun@gmail.com <kmbrun@gmail.com>  
**Sent:** Monday, November 13, 2023 12:55 PM  
**To:** Masengale, Lisa (EFSEC) <lisa.masengale@efsec.wa.gov>  
**Subject:** RE: Horse Heaven Final ASC Appendices

External Email

If those sites are that sensitive, perhaps Scout should not be building turbines on them.

Karen

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**From:** Masengale, Lisa (EFSEC)  
**Sent:** Monday, November 13, 2023 12:29 PM  
**To:** [kmbrun@gmail.com](mailto:kmbrun@gmail.com)  
**Subject:** RE: Horse Heaven Final ASC Appendices

Good Afternoon,

I am still reviewing and redacting the ASC appendices. They will be posted online one-by-one as I finish reviewing them.

Please note, Appendix R – Cultural Resource Reports, will not be posted online. The cultural reports are of great sensitivity, especially to the Tribes, and we therefore respect the wishes of the Tribes by not posting them online, even in redacted form.

As always, you are also welcome to request the ASC appendices via public records request. The most expeditious way to process a request is to create an account and submit a public records request through our [Public Records Portal](#). If you would like to submit a request but prefer not to submit via the Public Records Portal, just let me know and I will open your request manually in the portal. Please note, submitting a public records request still requires me to review and redact all sensitive (confidential) information, which I am doing as expeditiously as possible.



Thank you,

Lisa Masengale (*she/her*)  
Forms and Records Analyst Supervisor  
Energy Facility Site Evaluation Council  
Phone number: (360) 485-1591  
EFSEC phone number: (360) 664-1345  
[www.efsec.wa.gov](http://www.efsec.wa.gov)

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**From:** [kmbrun@gmail.com](mailto:kmbrun@gmail.com) <[kmbrun@gmail.com](mailto:kmbrun@gmail.com)>  
**Sent:** Friday, November 10, 2023 7:42 AM  
**To:** Masengale, Lisa (EFSEC) <[lisa.masengale@efsec.wa.gov](mailto:lisa.masengale@efsec.wa.gov)>  
**Subject:** Horse Heaven Final ASC Appendices

External Email

Lisa, I do not see any appendices along with the Final ASC in your postings. Why not? Does this mean that the 12/1/23 updated appendices were used for the FEIS? The appendices that were changed from or added to the original ASC are the following:

Appendix G – Shadow Flicker Analysis Memo (Revised)  
Appendix I – Wetlands and Other Waters Delineation Report (Revised)  
Appendix K – Biological Reports (Revised)  
Appendix L – Draft Wildlife and Habitat Mitigation Plan (New)  
Appendix O – Acoustic Reports (Revised)  
Appendix Q – Visual Simulations (Revised)  
Appendix R – Cultural Resource Reports (redacted) (Revised)

Karen Brun  
Kennewick, WA

**From:** [CEASE2020](#)  
**To:** [State of Washington](#); [outbound@ig.governor.wa.gov](mailto:outbound@ig.governor.wa.gov); [Corry, Chris \(LEG\)](#); [King, Curtis](#); [GOVOutBound](#); [Drew, Kathleen \(EFSEC\)](#); [Bumpus, Sonia \(EFSEC\)](#); [Snarski, Joanne \(EFSEC\)](#); [Hafkemeyer, Ami \(EFSEC\)](#); [patricia.betts@efsec.wa.gov](mailto:patricia.betts@efsec.wa.gov)  
**Subject:** C.E.A.S.E  
**Date:** Monday, November 13, 2023 4:14:01 PM

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External Email

[Latest Update on Horse Heaven Hills Windfarm Project \(pnwag.net\)](#)

EFSEC will ignore all the true facts and negative impacts and send it to Inslee who will do the same. This project would not happen in the Seattle area. It's time for EFSEC employees and Inslee to share in the clean energy plan. Time to put turbines in Puget Sound and solar sites on Bainbridge Island. Those hypocrites will never allow that to happen. Greg Wagner C.E.A.S.E.

From: [Dave Sharp](#)  
To: [EFSEC mi Comments: Levitt, Eli \(ECF\); Livingston, Michael F. \(DFW\); YOUNG, LENNY \(DNR\); Brewster, Stacey \(UTC\); elizabeth.osborne@com.wa.gov; Drew, Kathleen \(EFSEC\); Bumpus, Sonia \(EFSEC\)](#)  
Subject: Fwd: Horse Heaven Project-Fugitive Dust  
Date: Thursday, November 16, 2023 9:40:40 AM  
Attachments: [image.png](#)

External Email

David Sharp  
Vice President, Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

----- Forwarded message -----  
From: **Dave Sharp** <[dave@tricityscares.org](mailto:dave@tricityscares.org)>  
Date: Wed, Nov 15, 2023 at 7:54 PM  
Subject: Horse Heaven Project-Fugitive Dust  
To: <[efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov)>

To the EFSEC Staff and Council, is it not coincidental that part of the topic today was fugitive dust? In the following screen shot, Kennewick is singled out on the Dept of Ecology website as the most problematic air quality site in the state. The PM 10 level highlighted is barely below the National Ambient Air Quality Standard of 150. The Applicants Final ASC, Table 3.2-1, shows the three-year average (2019-2021) at 240. Any uptick will make an already bad situation worse and may make the area subject to mandatory implementation plans to regain compliance.

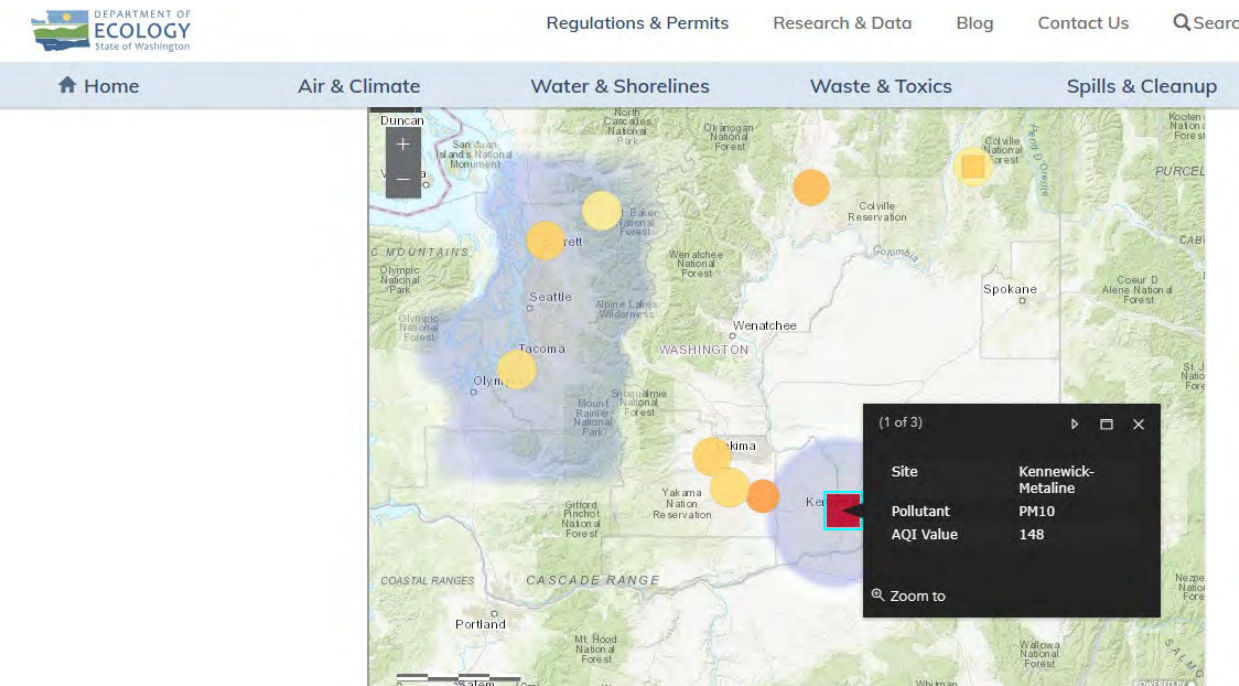
The Metaline site shown is downwind of the Horse Heaven Project, and the parched dryland area of the HHH is most likely the major contributor. To get an idea of how bad this problem is currently, please review the Adjudication Supplemental Testimony of HHH farmer Chris Wiley and his description of the talcum powder-like fine dust.

The Final ASC states that post construction, the annual PM10 emissions will be 19 pounds of dust per year. That incredibly low number with over 100 miles of unpaved roads is simply not believable.

Does the Applicant even take into account the downdraft and updraft wake turbulence of the wind turbine rotor span with blade tips within 40' from the ground? The Applicant's data request response to a paragliding question certainly shows that turbulence.

**Some recommendations:**

1. Staff should review the Applicants calculations and methodology to check the validity of the PM-10 emissions during the operations phase. EPA's AP42 Chapter 13.2.2 is the industry standard for unpaved roads. The method used by the Applicant is unclear.
2. Ensure that a detailed dust control plan is in place including speed limits of no more than 5 mph as per EPA Best practices.
3. The project should not move forward without a water supply proven and secured with quantity necessary to control dust.
4. Construction curtailment should be required when wind speeds are high enough to entrain dust into the air during earthmoving activities.
5. Follow Best management dust control practices of the US EPA. [Fugitive Dust Control Measures and Best Practices \(epa.gov\)](https://www.epa.gov/fugitive-dust-control-measures-and-best-practices)



David Sharp  
Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: HHH Wind Farm  
**Date:** Friday, November 17, 2023 3:37:49 PM

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**From:** Neal Farenbaugh <nfarenbaugh@hotmail.com>  
**Sent:** Friday, November 17, 2023 3:37 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH Wind Farm

External Email

I live nearby and absolutely object to this project! We don't want to have these wind turbines obstructing our views of the surrounding area. If you think it's necessary to have these wind turbines then move them south a couple of miles so we don't have to see them.



**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse Heaven FEIS Questions/Comments  
**Date:** Monday, November 27, 2023 4:01:14 PM

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**From:** kmbrun@gmail.com <kmbrun@gmail.com>

**Sent:** Monday, November 27, 2023 4:00 PM

**To:** Moon, Amy (EFSEC) <amy.moon@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC (EFSEC) <efsec@efsec.wa.gov>; efsec@doe.wa.gov; efsec@wdfw.wa.gov; efsec@dnr.wa.gov; Grantham, Andrea (EFSEC) <andrea.grantham@efsec.wa.gov>; Brewster, Stacey (UTC) <stacey.brewster@utc.wa.gov>; Drew, Kathleen (EFSEC) <kathleen.drew@efsec.wa.gov>; Levitt, Eli (ECY) <elev461@ECY.WA.GOV>; Livingston, Michael F (DFW) <Michael.Livingston@dfw.wa.gov>; Brewster, Stacey (UTC) <stacey.brewster@utc.wa.gov>; Osborne, Elizabeth (COM) <elizabeth.osborne@commerce.wa.gov>; Bumpus, Sonia (EFSEC) <sonia.bumpus@efsec.wa.gov>

**Subject:** Horse Heaven FEIS Questions/Comments

### External Email

All, after spending many hours reviewing the HH FEIS, I have many questions and comments. This project is the largest ever proposed for Washington State and has not received the amount of scrutiny commensurate with its size and scale. The process so far appears to be a rubber stamp rather than the thorough vetting that the Legislature intended. Additionally, the power produced will, in all likelihood, be distributed out of state and, therefore, have zero impact on Governor Inslee's carbon goals.

#### 1. Chapter 3 – Affected Environment

Where are the visual simulations for Representative Viewpoints 17-23?

2. **Section 3.13.2.1** states that the Lease Boundary primarily falls within the jurisdiction of Fire Districts #1 and #5. **That is not entirely true.** [Fire District #2](#) serves Benton City and the rural areas surrounding Benton City including the area involved in the June 18<sup>th</sup> wildfire. Refer to the Office of Fire Management [maps](#) for Benton County. Who didn't do their homework?

#### 3. Section 4.10, Visual Aspects, Light and Glare

According to the referenced **Appendix 3.10-2 Updated SWCA Visual Study – Final EIS, Section 4.2.4.1**, the Applicant committed to “**Clustering or grouping turbines** to break up long lines of turbines”. Neither the FASC nor the FEIS provide evidence that this has been done. Why not? If they committed to it, then they should do it.

#### Section 4.10.1.1, Visual Aspects Methodology

The analysis of the Project's visual impacts focuses on three elements: landscape character, viewing locations, and compliance with state and county visual management guidance. The analysis uses the methods developed by the Clean Energy States Alliance (CESA), which suggest three evaluation criteria as they relate to determining whether impacts rise to the magnitude of "undue" or "unreasonable" (CESA 2011):

- ı Does the project violate a clear written aesthetic standard intended to protect the scenic values or aesthetics of the area or a particular scenic resource?
- ı Does the project dominate views from highly sensitive viewing areas or within the region as a whole?
- ı Has the developer **failed to take reasonable measures to mitigate** the significant or avoidable impacts of the project?

From our perspective, the answer to every one of these questions is a resounding "YES". Even SWCA states in:

#### **Section 4.2.2.6 Combined Impacts of Components**

- The combined impacts of the different Project components would result in a landscape character dominated by large-scale energy infrastructure,...
- ...the scale of the Project and prominence of the proposed turbines would result in high, long-term impacts to the existing landscape.
- Views from these locations (KOPs 3, 6, 12, 13 and 15) would be dominated by energy infrastructure as a result of the additive effects from each Project component, resulting in high, long-term impacts on these views. Since these impacts occur on viewpoints beyond the neighboring receptors, these effects would be regional in extent. In summary, activities during operation of all components of the Project would result in high, long-term, **unavoidable**, regional impacts on visual resources.
- The Horse Heaven Hills and northern ridgeline would, however, become dominated by energy infrastructure, with potential long duration views from areas within the communities between Benton City and Kennewick. These impacts on views would be most intense where unobstructed views of a large number of turbines occur." Which, as those of us who live here, would impact the residences who are at or near the same elevation as HHH-West, not those who are in Badger Canyon within .5 miles of the Project.

Given the restricted grid injection capacity of 850 MW, why are not the most onerous turbines being removed or relocated? Doing so would significantly reduce the multiple impacts of those turbines currently located in the migration corridor, on cultural resource sites, in heavily used recreation areas, within the

aerial firefighting corridor, and within proximity to populated residential areas. The “Significant Unavoidable Adverse Impacts” only exist because the Applicant refuses to consider any meaningful compromises on turbine location or quantity. It’s all about the money!

#### 4. In the FEIS, Public Health and Safety

**PHS-126:** Fire Suppression Aircraft Access: In the event of a major wildfire occurring in an area where fire suppression aircraft may need access near the Project, whether related to the Project or resulting from another cause, the Applicant would shut down turbines temporarily.

**Rationale:** This mitigation measure would allow access for fire suppression aircraft carrying water and fire suppression chemicals, as needed.

Had Judge Torem not denied testimony from David Wardell, Chairman of the Associated Aerial Firefighters and air tanker operator for 34 years, and David Baird, an experienced aerial firefighter, you would know that the proposed mitigation is unacceptable for protecting the lives and property of those who live near the steeply sloped areas prone to wildfires. These professionals require a 4-mile buffer zone in which to descend, drop the retardant or water, and lift out again. FAA restricts any obstruction 499’ tall within 20,000 feet from a runway. Commercial and passenger planes take off and land at the same height and speed as an aerial firefighting plane. Why would you think that having a 499’ tower with no spinning blade would be different from a 499’ building? The same restriction should apply. It makes no difference to an aerial firefighter whether the blades are spinning or not. It’s the presence of the 499’ tall turbines and the fact that they are inside the 4-mile buffer zone that matter.

#### 5. In Section 4.12.2.5, the FEIS “describes measures to reduce or compensate for impacts related to recreation...”.

**R-2:** The Certificate Holder would provide a minimum of five informational boards approved by DNR and EFSEC at viewpoints within the Lease Boundary and/or in the surrounding communities associated with scenic areas of interest. The construction of the informational boards would be completed within five years of the beginning of construction.

**Rationale:** To mitigate the loss of uninterrupted views of scenic viewpoints and provide information to the public regarding the Project, the Project’s expected years of operation and the reclamation of the Project. Additionally, photographs of the viewshed prior to the construction of the Project should be displayed, in color, on the informational boards.

Why would you think that posting informational boards on the operational Project and what it used to look like is going to mitigate the loss of uninterrupted views of scenic viewpoints? Just ludicrous.

6. In the FEIS, **Table 4.12-5b: Summary of Potential Impacts on Recreation during Operations**, the following appears:

Turbines would limit recreational activities (i.e., paragliding) that occur on public land near area of operation” with a Low magnitude of impact. Have you asked the paragliders if they agree with this rating? Your mitigation is to push them off to other areas but they selected this area for their recreational activity because it meets their criteria. If other areas were capable of doing so, they would’ve picked another place from which to paraglide.

7. **Table 4.12-5c** wherein EFSEC has determined that significant unavoidable adverse impacts would occur during the operation stage.

Are these really unavoidable or have they been designated as such because neither the Applicant nor EFSEC is willing to scale this project back to a reasonable and much less impactful state? Why do the turbines have to sit on the Horse Heaven Hills ridgeline when, by sacrificing a small amount of generation, they could be pushed farther south and southwest? The Applicant and EFSEC are asking the Tri-Cities to make a huge sacrifice with very little being offered to balance that out.

8. **Section 4.13 Public Health and Safety.** Under **Applicant Commitments** list of applicable federal, state, and local health and safety standards in on **Page 4-503**, there is a noticeable absence of anything remotely related to aerial firefighting. Why is that? Did they not consider aerial firefighting to be an area of concern for public health and safety? We sure do.

On **Page 4-506**, the FEIS states: “Fire may result from turbine construction under Turbine Option 1 due to existing site conditions and the nature of construction activities. However, potential impacts related to fire could be meaningful, as **wildfire risk in the area is considered high** (Section 3.13.2.1). Impacts of a fire would be medium, temporary, feasible, and **limited in spatial extent**.” So the Applicant and EFSEC acknowledge the risk of wildfire but yet hamstring firefighting ability by not providing a 4-mile buffer for aerial firefighting. Why is that? And what is meant by “limited in spatial extent”? Are you expecting a wildfire to stay in one place?

9. **Table 5-2: Cumulative Impacts with Proposed Action**

- **Air Quality:** Fugitive Dust (PM<sub>2.5</sub> and PM<sub>10</sub>) – Conclusion: The Proposed Action does not meaningfully contribute to the overall cumulative impact on air quality within the spatial and temporal setting. Where is the data that supports this conclusion? Just stating something doesn’t make it so.



- **Vegetation** - Conclusion: The Proposed Action would meaningfully contribute to cumulative impacts on Priority Habitat and special status plant species.
- **Wildlife and Habitat** - Conclusion: The Proposed Action would meaningfully contribute to cumulative impacts on Priority Habitat and special status plant species.
- **Historic and Cultural Resources** - Conclusion: Due to changes in the nature and use of the landscape, the Proposed Action would meaningfully contribute to a cumulative impact on historic and cultural resources.
- **Visual Aspects, Light and Glare** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on visual aspects within the spatial setting.
- **Noise and Vibration** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on the local noise environment in the spatial setting.
- **Recreation** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on recreational resources due to changes in the use, quality of the experience, and the health and safety of recreationists.
- **Transportation** – Conclusion: Depending on the construction timing of RFDs, the Proposed Action has the potential to meaningfully contribute to impacts on transportation within the spatial and temporal setting.

Of the 14 Resources listed in this table, 7 meaningfully contribute to a cumulative impact and 1 has the potential to do so. Another, Public Health and Safety, was not thought to have a meaningful impact from fire, smoke and haze, or hazardous materials release. That designation should be reconsidered since wildfires, whether caused by lightning, human irresponsibility, or a turbine, solar, panel, or BESS malfunction, have significant potential for harm to the public. Given that more than half of these resources are significantly impacted, why is neither the Applicant nor EFSEC taking a step back and seriously considering what else should be done to change this? Relocating the turbines currently sited within the migration and historic/cultural resources corridors and recreational areas would also reduce the impacts on vegetation and people (i.e., visual, light, glare, noise and vibration).

#### 10. Section 5.2.2 – Identification of Meaningful Contributions to Cumulative Impacts and Determination of Significant from the Proposed Action

- **Vegetation** - The potential exists for a final design that lessens the residual impact and reduces the Proposed Action's contribution to cumulative impacts on priority habitats and native plant species.

- **Wildlife and Habitat** – The potential exists for a final design that lessens the residual impact and reduces the Proposed Action’s contribution to cumulative impacts on special status wildlife species and priority habitats.
- **Historic and Cultural Resources** - Cumulative impacts from ground disturbance, viewshed alteration, and restricted access to Traditional Cultural Properties are likely to alter the nature and use of the landscape. Cumulative impacts from past and present actions and RFDs may affect the location, setting, feeling, and/or association of historic and cultural resources, resulting in a potential loss of the integrity of these resources.
- **Visual Aspects** - Mitigation measures have been identified for these impacts that, when implemented, are expected to reduce the magnitude of effect. These effects include dominating the area’s landscape character through the introduction of large-scale energy infrastructure, as well as dominating views from viewing locations where the setting would appear heavily modified.
- **Noise** - Impacts from long-term noise sources could add to the present developments and RFDs in the local settings.
- **Recreation** - Cumulative loss of the use for recreation resources occurs when lands, frequently used for recreation activities, are taken out of use during the construction and operation of non-recreation projects or recreation activities are indirectly impacted by projects (e.g., visual, noise, etc.).
- **Transportation** - Cumulative impacts from past and present actions and RFDs have the potential to affect the level of service of traffic routes, cause loss of access to public resources, and decrease roadway safety if constructed or decommissioned contemporaneously.

Why were Light and Glare not addressed in Section 5.2.2?

#### 11. **Table 5-3: Cumulative Impact Analysis Summary**

Of the 17 topics listed in this table, all but one (vibration during construction and decommissioning) acknowledge that the proposed action meaningfully contributes to a cumulative impact. It appears to any intelligent person that you all should back to the drawing board. This project is not ready for prime-time. What rationale do you have for proceeding with this project when there are so many negative impacts – many of which could be resolved with compromise on the part of the Applicant and EFSEC? EFSEC should not be in the business of making sure that the Applicant gets what they want and disregarding everyone else.

12. According to **WAC 463-60-085(2) Fair treatment**. The application shall describe how the proposal's design and mitigation measures ensure that no group of people, including any racial, ethnic, or socioeconomic group, bear a disproportionate share of the environmental or socioeconomic impacts resulting from the construction and operation of the proposed facility.

Statistics provided by TCC during the adjudication shows that this project will impact 20 times more people than all the rest of the wind and solar projects in the entire state. That definitely shows that the residents of the Tri-Cities will bear a disproportionate share of the environmental impacts. How can that be justified?

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#); [Drew, Kathleen \(EFSEC\)](#); [Livingston, Michael F \(DFW\)](#); [YOUNG, LENNY \(DNR\)](#); [Levitt, Eli \(ECY\)](#); [Brewster, Stacey \(UTC\)](#); [elizabeth.osborne@com.wa.gov](mailto:elizabeth.osborne@com.wa.gov); [Bumpus, Sonia \(EFSEC\)](#)  
**Subject:** Fugitive Dust -Calculations and Modeling Incomplete  
**Date:** Wednesday, November 29, 2023 9:01:54 AM

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External Email

In an earlier comment it was pointed out that the PM10 emissions for O&M portion of the project were unbelievably low at 19 pounds for PM10. I stand by the comment.

**Ongoing O&M Activities-The FEIS calculation for PM omits fugitive dust sources. It appears incomplete, and incorrectly understates the actual emissions.**

The calculation only includes PM from vehicle exhausts, brake pads and brake liners. Fugitive dust emissions will be orders of magnitude higher than the method used. The two largest fugitive dust sources; windblown open areas, and vehicle wheel contact with unpaved road surfaces are not included. The FEIS does not require any active dust control mitigation post construction for unpaved roads, and the emissions would be considered uncontrolled. A comprehensive PM calculation that includes fugitive dust should be performed, as should dispersion modeling.

**AP-42 Section 13.2.2.2 Emissions Calculation and Correction Parameters** offers an appropriate calculation. Local AP factors, i. e., silt, moisture, and particle size fractions, should be used instead of general factors as AP42 recommends.

The project will add approximately 100 miles of unpaved roads, and potentially 36 miles of crane paths. The project increases unpaved roads in the entire county by nearly 50%, and ~400% within 10 miles of the metro areas and communities. The only reason for these roads to exist is to support operations and maintenance of the HHH project.

Since PM 10 is a criteria pollutant identified by the National Ambient Air Quality Standard (NAAQS) the FEIS needs to be comprehensive and correct. This uncontrolled source exists only to support the project and will add an ongoing increment to the area's already high PM levels.

**Dispersion Modeling was not Performed for Construction Activities**

Construction emissions dwarf the batch plant emissions by a factor of about 400 times. Dispersion modeling should be performed, and Fugitive emissions should be included as in the Tetra Tech model. The emissions calculations should be revised to utilize local data for AP factors as discussed above. The FEIS should demonstrate that the calculation shortcut taken to use only bulldozer and grader emissions is the worst case scenario. By not including backhoe and excavator activity, some emission activity from that equipment has also been excluded.

The Tetra Tec dispersion modeling in Appendix 4.3-2(batch plant activities and diesel



engines) showed the PM10 and PM2.5 uncomfortably bumping up to the NAAQS standard exceedance level. The batch plant emissions are intertwined with the construction activities and across the same area. The only difference is that construction activities will be 400 times greater. The construction activity should get the same modeling and integrated with the batch plant modeling, if possible..

This is a major health issue that will affect many people. Without a comprehensive calculation, the council will not be adequately informed.

We know the following: 1. Benton County has ongoing fugitive dust issues; enough to justify an agency specifically devoted to air quality. 2. Benton County has high background PM10 and PM2.5 (Reference Tetra-Tech modeling report), 3. The County has been in non-attainment status for PM-10 several times, and the downwind Burbank located PM2.5 monitor in Franklin County is on the NAAQS watch status. 4. We know from descriptive testimony how dry and dusty the Horse Heaven Hills are; Chris Wiley, supplemental testimony, 5. There are ~300,000 people within 10 miles of the project, and 6. Many people work outdoors, particularly those in the Agriculture industry or construction industries. That category of people would see even more increased exposure to dust levels.

The FEIS as now presented is deficient for this key topic, and the Council should have necessary data in front of them before proceeding.

The Tetra Tech model first appeared at the end of October, 2023, with no public or adjudication review possible.

Note that both the DEIS and FEIS opening page of Appendix 4.3-1 Emissions Calculation Table, Page 1 of 15, *Horse Heaven Wind Farm-Construction Emissions-Emission Summary by Phase and Year* **misrepresent emissions by not including fugitive dust** and implying that the *Summary* page, by virtue of the word summary, was inclusive of all emissions.

If I were a council member **my** assumption would be just what it says, *Emission Summary by Phase and Year*. It is not. Yes, the fugitive dust emissions are included toward the end of all the tables and other information, but even that table presents it as "*Fugitive Dust Emissions Summary Construction Scenario*". Why was it not included on the summary page? It is an emission, and it is covered under federal law. Would the council member have time to flush out that detail? A council member is in an executive role and dependent upon others to inform and educate. A council member does not have the time to dig into details.

David Sharp  
Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: FEIS Aerial Firefighting SME  
**Date:** Wednesday, November 29, 2023 4:31:59 PM

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**From:** kmbrun@gmail.com <kmbrun@gmail.com>  
**Sent:** Wednesday, November 29, 2023 4:28 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** FEIS Aerial Firefighting SME

External Email

During your 11/29/23 special meeting presentation, your firefighting subject matter expert was way off the mark on his description of the type of fires we have here. We have to use planes and helicopters every year to fight fires on the slope area near Benton City. They are contracted by the local fire districts. When called to task, he back pedaled big time. Actually asking the local fire districts about how they fight slope fires is the right call.

Karen Brun  
Kennewick, WA

**From:** [Paul Krupin](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#); [COM Communications](#); [cpl@dnt.gov](#); [stacy.brewster@utc.wa.gov](#); [UTC DL Commissioners](#); [Brewster, Stacey \(UTC\)](#); [Drew, Kathleen \(EFSEC\)](#); [Levitt, Eli \(ECY\)](#); [Livingston, Michael F. \(DFW\)](#); [Osborne, Elizabeth \(COM\)](#); [YOUNG, LENNY \(DNR\)](#)  
**Cc:** [Moon, Amy \(EFSEC\)](#); [Hafkemeyer, Ami \(EFSEC\)](#); [Grantham, Andrea \(EFSEC\)](#); [Owens, Joan \(EFSEC\)](#)  
**Subject:** HHH Special Presentation Nov 29 - aerial firefighting issue  
**Date:** Thursday, November 30, 2023 8:55:25 AM  
**Attachments:** [Linda Lehman Testimony PJK final 070523 1000 AM.pdf](#)  
[Mark Baird resume EXH-5913 S.pdf](#)  
[BAIRD EXH-5910 S Supplemental Testimony with maps.pdf](#)  
[WARDALL EXH-5906 S.pdf](#)  
[Wardall EXH-5908 S.pdf](#)  
[EXH 5907 Resume - Dave Wardall.pdf](#)

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External Email

At the very end of the Nov 29, 2023 special meeting, the topic of aerial firefighting was raised when discussing the public safety element of the presentation on the Horse Heaven Hills (HHH) FEIS Mitigation.

The question was asked what type of aircraft was used in the recent fires in the Horse Heaven Hills. Lenny Young, DNR asked how close to the turbines the aircraft used can fly. The Scout technical expert who responded at the request of EFSEC staff did not provide accurate information.

The following information is in the public comments and adjudication record submitted to EFSEC for the Horse Heaven Hills Project.

Testimony was submitted in the DEIS public comments and the HHH adjudication record addressing aerial firefighting requirements along with photos of the actual aircraft and fire maps and fire perimeters of the fire.

The aircraft used on June 13-14, 2023 in the Hanson Fire that swept the northern slope adjacent to the Horse Heaven Hills Project was a DC-10.

**Paul Krupin submitted fire history maps (EXH-5307-R) that were admitted into testimony** on August 8, 2023. The maps are on the EFSEC website at the following link:

[https://www.efsec.wa.gov/sites/default/files/210011/admitted/EXH-5307\\_R.pdf](https://www.efsec.wa.gov/sites/default/files/210011/admitted/EXH-5307_R.pdf) The maps include mileage rings from fire perimeters that can be

used to identify the turbines in zones too close to the areas where aerial firefighting aircraft are utilized.

**Lonnie Click, Fire Chief, gave regular and supplemental testimony (EXH-5631\_R and EXH-5912\_R)** that was admitted into testimony on August 22, 2023.

**Dennis Bates, Fire Chief gave supplemental testimony (EXH-5911\_S)** that was admitted into testimony on September 14, 2023.

**Linda Lehman, Mayor of Benton City** gave testimony to the adjudication that states in pertinent part:

“Comment #3 – The Application and the DEIS do not address the safety of fire suppression aircraft over ridgelines in the Horse Heaven Hills, northern areas of the project, or in Webber and Badger Canyon....[]... Aerial firefighting will be seriously hindered if there are 499-foot wind turbines in close proximity to the flight paths of the aircraft and helicopters.

**Mark Baird, aerial firefighter pilot gave supplemental testimony (EXH-5913\_S Testimony and EXH-5910\_S Resume)** that was stricken from the adjudication record by Judge Torem on September 22, 2023.

Page 5 line 5 to 13 of the testimony states in pertinent part:

“Between three and four nautical miles spacing would at least make aerial firefighting possible in order to save lives and property. FAA TERPS, and ICAO Pan Ops dictate maneuvering minimum radius of turn for large aircraft as well as minimum climb rates to avoid known obstacles in approach and departure corridors where obstructions are known and accurately mapped; 2.7 nautical miles is the

minimum  
radius of turn for category E aircraft with maneuvering speeds of 168  
plus knots. A  
climb of 200 feet per nautical mile is the minimum for most departure  
procedures. If  
the ridge top is 2000 feet msl and it has a 500-foot tower on top of it,  
climb capability  
would be exceeded quickly.”

**David Wardall, Chairman of the National Aerial Firefighters Association** gave  
**testimony (EXH-5096\_S and EXH-5908\_S)** that was stricken from the  
adjudication record by Judge Torem on September 22, 2023 states in pertinent  
part:

Page 2 lines 17 to 22, state in pertinent part,

“Wind turbines present severe impediments to aerial firefighting  
operations.  
The existence of the wind turbines effectively creates a “no fly” zone  
which  
greatly increases the risk that any wildfire that either began in or near  
the project site  
or spread into it from any surrounding area, could not be quickly  
contained, and would  
grow. I believe there is a threat to the adjacent communities from this  
proposal by  
eliminating the possibility of fixed wing air attacks that needs to be  
acknowledged.”

Page 3 lines 8 to 26 state in pertinent part:

“... the Horse Heaven Hills Wind Farm Project is huge – 25 miles and  
four to six miles wide – over 60,000 acres with up to 850 MW from up to  
244 turbines,  
each one 500 foot to 671 foot high in up to 6 rows along the ridgeline.



This is a huge major obstruction to responding firefighting efforts. The size of this proposed project will make a huge “No Fly” zone for civil aircraft, medivac helicopters and of course firefighting aircraft.”

“The extraordinary length of the project creates a 25-mile barrier to fixed wing tanker aircraft. The wind turbines produce a lot of air rotating vortices type turbulence that will interfere with safe aerial firefighting operations.

Depending on the winds and the terrain, in order to make effective air drops, the minimum obstruction setback distance should be three to four miles along any flight paths needed to conduct aerial operations, and two to three miles perpendicular to the flight paths to reduce the risks posed by the turbulence downwind of the wind turbines.

Also, brush and grass are “flash” fuels easily ignited up to two miles ahead of the fire front from blown embers during wind events at 15 mph or greater.”

Page 4 lines 1 to 6 state:

“This is a leapfrog-type fast-moving fire which fills in between the fire front and the new ember hot spots. The fire essentially explodes. Little time to evacuate.

This project would require lots of pre-fire planning and vegetation removal and maintenance along roadway escape routes and wide fire breaks around

the entire  
project and down-wind structures.”

All this is available information in original and redlined strikeout versions at the EFSEC website.

The fire history can be validated on the DNR website in the Washington DNR Large Fires Dataset:

<https://geo.wa.gov/datasets/6f31b076628d4f8ca5a964cbefd2cccc/explore>

Hope this helps. Appreciatively,

Paul Krupin, BA MS JD

509-531-8390 cell 509-582-5174 landline [Paul@Presari.com](mailto:Paul@Presari.com)

Appreciatively,

Paul J. Krupin, BA, MS, JD

Board Member on behalf of TRI-CITIES C.A.R.E.S

Visit: <http://www.TriCitiesCARES.org>

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TCC  
Supplemental Testimony  
Mark Baird  
EXH-5910-S

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.

SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS MARK BAIRD

Q: Please state your name and address.

A: Mark Baird, P.O. Box 842, 4716 Mill Creek Rd, Fort Jones CA 96032.

Q: Please briefly state your work experience and qualifications.

A: I have over 23,000 hours of flight experience, 17,500 in the DC-10.

I hold the following airman certificates: ATP multi engine land with type ratings in B-744, DC-10, MD11. I hold an Airframe and Power plant mechanic certificate, and an advanced ground instructor rating. I have 15 years experience as an instructor pilot in the DC-10, and 7 years experience as a pilot engaged in aerial firefighting using the DC-10 fire tanker.

Q: Did you review information about the Horse Heaven Hills project location and terrain?

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

MARK BAIRD - 1

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1 A: Yes, in preparing for my testimony, TCC member and witness Paul Krupin utilized  
2 CalTopo to assist in familiarizing me with the fire history and topography of the area.

3 These materials included the following maps and photographs:

4 Page 6 is the Fire map created by the South East Washington Interagency  
5 Team for the Hansen Road – Rupert Road Fire that occurred on June 16, 2023. The  
6 map shows the location and the extent of the fire perimeter. The area is located south  
7 of Interstate 82 south of Benton City, WA. The Hansen Road fire is approximately 12  
8 miles in length east to west and one to two miles wide north to south.

9 Page 7 is an aerial photo taken out the window of one of the DC-10's dropping  
10 fire retardant on the Hansen Road – Rupert Road fire, on June 16, 2023, showing the  
11 extent of the fire and the fire perimeter.

12 Page 8 is a CalTopo digital Geographic Information System map  
13 (www.Caltopo.com) showing the fire history data layer on the lands to the north of the  
14 Horse Heaven Hills project area. The fire history in this area covers events from the  
15 year 2002 to present roughly 20 years). The black dots show the proposed Horse  
16 Heaven Hill project wind turbine locations. The orange and red zones are the  
17 individual fire events with their name and the date they occurred. The fire perimeters  
18 in red show the extent to which the fire burned. This map depicts an area south of  
19 Interstate 82 south of Benton City and Kennewick in Washington State.

20 Page 9 is a CalTopo digital Geographic Information System map  
21 (www.Caltopo.com) showing the slope angle shading data layer using 40-foot contour  
22 lines to visually enhance the steep slope terrain in and north of the Horse Heaven Hills  
23 project area.

24 Page 10 is a CalTopo digital Geographic Information System map  
25 (www.Caltopo.com) showing the road map data layer to visually enhance the  
26

1 identification of known vehicular access roads in the area and terrain in and north of  
2 the Horse Heaven Hills project area.

3       Pages 11 and 12 are CalTopo digital Geographic Information System maps  
4 (www.Caltopo.com) showing the USGS Topographic Map data layer showing the  
5 detailed contour lines to aid in the interpretation of rugged and steep terrain in the  
6 area of the fire and in and north of the Horse Heaven Hills project area. Page 11 is the  
7 western section and page 12 is the eastern section of the burned area north of the  
8 Horse Heaven Hills Project area.

9       Page 13 is a CalTopo digital Geographic Information System map  
10 (www.Caltopo.com) switched from a topographic map to an aerial photo layer (NAIP  
11 from the USDA Farm Service) showing the 40-foot contours on top of the ground  
12 surface. This map can be used to visually enhance the identification of known ground  
13 surface features including irrigation, wineries, residences, roads, and highways and  
14 much more. This figure covers the area in and north of the Horse Heaven Hills project  
15 area.

16       Page 14 is a CalTopo digital Geographic Information System map  
17 (www.Caltopo.com) showing the slope shading contours and the fire history data  
18 layers simultaneously. Four-mile radial circles were drawn around six selected fire  
19 perimeter locations, and a polygon was then drawn around the external perimeter of  
20 these circles. The polygon identifies a potential restricted airspace zone needed to  
21 ensure the safety of aerial firefighters.

22       Page 15 is a CalTopo digital Geographic Information System map  
23 (www.Caltopo.com) showing the slope shading contours and the fire history data  
24 layers simultaneously. Two-mile radial circles were drawn around six selected fire  
25 perimeter locations, and a polygon was then drawn around the external perimeter of  
26

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

MARK BAIRD - 3

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1 these circles. The polygon identifies a smaller potential restricted airspace zone  
2 needed to ensure the safety of aerial firefighters.

3  
4 Q: Please describe your observations and comments on the Horse Heaven Hills  
5 Wind Farm and how it relates to aerial firefighting operations.

6 A: The Horse Heaven Wind project as mapped and described in the information I  
7 received would, for all intents and purposes, be indefensible by air. The communities  
8 and structures adjacent to, or nearby, the project would also be indefensible using  
9 fixed wing aircraft. Aerial firefighting efforts would either be impossible or rendered  
10 totally ineffective due to the height and spacing of the turbines in addition to their  
11 placement on the higher ground, which negates the ability to prevent fire from running  
12 uphill or "backing behavior," which is typical in terrain described and illustrated in the  
13 project maps.

14 Aerial assets are also prohibited from dropping retardant on electrical  
15 infrastructure and any watercourses in the fire area, further reducing the capability of  
16 the aircraft to assist in building effective fire lines. Fire retardant weighs nine pounds  
17 per gallon. Dropping at between 150 and 160 knots at low altitude would cause  
18 catastrophic damage to any of the proposed infrastructure were it to be hit during  
19 routine fire fighting activity.

20  
21 Q: Please describe your opinion on how close the turbines can be located if  
22 airspace must be restricted to ensure that aerial firefighting operations can be  
23 conducted safely.

24 A: Turbine location, blade turbulence, tip vortex, quantities and spacing of turbines,  
25 and proximity to water courses, communities and other structures impact aerial  
26

firefighting capability and effectiveness of aerial tankers, particularly LATS (Large Air Tankers) and VLATS (Very Large Air Tankers). Blade turbulence and tip vortex also impact helicopter operations.

Between three and four nautical miles spacing would at least make aerial firefighting possible in order to save lives and property. FAA TERPS, and ICAO Pan Ops dictate maneuvering minimum radius of turn for large aircraft as well as minimum climb rates to avoid known obstacles in approach and departure corridors where obstructions are known and accurately mapped; 2.7 nautical miles is the minimum radius of turn for category E aircraft with maneuvering speeds of 168 plus knots. A climb of 200 feet per nautical mile is the minimum for most departure procedures. If the ridge top is 2000 feet msl and it has a 500-foot tower on top of it, climb capability would be exceeded quickly.

Based upon the above information it is my opinion that turbines would require spacing of three to four nautical miles to provide aircraft with the ability to safely and effectively fight fire.

Q: Are you providing photographs?

A: Yes, attached.

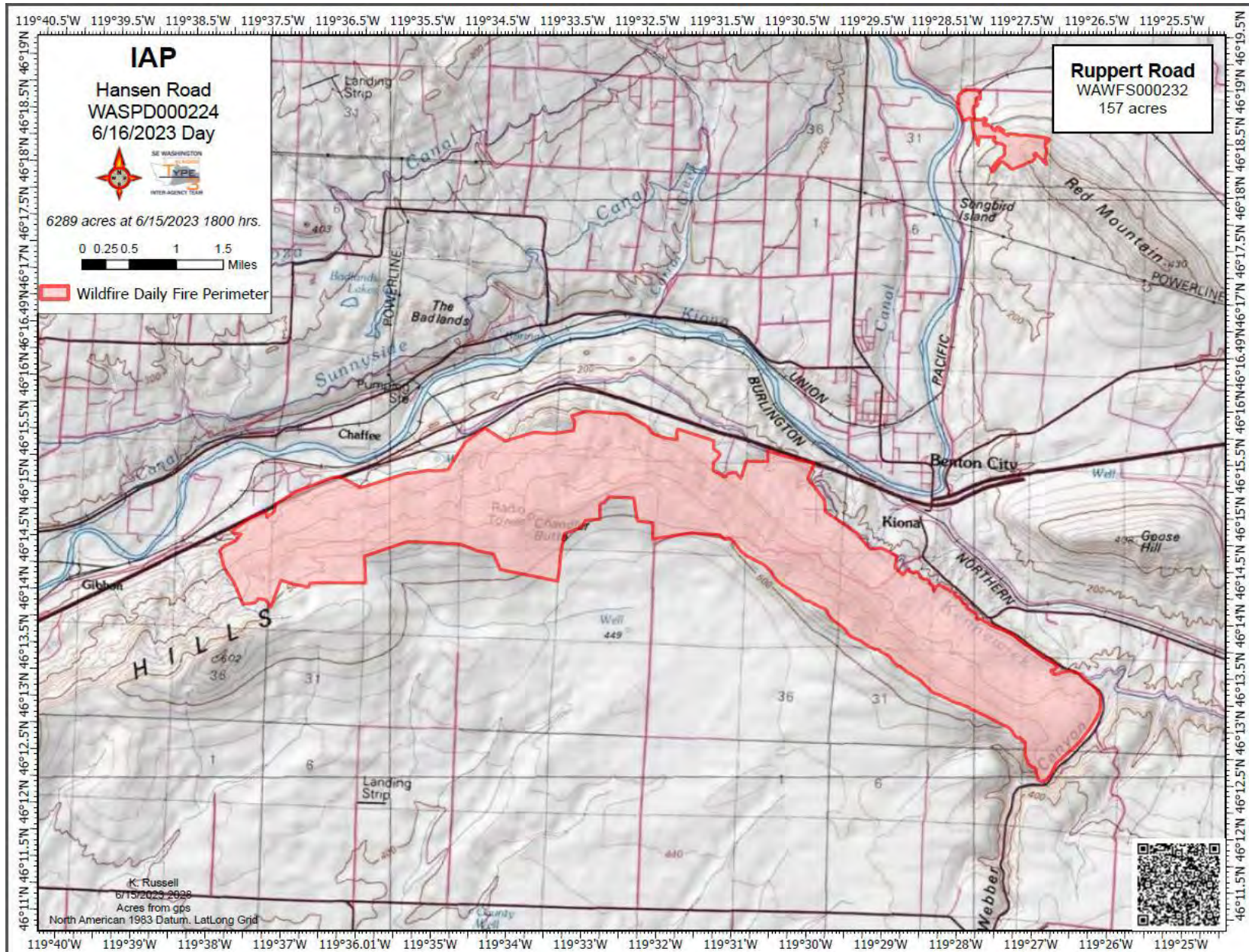
I declare under penalty of perjury under the laws of the State of Washington that my testimony and reports are true and correct to the best of my knowledge and belief.

Signed this 3<sup>rd</sup> day of September 2023 in Fort Jones California

Mark Baird /s/

SUPPLEMENTAL TESTIMONY OF TCC WITNESS

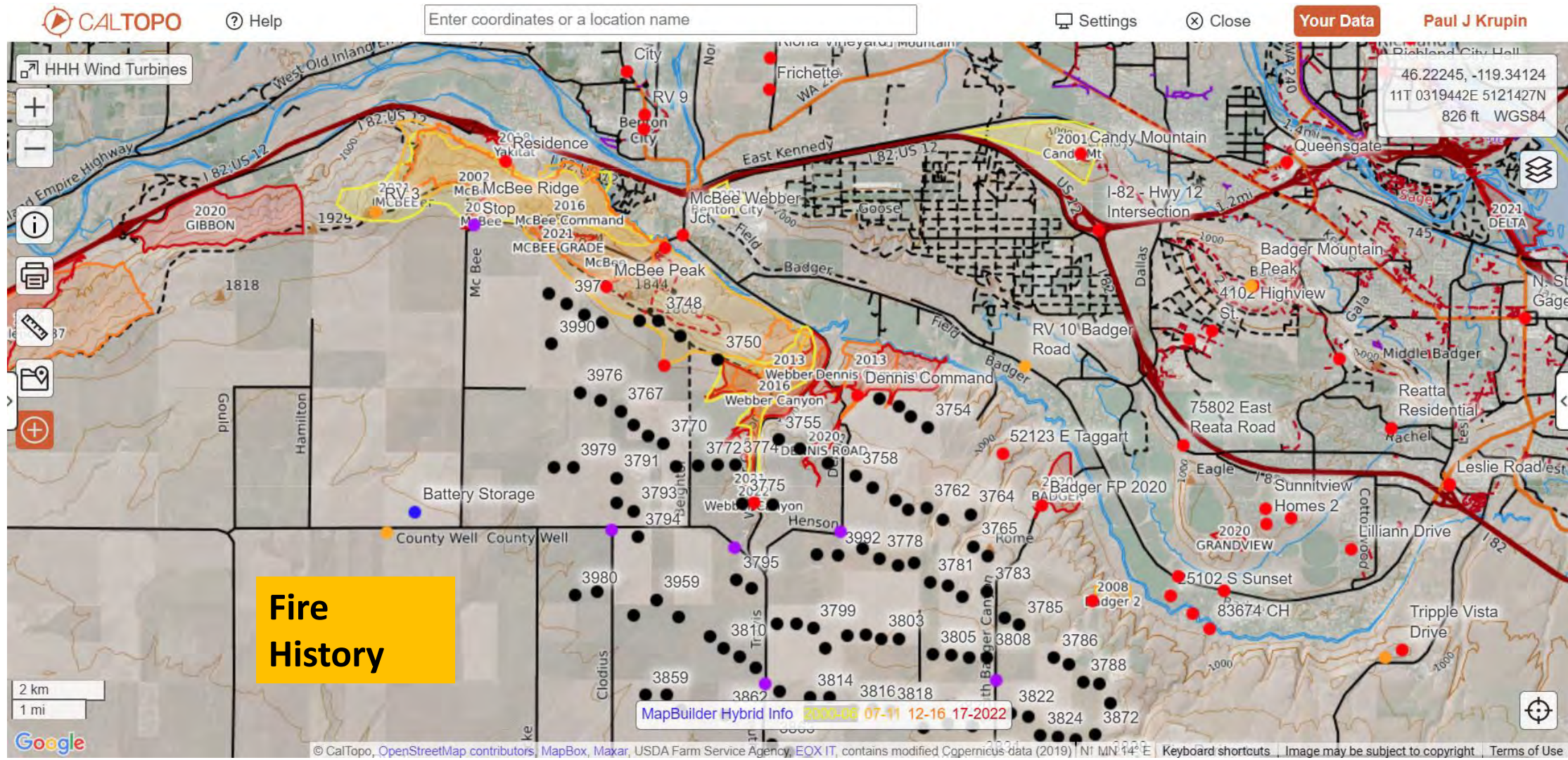
MARK BAIRD - 5







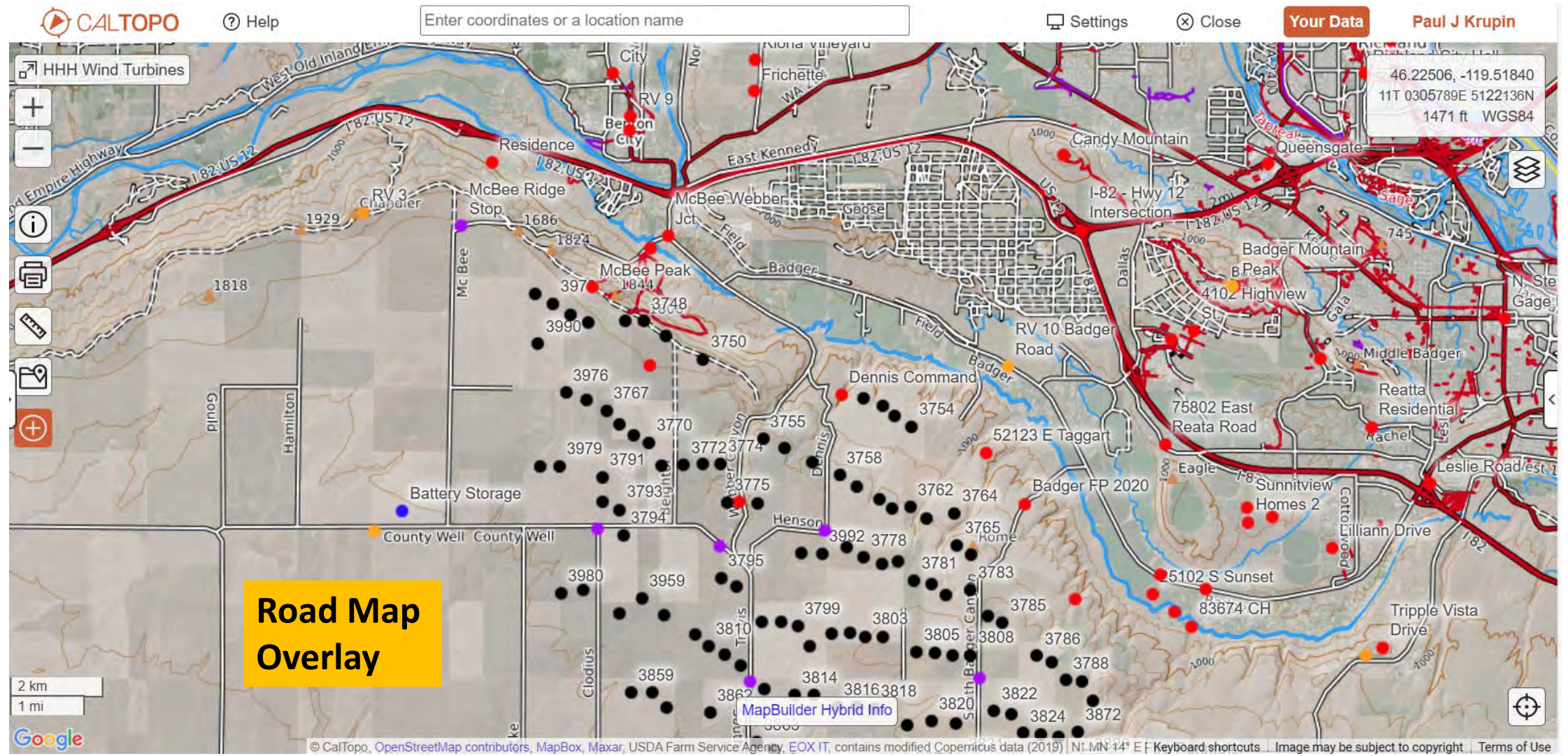




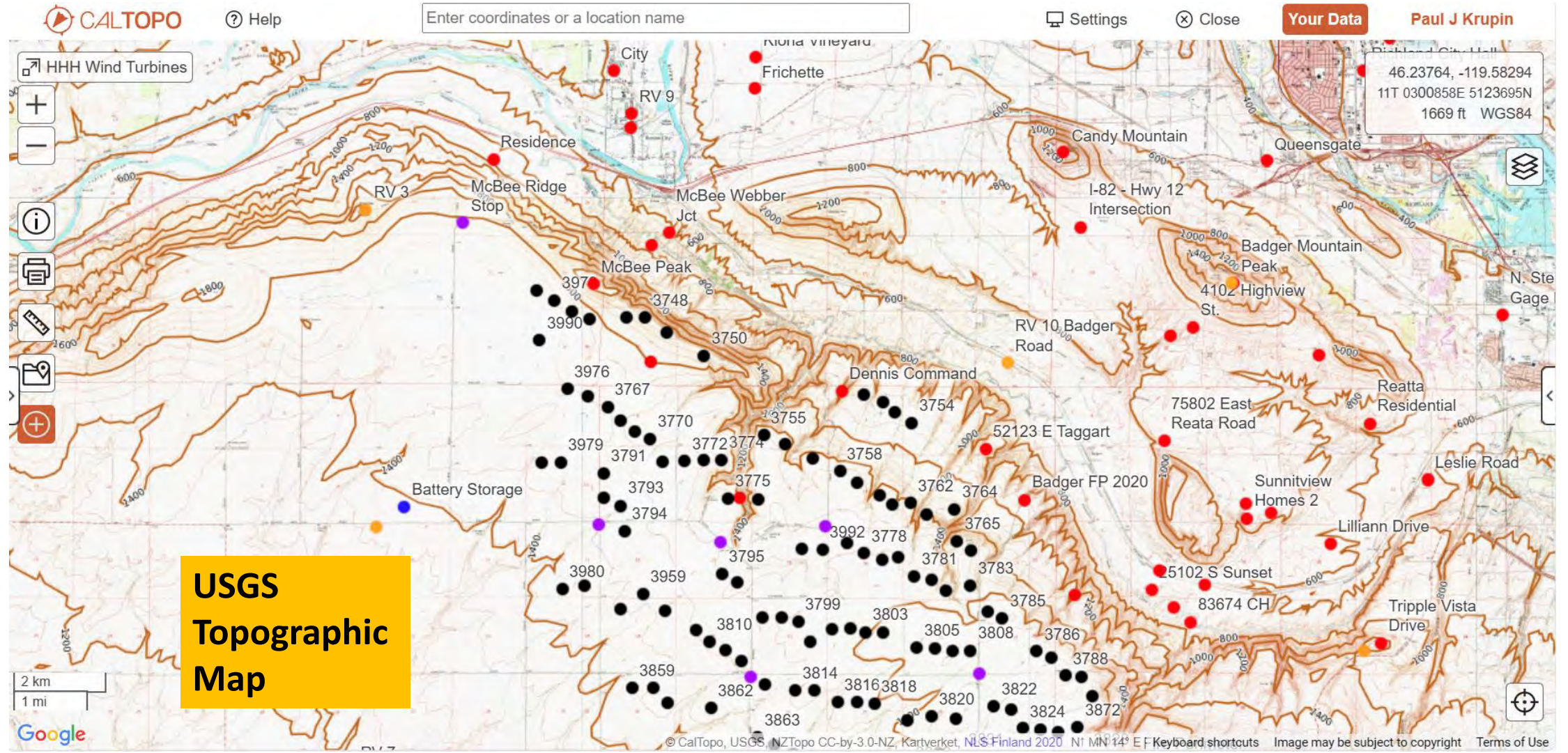




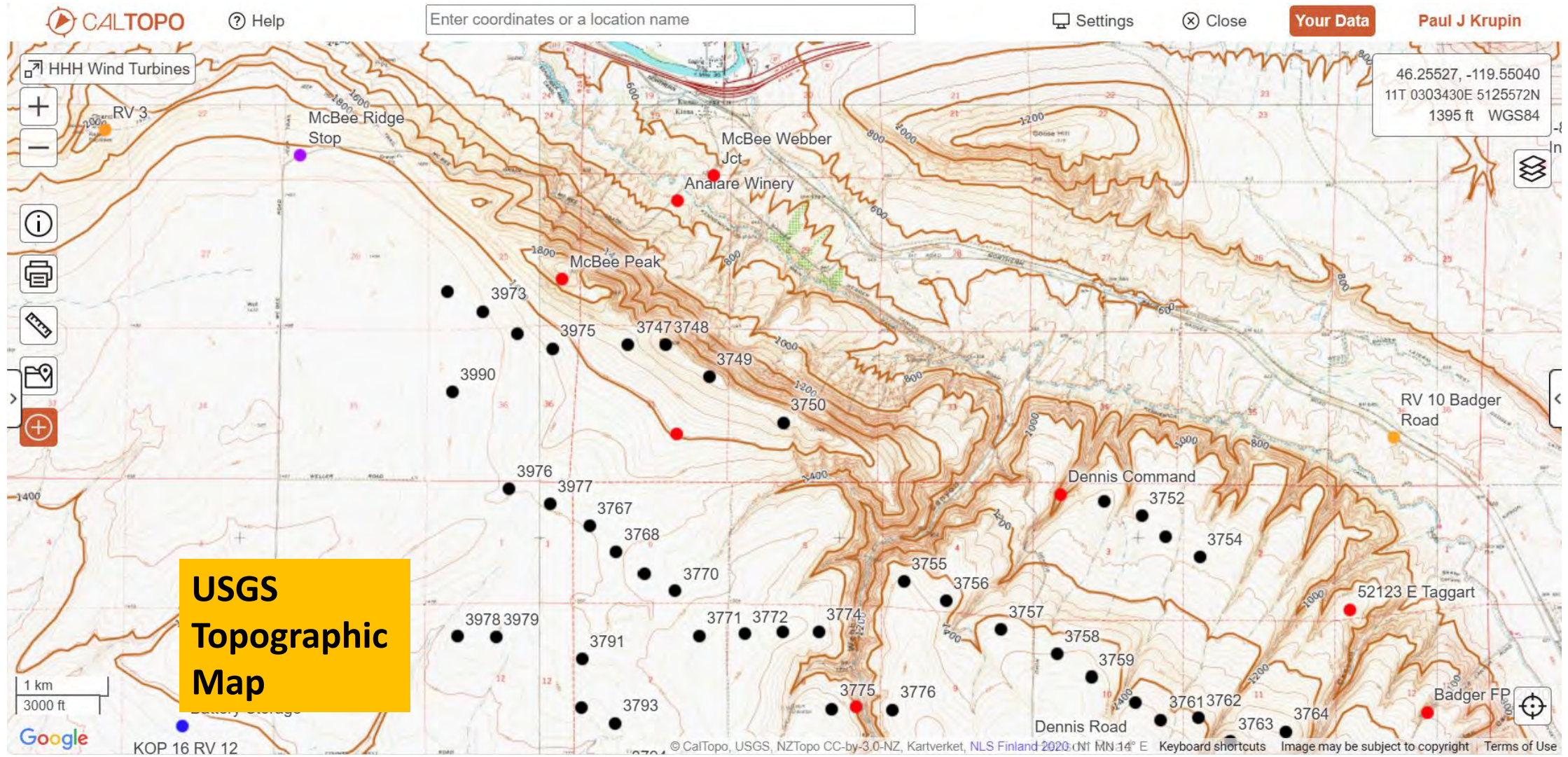




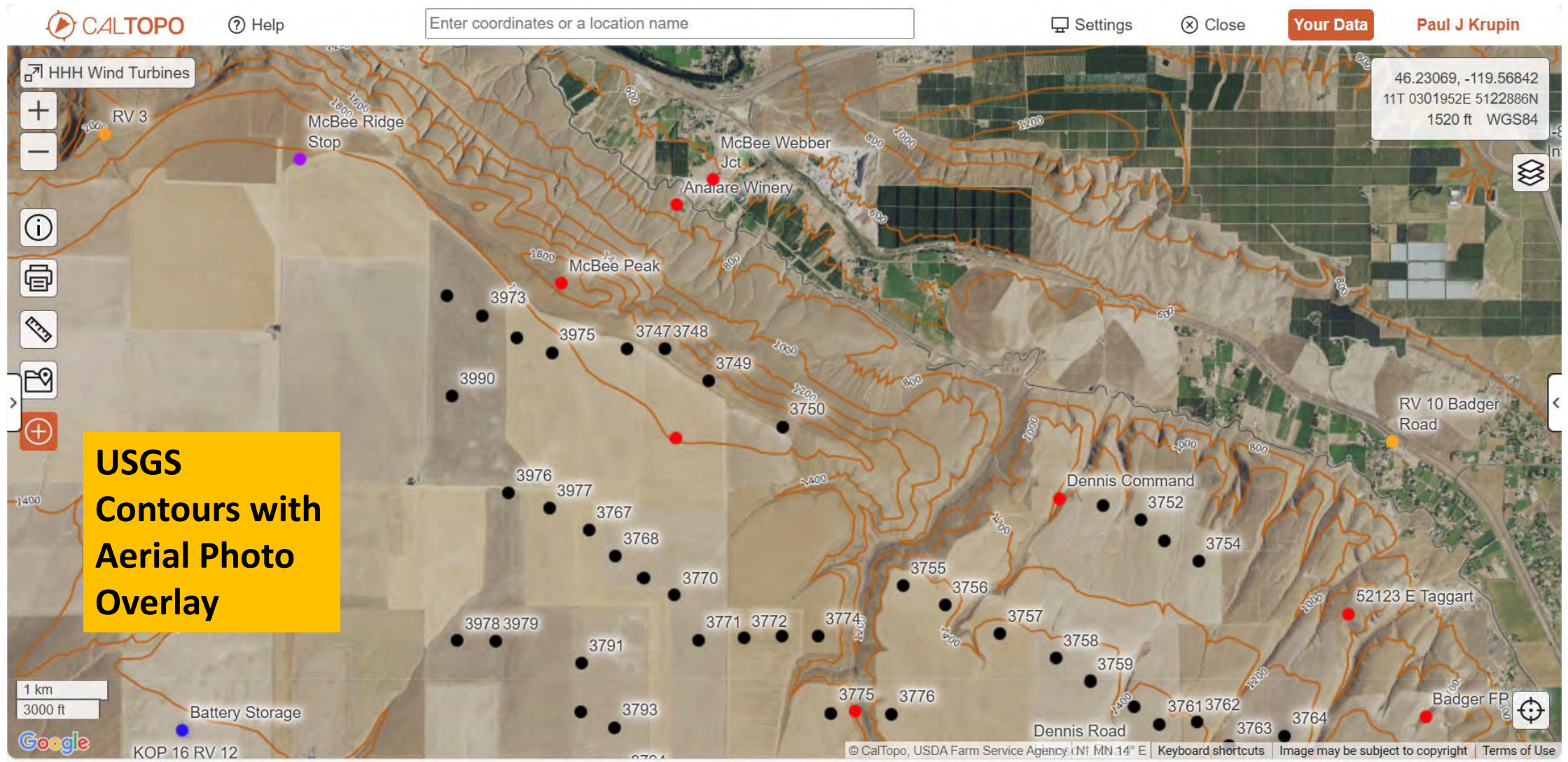




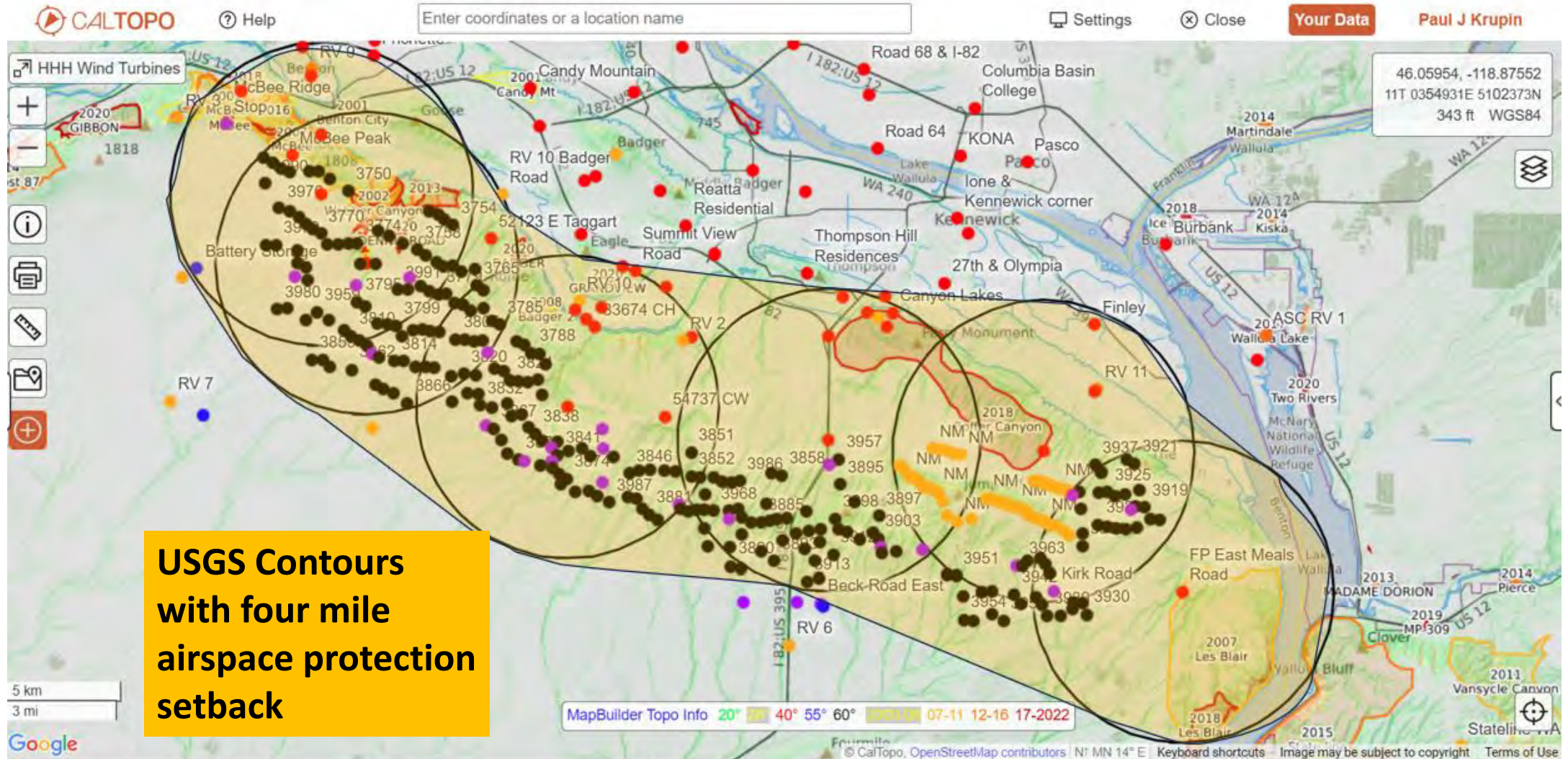






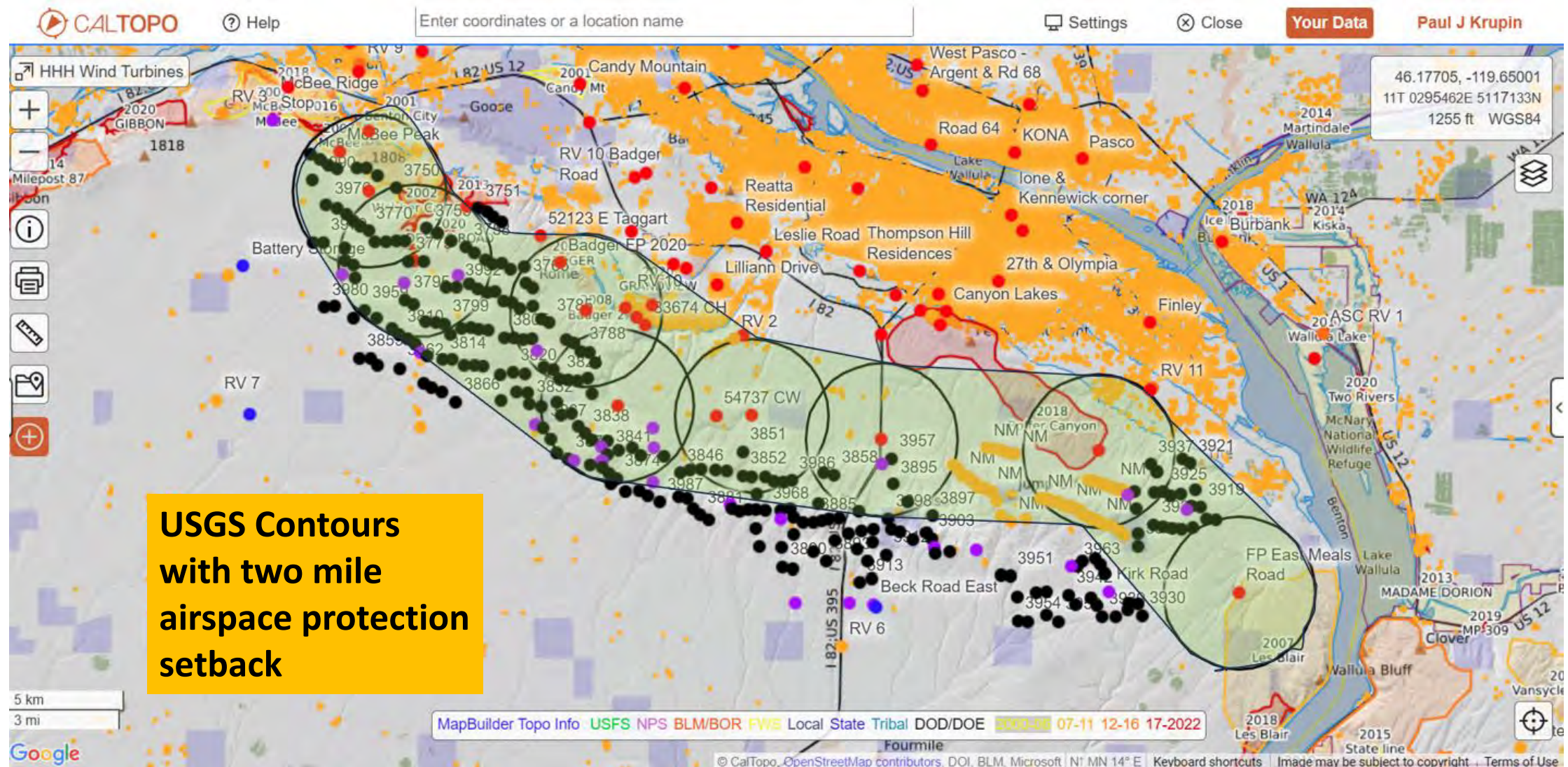






**USGS Contours  
with four mile  
airspace protection  
setback**





## **W. DAVID WARDALL**

17069 Lambert Road  
Ione, CA 95640  
209-274-9160

### **Retired, Consulting Aerospace Engineer**

2009-2023

Clients include: NASA, DynCorp International, USFS, States of California and New York, UC Davis, Comerica Bank, Overseas Aircraft Support, US Technical, Cessna, City of LA, TTE International, Impact International, Global Supertanker, various FBO's

### **Chief, Aircraft Maintenance and Engineering**

1996- 2008

#### **California Department of Forestry and Fire Protection (CAL FIRE)**

Plan, organize and direct the aircraft Maintenance and Engineering Program for CAL FIRE. Responsible 24/7 for 55 fire fighting aircraft. Hold FAA Director of Maintenance position for fleet of aircraft.

- Directly administer \$20 million budget for aircraft maintenance and engineering
- Supervise management staff of four aircraft maintenance managers
- Supervise depot level and field assigned maintenance work force of 80 technicians
- Manage FAA Repair Station Certificate with several class ratings
- As an FAA DER, design and approve major modifications and major repairs
- Hold and maintain three FAA type certificates for fire fighting aircraft
- In-house manufacture a wide variety of aerospace parts and components
- Act as pilot-in-command for VIP flights for Governor and cabinet staff
- Perform maintenance test flights on transport class airtankers

### **Deputy Chief, Research and Development**

1995-1996

#### **California Department of Forestry and Fire Protection (CDF)**

Plan, organize and direct the Research and Development program. Plan and submit Federal Grant funding request to obtain, at no cost to State, a high altitude, high performance turbine powered aircraft. Retrofit and install an infrared real time fire mapping system.

- Develop real time live down-link fire mapping program with several map overlays
- Manage all field and depot level maintenance through specialized service contracts
- Design and approve as an FAA DER structures engineer, infrared sensor installation
- Design and approve as an FAA DER, integrated cabin equipment and consoles
- Oversee and manage all aircraft engineering major modifications and repairs
- Fly aircraft as fire mapping airplane and for VIP transport of Governor and staff
- Fly transport class airtankers for maintenance evaluation test flights

### **Deputy Chief, Airplane Program**

1990-1995

#### **California Department of Forestry and Fire Protection (CDF)**

Plan, organize and direct CDF Airplane Program. Responsible 24/7 for 23 airtankers, 15 observation aircraft and 5 support aircraft deployed to 13 airtanker bases and a major depot level maintenance facility.

- Directly administer \$6 million budget for airplane program
- Supervise management staff of two aircraft maintenance managers
- Supervise two chief pilots, airtankers and observation airplanes
- Supervise 50 line airtanker and observation aircraft pilots

- Supervise depot level and field assigned maintenance work force of 65 technicians
- As an FAA DER, design and approve major modifications and major repairs
- Act as pilot-in-command for VIP flights for Governor and cabinet staff
- Perform maintenance and test flights on Transport class airtankers

**Manager, Aircraft Maintenance and Engineering** 1977-1990  
**California Department of Forestry and Fire Protection (CDF)**

Supervise the contracted maintenance of 51 Department aircraft. Responsible 24/7 for the maintenance of 19 airtankers, 16 observation aircraft, 12 helicopters and four support airplanes.

- Directly administer \$10 million budget for aircraft maintenance and engineering
- Supervise management staff of three aircraft maintenance managers
- Supervise depot level and field assigned maintenance work force of 60 technicians
- As an FAA DER, design and approve major modifications and major repairs
- Hold and maintain two FAA type certificates for fire fighting aircraft
- Act as pilot-in-command for VIP flights for Governor and cabinet staff
- Perform maintenance and test flights on Transport class airtankers

**Aviation Consultant and Airport Inspector** 1974-1977  
**California Department of Aeronautics**

Manage the contracted maintenance of Department aircraft. Inspect airports for permit issuance and airport safety considerations.

- Inspect Department aircraft for airworthiness
- Prepare maintenance bid specifications; bid, award and monitor contracts
- Inspect airports and heliports for license and construction standards
- Evaluate and award State and FAA grants for airport construction
- Fly Department aircraft as pilot-in-command

**Airframe Systems Engineer** 1973-1974  
**Lockheed Aircraft Corporation**

Employed in the Field Service Department. Assist and advise airline customer personnel in the inspection, maintenance and operation of the L-1011 jet transport.

- Develop customer relations to improve maintenance and operation of the L-1011
- Maintain a close liaison with factory engineering on operations of the plane
- Investigate and report on accidents, incidents and service problems
- Inspect unserviceable removed parts to determine cause of failure and warranty

**Associate Production Engineer** 1971-1972  
**Lockheed Aircraft Corporation**

Design modifications and repairs to the L-1011 jet transport resulting from manufacturing damage and blue print errors.

- Respond to production line floor and design repairs to shop errors and damage
- Investigate drawing errors and design revisions to drawings
- Inspect aircraft in final assembly and flight line for conformity to engineering drawings



## **CERTIFICATES/ RATINGS/ LICENSES**

FAA Airline Transport Pilot, several type ratings  
FAA Flight Engineer, Turbo Jet, L-1011  
FAA Flight Instructor, Airplane Single & Multi-Engine Land  
FAA Flight Instructor, Instruments  
FAA Designated Engineering Representative, (DER), Structures, Parts 23, 25, 27, 29 & 33  
FAA Designated Engineering Representative, (DER), Powerplants, Part 33  
FAA Airframe and Powerplant Technician with Inspection Authorization (IA)  
Holder of Three FAA Aircraft Type Certificates  
Holder of FAA Part 145 Repair Station Certificate

## **PROFESSIONAL EDUCATION AND TRAINING**

Academic:               BS Aeronautical Maintenance, San Jose State University, 1971  
                              MS Aviation Safety, USC, several classes completed

Professional:           Aviation Safety Officer, USC, Los Angeles, CA, 1979  
                              Gas Turbine Accident Investigation, USC, Los Angeles, CA, 1995  
                              Senior Level Aviation Management, US Forest Service, 1985  
                              Techniques of Supervision "A" & "B", State of California, 1989  
                              Type Ratings and recurrent training, Flight Safety International  
                              Factory schools: Bendix, Bell Helicopter, Allison, Lockheed, Garrett, etc.  
                              FAA DER annual re-current technical training for last 35+ years

## **ACHIEVEMENTS**

Dean's Scholar, School of Engineering, Dept. of Aeronautics, San Jose State University, 1971  
Dean's List Every Semester, San Jose State University 1970 and 1971  
National Aerospace Education Award  
Scholarship Achievement Award  
Airport Owner / Operator / Manager

## **Clients**

DynCorp International  
NASA, Houston Space Center  
US Navy  
US Air Force  
Minden Air Corp  
Comerica Bank  
State of New York, State Police Aviation Unit  
CAL FIRE Aviation Unit  
US Technical, Aerospace Engineering  
AAR Corporation  
Seacor Holdings  
Loree Air  
Global Supertanker

Page 4

W. David Wardall

Aero Vonics

GARD Specialists Co., Inc.

Global Supertanker

Cessna Aircraft Co.

## Testimony from Linda Lehman

Benton City has reviewed the Application for Site Certification and is submitting comments to the EFSEC based on its review of these documents. The points we make on the Application for Site Certification closely follow the comments and issues we identified in our comments on the DEIS for the SEPA process. The ASC and the DEIS utilize the same set of reports and documentation.

Benton City supports the use of green energy alternatives over carbon-based sources. The City has been proactive in developing solar energy to off-set costs of operating its Wastewater Treatment Plant Laboratory and Sewer Lift Stations. The solar array was installed by the City in 2017.

Benton City is not to be considered a NIMBY complainant; rather, the City is submitting comments that point to areas that affect safety, economic and socioeconomic factors that have not been considered in the Application.

Benton City has a right to expect a fair and unbiased Adjudication and SEPA process; however, the City finds that there are equity issues. The City is identifying places in the ASC where elements have not been identified analyzed, do not provide adequate information, and do not offer reasonable alternatives.

We believe the proposed action options in the ASC are IN conflict with city development goals, are inconsistent, and will hinder or impede city planned development.

**Comment #1 - The Application does not consider economic effects to Benton City regarding the planned I-82 development adjacent to the Horse Heaven Hills Wind Turbine Project.**

*We strongly disagree with the Applicant's conclusion statement that the project will not materially endanger the health, safety, and welfare of the surrounding community to an extent greater than that associated with any other permitted uses in the applicable zoning district.*

## Project Description

For the past 15 years, Benton City has been engaged in efforts to annex and/or sell City-owned property on the south side of I-82. This area is comprised of 212 acres and is needed by Benton City to provide additional light industrial acreage, a hotel, and additional mixed residential housing. The initial development entailed creation of a force main and additional lift stations to bring water and sewer across the Yakima River to support the development. This action was contracted in 2008 at a cost of \$787,542.39. This work allowed sewage that had been previously truncated on the south side of the Yakima River during flooding, to be piped directly to the Wastewater Treatment Plant on the north side of the river.

The current phase of the I-82 Development Project has been underway since approximately 2018. It is a joint project with the Department of Natural Resources (DNR) and the City of Benton City on State Trust Lands that were annexed into Benton City. Recently, the port of kennewick has

offered funding to the city to complete its zoning map and to complete training for staff in implementing new design standards. A Subarea Plan has been completed by AHBL, Inc., is based on feasibility studies by Eco Northwest, and incorporates City designs by world-famous designers, Michael Mahaffey and Laurence Quamar. The Subarea Plan has been reviewed by the DNR and will be incorporated into the Benton City Comprehensive Plan in early 2023.

The Subarea Plan contains preliminary designs to accommodate additional residences, allow for more light industrial space (Benton City's current Industrial Park is full), and provide a high-end lodging/dining experience with outstanding views that cover 180 degrees from west to east. These views currently include the Horse Heaven Hills near Anelare Winery to the West, Red Mountain to the north, and eastward down the valley toward Goose Ridge. Currently, design standards are under development preceding DNR's release of the property for sale and/or ground lease. The Subarea Plan is intended to attract more visitors to the Red Mountain AVA, provide upscale lodging, and provide services to local wineries, such as bottle or cork distribution centers, and manufacturing of pumps and valves as well as other wineries or tasting rooms.

To encourage light industrial tenants to the development, the City chose to run sewer and water along Jacobs and Field Roads where the light industrial development is planned. This work is slated to start in 2023 at an additional cost of approximately \$360,000.00.

This development has moved forward at a significant cost to the City, and the City obviously wants to protect its investments and need for expansion. The City does not want to compromise its standards to do so. Horse Heaven Hills views will have several very prominent Wind Turbines that would impede the natural beauty that is planned to be emphasized in the development. Several large Wind Turbines are located less than a mile distance, as shown in the Application, and would no doubt impede views and devalue the City's investments if surrounded by hundreds of Wind Turbines.

**Conclusion:** Wind Turbines within a mile of the planned development will materially endanger the health, safety, and welfare of the surrounding community to an extent greater than that associated with any other permitted uses within the applicable zoning district. Further, it is inconsistent with Benton County Conditional Use Permit Requirements.

**Recommendations:**

1. Complete financial studies that would consider the development and postulated losses to the taxpayers of Benton City due to current Application for Site Certification.
2. Remove the four (4) (or more, based on Options), Wind Turbines from the northern edge of Horse Heaven Hills from the ASC;
3. Consider expanding the solar array to balance power losses from removal of wind turbines.

**Comment #2 - The Union Pacific Railroad Bridge and Trail Hub Project loss of recreation and financial impacts of this project have not been addressed in the Application.**



**Requirements:**

The ASC references Benton County Conditional Use Permit Requirements and Project Analysis

*Item (b) Will not materially endanger the health, safety, and welfare of the surrounding community to an extent greater than that associated with any other permitted uses in the applicable zoning district.*

Under the Washington State Environmental Policy Act, the Adjudication will feed fact and legal conclusions into the SEPA process and facilitate a recommendation to the Governor that weighs the likelihood of occurrence with the severity of an impact (Washington Administrative Code [WAC] 197-11-794) and considers several factors when determining the significance of identified potential impacts (WAC 197-11-330 and WAC 197-11-794).

These impacts were qualitatively assessed based on the method of analysis described in Appendix S Economic Impact Assessment in the Updated ASC as well as in the DEIS Section 4.12.1., Appendix 4-16-1 Technical Review of Horse Heaven Hills Wind Farm, LLCs Economic Impact Analysis.

The City disagrees with the Applicants conclusion statements that the project would not hinder or discourage the development of permitted uses on neighboring properties in the applicable zoning district as a result of the location, size or height of the buildings, structures, walls, required fences or screening vegetation to a greater extent than other permitted uses in the applicable zoning district.

We find flaws and have issues with the identification, discussion and analysis of Project Impacts on Land Use in the Application and the DEIS Section 4.8.

The adjudication process for the Project would allow interested parties, including neighbors, to participate in the project's review and conditions may be placed upon the Project's construction and operations that address issues involving development of permitted uses on neighboring properties.

**Project Description**

Since 2017, the City has sought to purchase the historic Union Pacific Railroad Bridge, which has been abandoned for nearly a century. The purpose of the Project is to link Benton City to more wide-ranging trail systems, such as Friends of Badger Mountain Trail system, Tapteal Greenway Overland Trail systems, Benton County proposed trail through Badger Canyon and other envisioned trail systems located along ridgelines of Horse Heaven Hills.

Negotiations have been ongoing for several years with the Union Pacific Railroad and cost estimates have been prepared for inspections for environmental effects, and structural integrity of the bridge. The City has proactively purchased eleven (11) acres of park land leading up to and adjacent to the bridge. In doing so, cultural surveys were performed, and several land swaps and boundary line adjustments were made. Recently, there has been increased interest in acquiring the bridge from several bike clubs and hiking enthusiasts, as well as from Benton County. This increased interest has led Congressman Newhouse to select the project for inclusion in the recent Omnibus bill, which has now passed. The City should receive Federal appropriation of \$2 million dollars toward the purchase and development of the Railroad Bridge.

The abandoned Union Pacific Railroad Bridge that crosses the Yakima River on the eastern side of Benton City was closed in the 1950s and has been abandoned ever since. Utilizing the bridge as a Rails-to-Trails connector was envisioned approximately seven (7) years ago, as its full potential became apparent. Vision for the project includes a City Park at the west end of the bridge with connection to the Red Mountain Winery Trail to the east. The Red Mountain Winery Trail will be the most westerly leg of a Trail System of approximately 15 miles that comprise the current and planned Badger Mountain Trail System. The Trail System provides access to local cities such as Richland and Kennewick.

Quality of Life and Safety – Quality of Life in the greater Benton City area and within the County is enhanced by providing access to miles of walking and cycling trails, and the bridge provides connectivity to existing trails to the east. Western Benton County cycling route(s) access will also be enhanced via a safer route for cyclists traveling from the east. Currently, cyclists must ride on a two-lane State Road with no bike lanes, enter a round-about and then cross a vehicular bridge with very little distance (approximately two feet) between the traffic lane and guard rail, which is dangerous.

Tourism, Education, and Economic Development – The Railroad Bridge connection will allow Benton City to enjoy increased tourism which will support businesses, especially restaurants and retail establishments. It will also encourage family outings along the bike path for discovery of Benton City's unique offerings. These offerings include scientific kiosks such as the Uranus Orbital Marker (part of the Hanford Reach Solar System SILAS Education Project) and wildlife information about natural species that inhabit this area of the Yakima River, in cooperation with the Washington Department of Fish & Wildlife. Historical information is being developed with regard to history of agriculture located at the first irrigation paddlewheel.

Providing a healthy walking and cycling experience also supports Red Mountain wineries by providing various family experience that encourage visitors to stay longer and explore other activities along the river such as swimming, fishing, kayaking and paddle-boarding at the start of the Tapteal Greenway River Trail.

Project goals are to create a significant community impact in terms of quality-of-life, improved tourism, education, safety, and economic development. These goals are measurable by increased tourism via records from Benton City Chamber of Commerce Tourism Office and records regarding social media's number of contacts. Other measurable items are property tax increases, housing starts, numbers of created jobs, and overall increase in Business Licenses.

## **Conclusion**

**The Benton City Railroad Bridge and Regional Trail Development, in terms of economics, or loss of recreation, has not been considered or studied in either the Application or the DEIS.**

Loss of trails through Badger Mountain, McBee Grade and other areas of Horse Heaven Hills will diminish the City's return on investment from fewer hikers due to positioning of Wind Turbines, loss of natural beauty, loss of habitat and bird mortality.

## **Recommended Stipulations:**

1. Complete an economic study that analyzes the loss of hiking trails up Badger Canyon and along other ridgelines that can affect the number of hikers and quality of their experiences.

These impacts will effect both economic and recreational investments that have been made by the City of Benton City.

2. Remove the four (4) (or more, based on Options) Wind Turbines from the northern edge of Horse Heaven Hills; or
3. Expand the solar array to accommodate the loss in output.

**Comment #3 – The Application and the DEIS do not address the safety of fire suppression aircraft over ridgelines in the Horse Heaven Hills, northern areas of the project, or in Webber and Badger Canyon.**

**Aerial firefighting will be seriously hindered if there are 499-foot wind turbines in close proximity to the flight paths of the aircraft and helicopters.**

**Regulation:**

11.17.070(q)(7). All Wind Turbine(s) must comply with the Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace, as currently in effect or as hereafter amended, including but not limited to, providing such notices to the FAA as required thereunder and compliance with all requirements or prohibitions imposed by the FAA on the applicant's proposal.

**Description**

Horse Heaven Hills are subject to numerous wildfires that may or may not influence the Wind Turbines. However, neglected in the Application and the DEIS is the huge safety risk that these Wind Turbines pose on fire suppression aircraft, especially near ridgelines. Fire District 2 often utilizes two types of aircraft during fire suppression work: fixed wing (Air Tankers) and helicopters. The Fire District coordinates with Washington State Fish and Wildlife and with the US Bureau of Land Management (BLM) through specific operating procedures. Representatives of either agency would call the Fire District to inform what type of aircraft is needed. It is not an uncommon occurrence in Horse Heaven Hills.

Attached is a photograph of a recent fire which almost engulfed Anelare Winery on McBee Grade, the location of one of the proposed Wind Turbines. As you can see from the photograph, there is considerable smoke produced by this fire. Firefighters focused on the ground and in drenching hot areas. Wind Turbines may be obscured to low altitude planes. Maneuverability is critical and should not be hampered by trying to maneuver their way through the numerous proposed Wind Turbines at this very ridgeline and also through the steep slopes of Weber Canyon.

An additional concern is aircraft being forced to fly over urbanized areas and major roadways, as this practice discouraged for safety reasons. If Wind Turbines are located on the ridgeline, aircraft will be forced to fly over more populated areas and along I-82 or Weber Canyon Road. Firefighters expressed concern that some things or items may fall into those areas or that the aircraft would be a major distraction to those driving on highways at higher speeds.

A commonly used aircraft is called a SEAT. A single engine airtanker, or SEAT, is the smallest airtanker. These aircraft can deliver up to 800 gallons of fire retardant or water to wildland firefighters on the ground and are ideal for wildfires in lighter fuels, like grasses and light brush.



A "Type 2" aircraft is the fire suppression helicopter. It is commonly known as a "UH-1H Huey". This type of aircraft is designed to carry up to nine firefighters plus the crew and the bucket that is utilized for water drops carries between 300 and 600 gallons of water.



Further, red flashing lights may be confused with emergency vehicles or hot spots and could prove to be a distraction to pilots.



Working Wind Turbines could cause embers to spread down gradient areas, such as Benton City or residences in Badger Canyon.

The Updated Application Appendix P Emergency Response Plan and Table 3.8-1A in the DEIS states do not adequately address fire prevention. Both call for the preparation of a Fire Prevention Plan.

At the present time, Applicant's documentation does not appear to satisfy or be consistent with Benton County LU G 6 Policy 14. LU Goal 6.

*Policy 14: Support and encourage the use of and application of Firewise principles and other fire risk reduction measures consistent with the Benton County Natural Hazard Mitigation Plan and Community Wildfire Protection Plan to reduce fire risk for urban development, urban subdivisions, rural subdivisions and large rural developments susceptible to wildfires. Encourage the implementation of the Firewise principles, or similar best management measures.*

At the present time, Applicant's documentation does not appear to satisfy or be consistent with Benton County LU Goal 2

*Policy 1: Limit developments in areas with higher risk for natural disaster or geologic hazard unless it can be demonstrated by the Project proponent that the development is sited, designed, and engineered for long term structural integrity and that life and property on- and off-site are not subject to increased risk as a result of the development.*



*This is a photo of the DC-10 flying over my house in Benton City on June 13, 2023.*



*This is a photo looking at the across Interstate 84 towards the ridgeline of the Horse Heaven Hills (on the project) from my house in Benton City on June 13, 2023.*



*This is a photo looking at the across Interstate 84 towards the ridgeline of the Horse Heaven Hills (on the project) from my house in Benton City on June 13, 2023.*

**Conclusions:**

The Application fails to recognize and adequately address the significant and increased risk of harm faced by Benton City residents from the proposed HHH Wind Turbine Project, especially from fire hazards.

The turbines will affect the ability of firefighting aircraft to perform effectively, and further endanger the pilots of these aircraft. The Draft Hazard Mitigation Plan is silent with respect to air defenses when it comes to fire fighting. Rather it concentrates on protecting or evacuating their facilities and clearing some roads between the turbines for firefighting vehicles.

**Recommended Stipulations:**

1. Discuss maneuverability requirements with the State and/or Federal fire pilots regarding their procedures and common practices for suppression activities.
2. At a minimum, move Wind Turbines back from ridgelines and existing housing so that pilots do not face additional risks of working around Wind Turbines.

**References:**

Excerpt and Photos from Tri-City Herald, July 15, 2016, follow.

# Fire Threatens Washington Winery, Vineyard Near Red Mountain

July 15, 2016 by [Great Northwest Wine](#) 1 Comment



Skyfall Vineyard, owned by Precept Wine in Seattle, sits just below the aftermath of a 4,000-acre wildfire. The blaze threatened the vineyard before it was brought under control. (Photo by Niranjana Perdue/Great Northwest Wine)

KIONA, Wash. – A 4,000-acre wildfire near Red Mountain threatened one winery and smoked a handful of Chardonnay vines before being brought under control early this morning.

Fifteen agencies battled the blaze, according to the Tri-City Herald. It came within about 100 yards of [Anelare Winery](#) in the unincorporated community of Kiona, which sits across the freeway from famed Red Mountain. The fire started about 5 p.m. Thursday near Yakitat Road in the Yakima Valley and was brought under control about 4:30 a.m. today.

Kim Gravenslund, general manager of Anelare, said she did not know the cause of the fire, which came within a few hundred feet of the winery.

“It was moving fast,” she told Great Northwest Wine. “It was a pretty intense fire.”

Gravenslund drove to the winery about 11 p.m., and the entire southern side of Interstate 82 was lit up by flames. Anelare opened its Kiona tasting room two summers ago.



Across the road from Anelare and north of an irrigation canal is **Skyfall Vineyard**, owned by **Precept Wine** in Seattle. David Minick, director of vineyards for Precept, said the 125-acre vineyard was threatened by the flames and a handful of Chardonnay vines were singed by the blaze, which came within fewer than 100 feet of the southern edge of the vineyard.

A Benton County firefighter was walking along the canal Friday afternoon, looking for hot spots amid torched sagebrush.

Gravenslund said the fire didn't seem to be hurting business. In fact, she said the tasting room traffic has been brisk.

## Winemakers Watch Blaze From Across River



Firefighters drop retardant on flames that threaten Anelare Winery and Skyfall Vineyard along the northern flanks of the Horse Heaven Hills in the lower Yakima Valley near Benton City, Wash., on Thursday, July 14. (Photo courtesy of Larry Oates)  
Larry Oates of **Sleeping Dog Wines** in Benton City monitored the fire from his winery across the Yakima River.

“It was charging to the west, and somewhere around nightfall the dynamics changed,” Oates said. “The wind came from the west and pushed the fire to the east like a racehorse.”

Oates said he was impressed by the courage of firefighters who were touching off the backfires above Anelare.

“They were running almost vertically up the hill with their cans of kerosene, with the fire line maybe 30 feet away from them,” Oates said.

Oates said he couldn’t help but remember the evacuation of the entire town of Benton City in the face of the massive fire of June 2000 that scorched 163,000 acres on the Hanford Reach National Monument and burned 25 homes in Benton County.

“This never crossed the freeway, and it looked closer than what it was,” Oates said. “And we had about 1,000 acres of nicely irrigated alfalfa between us and this fire.”

**Comment #4 – The Viewpoint Analysis in the Updated Application Aesthetics Section 4.2.3 and Appendix Q Visual Simulations and the DEIS Section 4 and Table 4.10-1 do not accurately identify, describe, evaluate and score Benton City, and the only KOP viewpoint selected is on the main street in town and partially or completely obscures some of the Wind Turbines. The Applicant fails to identify even on Key Observation point at higher elevation areas with higher residential populations and also fails to identify any Key Observation points along Sunset Road, in the heart of the Red Mountain AVA.**

**Regulations:** Washington State Environmental Policy Act. EFSEC weighs the likelihood of occurrence with the severity of an impact (Washington Administrative Code [WAC] 197-11-794) and considers several factors when determining the significance of identified potential impacts (WAC 197-11-330 and WAC 197-11-794. The impact rating is summarized in Table 4.10-1.

**Description:**

The viewpoint selected for Benton City was not representative of the City nor the bulk of residences located within the City. The location selected was in the middle of the main highway SR 225 with two of the closest proposed primary turbines obscured from view. The location should have been selected with an unobstructed view. Many residences in the City sit at higher elevations and would be viewing many more Wind Turbines than the one shown.

The Application and the DEIS Table 4.10-9 provides an overview of impacts from each KOP/viewpoint and includes the viewer position, extent of the horizontal view occupied by the Project, level of contrast, and magnitude of impact.

Benton City is given as Key Viewpoint 9 and indicates that the Level of Visual Contrast is moderate, and the Magnitude of Impact is medium.

The City does not agree with the impact description which are as follows:

*The proposed Wind Turbines would be intermittently screened by development within Benton City, with partial screening of the Project features occurring where the Horse Heaven Hills would partially obstruct views to the south. Where visible, there would be a limited number of turbines in view, as depicted in the visual simulation.(a) The presence and motion of the turbines would attract attention but would appear codominant with other commercial and residential developments. Other areas within the city may have more expansive, unobstructed views of the proposed Wind Turbines, similar to KOPs 2 and 10. The Project would expand the extent of view occupied by moving Wind Turbines and would be prominent from this inferior viewing angle, resulting in medium, long term impacts on views.*

**Conclusion:**

**The City concludes that the Ratings in the Application and the DEIS are not appropriate or accurate due to the obscured viewpoint utilized, and descriptive assumptions that are not representative of Benton City.**

**Recommendations:**

1. Repeat the visual analysis with several more additional representative viewpoints and including residential areas in Benton City and along Sunset Road as well as the I-82 Project location (which is located within one (1) mile of the Wind Turbines).
2. Remove the Wind Turbines on the north side of the Horse Heaven Hills and substitute their power with the solar array.

**Comment #5 – Proximity to population - The highest number of Wind Turbines in the lowest economic groups, which raise Environmental Equity Questions**

**Requirements:**

Title VI of the Civil Rights Act prohibits recipients of Federal Financial Assistance from discrimination based on race, color, or national origin in any program or activity.

Executive Order 12898, directs Federal agencies to identify and address, as appropriate, disproportionately high adverse human health and environmental effects of their programs, policies, and activities on minority populations and low-income populations.

**Description:**

**Demographics:**

- Benton County has over 80,000 people within six (6) miles of the proposed Wind Turbines, more than all other Wind Farms in the state combined.
- Wind Turbines are closer to Benton City limits than any other community in the region.
- I-82 South Development at the Benton City exit will have Wind Turbine views of at least four (4) Wind Turbines, including flashing lights within a mile.
- Of all the municipalities and communities along the project length, Benton City is the smallest.
- Of all the municipalities and communities along the project length, Benton City has the lowest per capita income.
- Of all the municipalities and communities along the project length, Benton City has the largest percentage of Hispanic residents. Upward of 35% of the students in KIBE School District are not fluent in the English language.
- Of all the municipalities and communities along the project length, Benton City is most underprivileged and under-served.

**Conclusion:**

**Benton City deserves to be treated fairly and should have the ability to negotiate an outcome that will enhance the City's investments and support a higher quality of life without endangering its citizens. The City of Benton City consists of a very small staff that do not have the ability to evaluate many of the impacts created by this project. The City does not want to have its goals and plan marginalized because of the effort needed to adequately review of the project.**

**Recommended Stipulations:**

1. Remove and relocate Wind Turbines along the ridgeline back further south and implement options with more solar array.



2. Carefully identify, describe and evaluate economic damages that will be caused by this project to the City of Benton City.

**Comment #6 – Clarification of number of bird fatalities over the lifecycle of the project.**

**Description:**

**The City is concerned that a clarification is required to enable the general population to understand the total number of fatalities that will occur to birds and bats because of this project.**

The Application Appendices pertaining to Wildlife and the DEIS Appendix 4.6-1 2022 Wind Turbine Wildlife Collision Risk Assessment state “The literature review suggests that the effect of turbine height and rotor swept area on bird collision mortalities remains uncertain (AWWI 2021). Some studies did not find a relationship between bird mortality rates and turbine height (Everaert 2014; Barclay et al. 2007; Krijgsveld et al. 2009). Other studies report higher bird mortality rates at taller turbines on a per turbine basis (Loss et al. 2013; De Lucas et al. 2008, Thelander et al. 2003 but lower mortality rates per unit of energy generation (Thaxter et al, 2017), although this is not unequivocal (Huso et al. 2021)”.

“Collision with turbines is considered one of the greatest threats to bats in North America (O’Shea et al.2016). Three species of migratory tree-roosting bats (i.e., eastern red bat, silver-haired bat and hoary bat) make up most bat mortalities resulting from turbine collision, raising concerns about population-level impacts as the number of wind farms increases (Barclay et al 2007; Zimmerling and Francis 2016; Hein and Schirmacher 2016).

However, there is limited and conflicting information about the effect of turbine height on bat collision mortalities. Some studies report that bat mortality rates increase with turbine size (Baerwald and Barclay 2009), including on a per megawatt (MW) basis (Barclay et al. 2007), while others report no effect (Huso et al 2021), the opposite effect (Fielder et al 2007), or that mortality rates increase on either side of an optimum intermediate turbine size (Thaxter et al 2017).”

“Bird and bat collision risk associated with the two general turbine options was evaluated based on site-specific information collected during baseline studies conducted for the Project and presented in the Application for Site Certification (ASC) to the Washington Energy Facility Site Evaluation Council in 2021, in combination with a review of published scientific literature pertaining to bird and bat interactions with Wind Turbines.”

“The DEIS document addresses studies based on the exposure indices that represent relative collision risk but are not directly translatable to the number of bird mortalities due to factors such as species-specific collision avoidance.”

**This type of information (exposure index) is not helpful to public understanding of bird and bat mortality rates.**

To find meaningful numbers, the Application of Site Certification (ASC) was searched and a document entitled Bird and Bat Conservation Strategy, Horse Heaven Wind Farm, Benton County, Washington was found as Appendix M to the ASC. Chapter 6.0 Assessment of Risks to Birds and Bats, calculates risks from direct impacts such as collisions with turbines, power line interactions and indirect impacts.

In Section 6.1.1.1 Collisions for All Birds was compiled from publicly available data from 482 studies across 221 wind energy facilities in the US that reported 336 bird species as fatalities (WEST 2019). Of the studies between 2015 and 2018, fatality estimates at these facilities ranged from zero to nine birds/MW/year. The historic maximum as 12.1 birds/MW/year in California in 2014 (WEST 2019).

American Wildlife Institute (AWWI) also compiled publicly available data from 193 studies across 130 wind energy facilities in the US that reported 281 species of birds as fatalities during survey and an additional 13 species as incidental observation (AWWI 2019). Of the studies between 2002 and 2017, fatality estimates at the facilities ranged from approximately zero to 12 birds/MW/year with a median value of 1.8 birds/MW/year.

Among facilities in the USFWS Pacific Region, fatality estimates ranged from less than 0.4 to 8.4 birds/MW/year (median of 2.4 birds/MW/year) based on the 22 wind facilities (30 technical reports; WEST 2019). Of the more than 500 Avian species occurring in the Pacific Region, 114 have been recorded as fatalities.

While this still is not readily apparent as to just how many birds are being discussed, it can be calculated.

For example:

1 bird fatality per year per MW times the number of years in the life cycle for a 1150 MW design of the HHH Wind Farm would yield:

1 bird x 1150 MW x 35 years = 40,250 birds

1.8 birds x 1150 MW x 35 years = 72,450 birds

2.8 birds x 1150 MW x 35 years = 112,700 birds

9 birds x 1150 MW x 35 years = 362,250 birds

12 birds x 1150 MW x 35 years = 483,000 birds

Bats have not been studied as extensively in this respect. Appendix M states that AWWI (2018b) has compiled publicly available data from wind energy facilities in the US, and the median adjusted fatality estimate was 2.6 bats/MW/year with a range of 1 to 50 bats /MW/year. In Washington, fatality estimates from 13 facilities had a median adjusted fatality rate of 1.4 bats /MW/year at Nine Mile Canyon approximated the national median estimate and consisted entirely of hoary bats and silver-haired bats during the spring and fall (Erickson et al. 2003a, WEST 2019).

1 bat x 1150 MW x 35 years = 40,250 bats

2.6 bats x 1150 MW x 35 years = 104,650 bats

50 bats x 1150 x 35 years = 2,012,500 bats

A new study found that farmers around the world are turning to birds and bats for help reducing pesticide use, environmental impact, and increasing yields. By eating insects, bats save U.S. agriculture billions of dollars per year in pest control. Some studies have estimated that service to be worth over 3.7 billion dollars per year, and possibly as much as 53 billion dollars per year.

This value does not, however, consider the volume of insects eaten by bats in forest ecosystems and the degree to which that benefits industries like lumber. It also doesn't consider the critical importance of bats as plant and crop pollinators. So the actual monetary worth of bats is far greater than 3.7 billion dollars per year.

## **Conclusions:**

**The simplest way to keep birds and bats away from wind turbines is to not build wind turbines where lots of birds and bats are known to fly. It's not always that simple, though, since many of the open, treeless expanses that attract birds and bats are also prime locations for harvesting wind.**

Wind turbines may pose less danger to raptors if they're sited away from cliffs and hills where the birds of prey seek updrafts.

**Already-altered habitats like food farms make good turbine sites from a wildlife perspective, according to the American Bird Conservancy, but the main thing to avoid is any habitat deemed an "[Important Bird Area](#)."**

These include places where birds congregate for feeding and breeding, like wetlands and ridge edges, as well as migratory bottlenecks and flight paths used by endangered or declining species.

## **Recommendations.**

- Eliminate turbines in any habitat areas deemed to be an important bird or bat area.
- Lower the MW capacity with fewer Wind Turbines and find ways to mitigate these losses.
- Site Turbines away from ridgelines and other areas where birds and bats are known to fly.
- Consider ultrasonic deterrent devices, aka boom boxes which are inaudible to humans, but can be used to repel bats from wind turbines.
- Most wind turbines are painted white or gray, an attempt to make them as visually inconspicuous as possible. But white paint can indirectly lure birds and bats, researchers found in a 2010 study, by attracting the winged insects they hunt. White and gray turbines were second only to yellow ones in attracting insects, according to the study, including flies, moths, butterflies and beetles.

Purple turned out to be the least attractive color to these insects, raising the possibility that painting wind turbines purple might alleviate some bird and bat fatalities. The researchers stopped short of advocating that, however, noting that other factors — such as heat given off by turbines — could also be encouraging wildlife to fly near the spinning blades.

Even if purple paint isn't practical, another line of research is investigating the use of ultraviolet light to deter birds and bats from turbines. While UV light is invisible to humans, many other species can see it — including bats, which aren't as blind as you might have heard. Still, given the limitations of long-distance vision at night, some researchers think migrating bats don't always see the spinning blades, and mistake the poles of wind turbines for trees. Rather than trying to deter bats at short range, a team of researchers

with the U.S. Geological Survey and the University of Hawaii are studying how dim UV lights on turbines can warn bats about the danger from afar.

- Beyond new paint, lights, and sound, tweaking the design of wind turbines could greatly reduce the risk they pose to birds and bats. Engineers have come up with a wide array of wildlife-friendly designs in recent years, ranging from slight modifications to overhauls that barely resemble a traditional wind turbine. A concept known as Windstalk, for example, doesn't even use spinning blades. Developed by New York design firm Atelier DNA, it's meant to harness wind energy with giant, cattail-like poles that mimic "the wind sways a field of wheat, or reeds in a marsh." In Texas, some coastal wind farms have used radar for years to protect migrating birds. And there are products available like the MERLIN Avian Radar System, made by Florida-based DeTect, which scans the skies for 3 to 8 miles around wind-energy sites, both for "pre-construction mortality risk projections and for operational mitigation." Bats also typically prefer to fly in weak winds, so leaving turbines dormant at lower wind speeds — known as raising the "cut-in speed" at which they begin generating power — can save lives, too. In one study, published in the journal *BioOne Complete*, researchers found that leaving turbines idle until winds reach 5.5 meters per second curbed bat deaths by 60%.

**Comment #7 - Reserve the right to provide additional comments due to the very short review period. These documents are so large that they require more time to be fully examined by the public.**

**Recommendations:**

- 1. Hold a public hearing at the end of the adjudication.**
- 2. Hold a public comment period on the Final EIS.**



Resume of:

Mark A Baird P.O. Box 842 Fort Jones CA 96032

Employment History 1970-1972 United States Army Helicopter Door Gunner, Republic of Vietnam  
1700 hours, low level helicopter Aircraft maintenance

1972-1975 Airframe and Power Plant Mechanic World Airways Maintaining DC-10, DC-8, B747-200,  
B707, L188

1975- 1989 Charter Pilot for Executive Air Charter; California Air Charter On Demand Charter  
Service 6000 hours+/- 400 series Cessna, Piper Cheyenne, Navajo, Aztec,

April 1989- April 2014, World Airways. (Company ceased operations).

747-400 Check Airman, 2009-2014 DC-10 Check Airman 1995-2008 Line Capt. 1991-1995 First  
Officer 1989-1991 Total Time 23,000 + hours DOB 5/31/1952

Airline Transport Pilot, Multi-engine land, Commercial Pilot Single Engine Land, Airframe and Power  
plant Mechanic, Advanced Ground Instructor ratings, Instrument instructor ratings. Type Rated for  
B747-400, MD-11, DC-10 Qualified for CAT I/ II/IIIb, Lower than Standard CAT II, GPS approach  
qualified, VOR, NDB, LOC, Vnav/Lnav approach qualified. Qualified for Polar Ops Qualified NAT,  
Mid Atlantic, South Atlantic Qualified North Pacific, Mid Pacific, South Pacific I have also conducted  
South American route Qualifications as well as Africa, Asia,  
Central and Eastern Europe, CIS States, China, and Middle East including Afghanistan and Iraq. I have  
been a Check Airman, Simulator Instructor and Line Captain on Two Heavy Airplane Types, with one  
of the largest Military Contract Airlines. I am very comfortable at high altitude airports (747-400 in  
and out of Quito, Ecuador, high temperatures, high gross weight (875,000lbs), and short runways (DC-  
10-30, in and out of 5,700 foot runway in Punta Arenas, Chile). We operated under some of the worst  
weather conditions in the world. Prior to World Airways I had approximately 6000 hours of light  
multiengine and turbine experience in Piper Cheyenne, Cessna 400 series, Beech 18, and various other  
types of light aircraft both single and multi-engine.

2017-present, air tanker pilot for 10Tanker Air Carrier. VLAT air tanker operator primarily contracted  
to USFS but we have operated for the New South Wales Fire Service in Australia and in Chile engaged  
in initial attack aerial firefighting.

2012- 2019 : Reserve Deputy Sheriff, Siskiyou County

#### Personal History

I live with my wife, on our ranch in Siskiyou County California. We raise horses and Buffalo. My  
interests are civil war history with emphasis on Cavalry. I also enjoy astronomy.

Contact Information Mark A Baird mcbair@icloud.com 530-2276729 cell 530-468-5967 home P.O.  
Box 842 Fort Jones, CA 96032

1 TCC  
2 Supplemental Testimony  
3 DAVID WARDALL  
4 EXH-5906\_S

5 BEFORE THE STATE OF WASHINGTON  
6 ENERGY FACILITY SITING EVALUATION COUNCIL

7 In the Matter of the Application of:

DOCKET NO. EF-210011

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

SUPPLEMENTAL TESTIMONY OF TCC  
WITNESS DAVID WARDALL

10 Q: Please state your name and address.

11 A: W. David Wardall, 17069 Lambert Road, Lone, CA 95640.

12  
13 Q Please briefly describe your business, experience and qualifications.

14 A. I am the Chairman of the Associated Aerial Firefighters, Former Deputy Chief CDF  
15 air tanker operations for 34 years, and consulting engineer to the NTSB on aerial  
16 firefighting accidents. I have been involved in around 200 fatal and serious injury  
17 aircraft incident/accidents investigations, and hold an FAA Airline Transport pilot  
18 certificate.  
19

20 The Associated Aerial Firefighters is a non-profit organization with approximately 100  
21 members represents pilots from across the country. We provide a forum to advocate  
22 for safety, effectiveness, and efficiency in wildland aerial firefighting.  
23

24 My resume is EXH-5907\_S.  
25  
26

PRE-FILED TESTIMONY OF TCC WITNESS

DAVID WARDALL - 1

LAW OFFICES OF  
J. RICHARD ARAMBURU, PLLC  
705 2<sup>ND</sup> AVE., SUITE 1300  
SEATTLE 98104  
Telephone (206) 625-9515  
FAX (206) 682-1376  
aramburulaw.com

1 I have examined the proposed Horse Heaven Hills Project Wind and Solar Project and  
2 reviewed information regarding fire history and maps.  
3

4 Q: Have you prepared testimony containing your comments and observations about  
5 your concerns about this project, particularly about the proposed location of the wind  
6 turbines and the risks to aerial firefighting operations?  
7

8 A: My testimony is in the form of a copy of a letter and report submitted to the  
9 California Energy Commission in April 2021 containing our analysis and  
10 recommendations about a wind farm project proposed in Shasta County, California.  
11

12 This letter and report are provided in EXH-5908\_S.  
13

14 Q: Please describe any opinion you have regarding the ability to conduct aerial  
15 firefighting operations if the proposed project is approved as it is presently described.  
16

17 A: I have the same concerns about the Horse Heaven Hills Project as I do about other  
18 wind farm projects. Wind turbines present severe impediments to aerial firefighting  
19 operations. The existence of the wind turbines effectively creates a "no fly" zone which  
20 greatly increases the risk that any wildfire that either began in or near the project site  
21 or spread into it from any surrounding area, could not be quickly contained, and would  
22 grow. I believe there is a threat to the adjacent communities from this proposal by  
23 eliminating the possibility of fixed wing air attacks that needs to be acknowledged.  
24

25 I reviewed the turbine layout and the fire history maps of the area.  
26

1 Q: Is there a difference between steep slope range fires and mountain range forest  
2 fires?

3 A: Yes, fuel loading in tons per acre. Slope on range fires will accelerate movement a  
4 bit.

5  
6 The Fountain project in Shasta County was 48 turbines on 4,500 acres, 205 MW.

7  
8 By comparison, the Horse Heaven Hills Wind Farm Project is huge – 25 miles and  
9 four to six miles wide – over 60,000 acres with up to 850 MW from up to 244 turbines,  
10 each one 500 foot to 671 foot high in up to 6 rows along the ridgeline. This is a huge  
11 major obstruction to responding firefighting efforts. The size of this proposed project  
12 will make a huge “No Fly” zone for civil aircraft, medivac helicopters and of course  
13 firefighting aircraft.

14  
15 The extraordinary length of the project creates a 25-mile barrier to fixed wing tanker  
16 aircraft. The wind turbines produce a lot of air rotating vortices type turbulence that  
17 will interfere with safe aerial firefighting operations.

18  
19 Depending on the winds and the terrain, in order to make effective air drops, the  
20 minimum obstruction setback distance should be three to four miles along any flight  
21 paths needed to conduct aerial operations, and two to three miles perpendicular to the  
22 flight paths to reduce the risks posed by the turbulence downwind of the wind turbines.

23  
24 Also, brush and grass are “flash” fuels easily ignited up to two miles ahead of the fire  
25 front from blown embers during wind events at 15 mph or greater.  
26



1 This is a leapfrog-type fast-moving fire which fills in between the fire front and the new  
2 ember hot spots. The fire essentially explodes.

3 Little time to evacuate.

4 This project would require lots of pre-fire planning and vegetation removal and  
5 maintenance along roadway escape routes and wide fire breaks around the entire  
6 project and down-wind structures.

7  
8 Q: Why are you submitting testimony?

9  
10 A: I am here to share my concerns about the Horse Heaven Hills Wind and Solar  
11 Project at the request of Tri-Cities CARES. I acknowledge that I may be cross-  
12 examined during the adjudication hearings.

13  
14 I declare under the penalty of perjury under the laws of the State of Washington that  
15 my testimony is true and correct to the best of my knowledge and belief.

16  
17  
18 Signed this \_\_ 3rd \_\_ day of September, 2023, in \_\_Ione, CA.

19  
20 \_\_WESLEY DAVID WARDALL \_\_\_\_\_ /s/ \_\_\_\_\_

21 Printed Name

Signature

22  
23  
24  
25  
26  
PRE-FILED TESTIMONY OF TCC WITNESS

DAVID WARDALL - 4

LAW OFFICES OF  
J. RICHARD ARAMBURU, PLLC  
705 2<sup>ND</sup> AVE., SUITE 1300  
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April 10, 2023

Leonidas Payne, Project Manager  
California Energy Commission  
Environmental Office, 715 P Street, MS-15  
Sacramento, CA 95814  
[Leonidas.Payne@energy.ca.gov](mailto:Leonidas.Payne@energy.ca.gov)

Re: Fountain Wind Project (23-OPT-01)

Dear Mr. Payne,

This letter is respectfully submitted by three pilots involved in aerial firefighting, including the recent Chairman of the National Associated Aerial Firefighters, the former CDF Deputy Chief in charge of air operations for 30 years, and a current retardant pilot who has flown DC-10's to fight wildfires from the air in three different countries on two continents, including some fires in wind farms and including many of California's most recent large fires. A fire and forestry expert also joined us.

We want to alert the California Energy Commission (CEC) to the serious impediments to aerial firefighting in Eastern Shasta County that would be posed if the Fountain Wind Project is built. We hope you and your staff will carefully read this and each of our comments in the four Exhibits that follow. For example, as stated by Dave Wardall, a consulting aircraft structures engineer to the NTSB and retired CDF Deputy Chief of air tanker operations for 34 years: "We have examined the proposed project and determined it is an accident looking for a place to happen." (See full Statement, attached as **Exhibit. A.**) All of the signatories to this letter testified before the Shasta County Planning Commission

and/or Shasta County Board of Supervisors in connection with the permit application for this same project that was denied by Shasta County. The testimony of the aerial firefighters and other fire experts that supported the denial of the Fountain Wind permit application, also later supported, for many of the same reasons, the later zoning amendment that effected a ban by Shasta County on all such future projects in the unincorporated areas of Shasta County.

Our preliminary review of the CEC's February 10, 2023 Deficiency Letter leads us to believe that the CEC is unaware of the serious impediments to aerial firefighting posed by the existence of such a wind turbine project in Shasta county on the proposed site. As described herein, such a project would make it impossible to fight a wildfire, regardless of the cause of the fire, with air tankers (as well as rotor aircraft) anywhere in or near the project site and surrounding areas. The very existence of the wind turbines, which we understand may each exceed 700 feet in height (each therefore roughly twice as tall as the Statue of Liberty, and taller than Shasta Dam), would effectively create a "no fly" zone that would greatly increase the risk that any wildfire that either began in the project site or spread into the project site from any surrounding area, could not be quickly contained, and would likely grow beyond the project area to out-of-control proportions. Such a fire could easily then become an out-of-control wildfire covering tens of thousands, if not hundreds of thousands of acres, such as the Delta, Hirz, Carr, Camp, and Dixie fires of recent years. Such a fire, if not able to be contained from the air, because the turbine field is in the way, would not only burn the project itself, causing a toxic mess and obviating any benefits of having the project there, but would probably also burn through the surrounding communities of Montgomery Creek, Round Mountain, Oak Run and Moose Camp. And, if the fire spread beyond the immediate inter-mountain area, because it could not be quickly contained from the air,

such a fire could spread to even larger communities, such as Burney to the East, or Shingletown, Palo Cedro and Redding to the West, resulting in massive property damage and potentially even greater loss of life.

Shasta County has suffered several catastrophic wildfires in recent years, including the Carr, Zogg, Hirz, Fawn, Dixie and Delta fires, all of which occurred since this project was first proposed. Indeed, this very project site has burned once before in 1992, in the Fountain Fire, which burned over 60,000 acres of timberland (over 100 square miles), as well as hundreds of homes and businesses in the nearby towns of Montgomery Creek and Round Mountain, causing \$225 million in losses and suppression costs (in 2021 dollars), at the time the most expensive fire to contain in California history. As far as we know, the “Fountain Wind” project is the only wind turbine project to ever be named after a catastrophic wildfire (the “Fountain Fire”) that burned the very site on which it is proposed to be built. The site burned once before and will no doubt burn again and again.

Now, after the replanting of a timber plantation following the Fountain Fire, the project site is of even higher fire danger than before. Indeed, this project site carries the highest fire danger level in the entire State of California. The site is mostly covered now with a tree plantation covering tens of thousands of acres, composed of densely packed, highly flammable pine trees that have grown in the last 30 years to be about 40-50 feet tall, surrounded by mixed forest for miles in every direction of pine, fir, and oak woodlands.

To understand the magnitude of the impediments to aerial firefighting posed by the proposed Fountain Wind project, and described in this letter, you must begin by picturing two Statue of Liberties stacked one on top of the other (the Statue of Liberty is approximately 300 feet tall, the



proposed turbines may exceed 700 feet tall). Near the top of each turbine tower will be a nacelle, which will contain flammable fossil fuels (grease and oil) that can catch on fire (like a torch, to extend the Statue of Liberty analogy), on top of a superstructure rising out of the forest like a giant lightning rod (and turbine towers do attract lightning).

As stated by Mark Baird who has flown DC10's to fight fires on two continents and who has experience fighting wildfires near wind turbine projects: "The turbines themselves are potential ignition sources, which would compound the existing danger. Fires like the Dixie burned so hot the turbines themselves may combust and then sling burning debris as much as a quarter mile away. We wait until the fires, which are usually started by the turbines, burn well outside the perimeter of the project before we attempt suppression efforts." (**Exhibit B.**)

Most wildfires in Shasta County are caused by either lightning or human negligence/accidents. But even two Statue of Liberties stacked on top of each other does not convey the magnitude of these impediments to aerial firefighting, or the full extent of the problem, as even the Statue of Liberty does not have blades spinning around, nearly two football fields in diameter, and traveling at hundreds of miles an hour at the blade tips as they sweep a huge circle reaching even higher in the air than the nacelle. Now imagine such structures, essentially 70 story buildings, with their spinning blades, wholly or partially obscured by smoke in the midst of a wildfire sweeping through the tens of thousands of trees on the ground between and among the turbines. The turbines, of course, will have been placed intentionally on high points of the landscape, where there are frequently high winds which also typically accompany wildfires in Shasta County. And then picture 48 of these 700 foot plus tall turbines spread over several thousands of acres of densely packed pine trees (each of the 48 a massive skyscraper in its own right, each taller than anything north of downtown San Francisco).

It is not clear that any turbines this tall have ever been built before in California.

No mitigation of the problems posed by the existence of such extremely tall turbines in heavily forested, high fire danger areas is possible. Coloring the turbine blades, putting lights on them, and telling Cal Fire the GPS locations of where they are, is just rearranging deck chairs on the Titanic. What you need to understand is that the very existence of the turbines will mean that air tankers—essential weapons that Cal Fire and other agencies have to contain wildfires in California—simply will not be able to fly anywhere near that area at all, greatly increasing the risk that a fire in Eastern Shasta County, anywhere in or near the project site, will likely be unable to be fought from the air at all, and will necessarily likely grow to become a catastrophic fire.

This project and projects like it simply have no place in heavily forested, severe high fire danger areas such as the proposed project site, which is one of the main reasons why Shasta County has banned all such projects in the unincorporated areas of Shasta County (nearly all of Shasta County is forested and rated as being located in high or very high fire danger zones). Denying the present permit application, as both the Shasta Planning Commission and Board of Supervisors did before you, will likely save lives. We have lost over 100 lives in Northern California wildfires in recent years, including many women and children who were literally burned alive. To add the impairment to aerial firefighting of dozens of 700 foot tall wind turbines scattered through the forest to the already difficult task of containing catastrophic wildfires in high fire danger areas is beyond irresponsible. To do so would invite even greater tragedy by unnecessarily increasing the potential for additional loss of life that could occur as a result of wildfires in heavily forested Shasta County that could not be effectively contained by the use of air tankers and rotor aircraft.

**1. Aerial firefighting with fixed wing aircraft is the most effective way to contain wildfires quickly, support ground forces, and keep wildfires from growing to out-of-control proportions.**

The most effective way to quickly contain wildfires in California is with the use of fixed wing aircraft that drop fire retardant. Cal Fire and all other agencies depend heavily on aerial firefighting to contain fires, create fire lines, and otherwise protect lives, homes, businesses, and in many cases entire communities. As stated in the Proponent's own "experts" report, "it has been noted that in the vicinity of turbines, there will be a reduction of available airspace for fixed-wing aircraft...."

In Shasta County, such fixed wing air tankers use the Redding air tanker base to rapidly fight fires as and when needed. Such fixed wing air tankers have been used to fight all the major wildfires in Shasta County in recent years, including the Carr, Zogg, Hirz, Delta and Dixie fires, and many others. Most recently, fixed wing air tankers were used to contain the Fawn fire near Lake Shasta, and keep it from burning into the City of Redding. Had there been a wind turbine development in the way, such that fixed wing air tankers could not have been used to quickly contain the Fawn fire, that fire would have easily burned into Shasta Lake City and Redding and would have likely burned thousands of additional homes and businesses to the ground. As it was, there are no wind turbines there or near there, and air tankers were used to lay down retardant to create fire lines and fire breaks, and to save hundreds if not thousands of homes (and likely many lives too).

**2. Air Tankers Need to Drop Retardant From Only 100 to 200 Feet Above the Ground.**

As stated by the Chief: "Most effective drop height is 150' above the ground and lower crossing ridge tops not over 700'. I urge you to consider that flying heavily laden aircraft (fixed and rotor wing) with poor

visibility from smoke and very tall obstructions with whirling, immense blades is a **prescription for a fatal accident** both in the air and on the ground. No consideration for huge vortexes produced downwind from the turbines was taken.” (**Exhibit A, emphasis in original.**) So, in addition, for fires nearby, an air tanker must have some running room to drop to that low of an altitude before releasing retardant, and some additional running room to return to a higher altitude before returning to the airport to reload. Thus, if there were to be several thousands of acres sprinkled with 700 foot tall wind turbines in or near to any flightpath that an air tanker would otherwise take to attack a wildfire, the impediment to aerial firefighting would extend far beyond the project site itself and would not be limited to the footprint of the wind turbine project itself.

As mentioned above, if an air tanker were compelled to fly a safe distance above the top of the turbine blades, the drop height would be around 900 feet from the ground. Drops at this height are ineffective and simply disperse in the wind. Worse, wind turbines are often located on top of ridges or other high points. This means that a fire burning in a lower area--canyon bottom or on the slope--within or near the turbine project, along a flight approach line, could be well over 1000 to 2000 feet or more below the height of the safe flight path. Drops at this height would have no effect on fire on the ground whatsoever.

### **3. The Project Area and Surrounding Area Would Likely Be Deemed a “No Fly” Zone for Aerial Firefighting in the Event of A Wildfire In or Near The Project.**

A former interagency Type 1 (large fire) Plans Chief, Fire Behavior Analyst, and fifteen year National Fire Instructor, has concluded: “I would never recommend assignment of fixed wing aerial attack to this project area and would greatly restrict the use of rotor aircraft.” (**Exhibit C.**)



Thus, the likely impact of a project such as the proposed Fountain Wind Project would be to create a “No Fly” zone for aerial firefighting in Eastern Shasta County beyond the project because of flight path issues mentioned above. The effect would be, in a wildfire situation, to exclude air tankers from that general area of Shasta County entirely.

We expect a similar result would also apply to helicopters. When considering helicopters, it is important to note at the outset that the capacity of an initial attack Cal Fire helicopter to hold water or retardant is a fraction of the capacity of an air tanker. So if use of air tankers is completely eliminated by the existence of a turbine field, it might be possible for limited use of helicopters outside the boundaries of the turbine field, some safe distance away. The existence of the wind turbine project in the area has still, nonetheless, greatly diminished the effectiveness of any potential air attack on the fire while greatly increasing the likely outcome that the fire is not contained and grows out-of-control to become a catastrophic fire.

Even the potential limited use of helicopters around the fringes of the project site is problematic when such large obstructions are in the area. Such large turbines with massive turbine blades could easily be hidden or partially hidden by smoke, and the area between the turbines will also be subject to great turbulence. Helicopters are often grounded on very smoky days, or when there is an inversion layer present. Helicopters would be grounded more days or more often if the fire was in an area sprinkled with 700-foot-tall wind turbines. When you add the likely additional factor of not only some smoky conditions, but also very high winds, and/or swirling winds (created by weather, by the fire itself, and turbine vortexes or all three), the use of helicopters, even outside of the turbine field in surrounding areas might also be precluded or greatly diminished.

**4. With Such Large Turbines In the Way, Helicopter Rescues of Trapped or Injured Citizens and Firefighters on the Ground May Also Be Precluded.**

Proponent's own "experts" wrote that there would be "a reduction of airspace for rotor-wing aircraft used to deliver water/foam/gel/retardants, supplies and firefighters to wildfires." While one might suppose that without any air support, a wildfire in the project area or surrounding area could nonetheless be fought by fire trucks and crews on the ground, even this becomes more problematic due to the existence of the turbines. In wildfires in forested areas, citizens who live on ranches or in houses outside of heavily populated areas, or even citizens in towns (like Paradise, CA where over 80 lives were lost) that are in forested areas, can become trapped, injured, or otherwise in need of rescue or evacuation during a wildfire. Such rescues can sometimes be done by fire crews on the ground, but often need to be done by helicopter. In or near a huge wind turbine project, this may not be possible, further endangering the lives of firefighters and citizens on the ground, who may not be able to be rescued from the air if injured, further increasing the potential for loss of life.

**5. The Impediments to Aerial Firefighting Posed by the Turbines will likely mean that the Communities of Montgomery Creek, Round Mountain, Moose Camp, and Oak Run, at A Minimum, Will Burn in a Wildfire In or Near The Project Site, And Access To And Egress From These Communities Could Also Be Blocked By Fire Causing Substantial Loss of Life.**

As noted, the existence of 48 turbines in the project area will likely create a "No Fly" zone in Eastern Shasta County. This means that without the ability to contain a fire from the air using air tankers and possibly helicopters, any fire in that area will likely spread to burn the nearby

communities of Montgomery Creek, Round Mountain, Moose Camp, and Oak Run. The project is also close to Highway 299 and other rural roads that go from residential areas out to Highway 299. Without the ability to lay down retardant from the air, such a fire may also potentially block Highway 299, which is the only way in or out of the area for these rural communities, causing even further loss of life and property.

**6. No Satisfactory Mitigation Is Possible With The Extreme Fire Danger Posed By The Fuel and Terrain In And Around The Project Site.**

The problem is the existence of the turbines. Coloring the blades, putting lights on them, and informing Cal Fire of their GPS locations does not solve or mitigate the problem. Air tankers won't be able to fly there at all, so the problem is not identification of the turbines so they can be avoided by planes and helicopters. The problem is their very existence, their great height, turbulence and the insanity of placing them in a high fire danger, heavily forested area, where they don't belong.

Listen to the immediate past Chairman of the Associated Aerial Firefighters with 30 years of experience of fighting fires in this area, as well as fires in and around wind farms, as he warns:

“This appears to be a very unsafe proposal to adjacent communities and aerial firefighters.... The strategy was to not use fixed wing aircraft in the turbine fields at all. In Altamont and Tehachapi most of the turbine field was contained within light flashy fuels such as vast stands of grass lands. The proposed Fountain Project would be located in an area containing large stands of Pyrophytic fuels such as chaparral, manzanita, digger pines, and mixed conifers. The heat generated by such a fire, especially if it

is wind driven would be significantly greater than the heat produced by the fast-moving grass fire. This would pose a greater risk to ground firefighters because of the lack of ability to provide them effective air support and the adjacent homesteads surrounding the communities of Round Mountain, Montgomery Creek and Hillcrest. The threat of fatal damage to the tower structures is also worthy of consideration. Not only because of material losses but as an additional hazard that could endanger firefighters on the ground.” **(Exhibit D.)**

For all of the foregoing reasons, we respectfully request the following. First, if the application is not withdrawn or dropped by the applicant in its entirety, as it should be, we ask that the CEC review every wildfire in California in the last 5 years in which air tankers were used to contain or slow the growth of the fire, and estimate the additional fire spread that would have occurred if air tankers were unable to be used to fight and contain each such fire, including potential additional lives lost and millions of dollars of additional property damage that would or could have been suffered if air tankers could not have been used. Second, we ask that all of the issues addressed in this letter be fully addressed by the CEC in the CEQA process, including in any EIR that might be prepared in connection with the proposed Fountain Wind Project. And third and finally, we respectfully request that the CEC deny the application for a permit for the Fountain Wind Project and any similar project that may be proposed to be located in heavily forested Shasta County.

The Shasta County Planning Commission and Board of Supervisors denied a permit for this project for many of the foregoing reasons, and others, and later enacted a zoning ordinance banning all such industrial wind turbine projects in heavily forested Shasta County. They expressly took such actions to protect the health, safety and welfare of the citizens of Shasta County, and made specific findings of fact, supported by



the evidence and testimony of experts and citizens alike, that the Fountain Wind Project would be detrimental to the health, safety and welfare of the citizens of Shasta County. We believe that the Shasta County Planning Commission and Board of Supervisors acted responsibly and correctly. We hope that you will concur and deny the requested permit.

Sincerely,

/s/ Dave Wardall

Dave Wardall

Cal Fire Air Ops., Retired

Current Chair Associated

Aerial Firefighters

/s/ Stephen Fitch

Stephen Fitch

Forest Supervisor, Retired

/s/Mark Baird

Mark Baird

Air Attack Pilot

/s/ Jim Barnes

Jim Barnes

Former Pilot and Chair

Associated Aerial Firefighters

## EXHIBIT A

### Statement of David Wardall

- Chairman-Associated Aerial Firefighters
- Former Deputy Chief CDF air tanker operations for 34 years.
- Consulting engineer to the NTSB on aerial firefighting accidents.
- Involved in around 200 fatal and serious injury aircraft incident/accidents investigations.
- FAA Airline Transport pilot..

The Associated Aerial Firefighters with approximately 100 members represents pilots from across the country and provide a forum to advocate for safety, effectiveness, and efficiency in wildland aerial firefighting. I have examined the proposed Fountain Wind Project and determine it is an accident looking for a place to happen and testified in person at the Planning Commission Hearing where it was unanimously rejected.

The planning and analysis gone into this project is **seriously** flawed—  
Let me explain:

1. Real world dispatch and safety issues created by these huge turbines at over 600-ft AGL are many.
2. No consideration for huge vortexes produced downwind from the turbines was taken.
3. The movement of the turbine blades will produce sunlight reflections that will impair visual see and avoid for maneuvering among turbines.
4. Most effective drop height is 150' above the ground and lower crossing ridge tops **not** 600 to 750 feet.

I urge you to consider that flying heavily laden aircraft (fixed and rotor wing) with poor visibility from smoke and very tall obstructions with whirling, immense blades is a **prescription for a fatal accident** both in the air and on the ground.

**AND** understand how important Air Attack has been over the years. Recently Air Attack was key in saving numerous communities from Tulare to Redding.

**Finally**, consider the threat you would be imposing on the 3 communities immediately adjacent to this proposal by eliminating the possibility of fixed wing air attack.

Don't just take my word for it listen closely to Jim Barnes, former Chairman of the Board of Associated Aerial Firefighters. He has flown out of the Redding Air Tanker Base **AND** flown Wind Farm Fires.

/s/ Dave Wardall  
4/1/23  
davidwardall@gmail.com



## **EXHIBIT B**

### **Statement of Mark Baird**

- I have 23,000 hours with type ratings in the DC-10, MD-11 and B744 (747) supertanker
- Was an instructor in both the DC-10 and 747 supertankers
- Have spent the last 7 years flying the DC-10 (Very Large Air Tanker).
- Have flown fires all over the United States, Australia and Chile.
- Have flown the DC-10 on several large fires in the Shasta County area including the Dixie-largest fire in recent California history

As I testified to the Shasta Board of Supervisors, in my humble opinion the area adjacent to the ridge lines, spur ridges, and approaches to or escape routes away from heavy fuel fire would be rendered useless by the turbines. (Fountain Wind Project)

The communities near the development would be indefensible by air assets, particularly Large Air Tankers, or Very Large Air Tankers. Further, the turbines themselves are potential ignition sources, which would compound the existing danger. Fires like the Dixie burned so hot the turbines themselves may combust and then sling burning debris as much as a quarter mile away.

These projects built in flashy fuels are indefensible by air. We wait until the fires, which are usually started by the turbines, burn well outside the perimeter of the project before we attempt suppression efforts. Remember air tankers are prohibited from dropping anywhere near power lines or associated infrastructures unless we are given specific permission and the subject infrastructures have been de-energized. Retardant weighs nine pounds per gallon and might be traveling as fast as 150 mph when it hits a structure. Retardant dropped directly on a structure will crush it.

All said and done the proposed project is a dangerous and unproductive risk to the environment, communities and their citizens.

/s/ Mark Baird

4/1/23

mcbair@me.com

## **EXHIBIT C**

### **Statement of Stephen Fitch**

- Former Forest Supervisor and District Ranger of the adjacent Shasta Trinity National Forest
- Formerly responsible for 7 National Forests and 10 million acres in 3 states
- Past type 1 (large fire) Planning Section Chief & Fire Behavior officer on fires across US
- Served 15yrs on Advanced Fire & Resource Mgt. training Cadre training US, Canadian, Mexican forest managers.
- Congressional Fellow and adviser to U.S. Senate Energy & Natural Resource Committee Chairman on fire and resource matters 100th Congress.
- On the team that developed and tested the Incident Command System used on all fires today.
- Was responsible for the largest Air Tanker base in California at Ontario International Airport

Why am I concerned with this project?—As the former Forest Supervisor and District Ranger of the National Forest located adjacent to this project on two sides, I consider this project a threat to the area I spent 11yrs of my life protecting. I have been responsible for reviewing and approving or denying similar projects that threaten or enhance 7 National Forests in 3 states. A fire escaping from within or near this project would immediately threaten the Shasta Trinity National Forest.

Foremost I'm concerned about the effect on wildfire suppression and protection of the adjacent communities. These concerns emanate from having served in the positions listed above.

As you review this proposal please consider that no matter how many **experts** the **proponents** bring in to justify this project they will **never** be able to explain how to make up for the loss of what has become a key to keeping fires small and saving communities, homes and **lives** from big fires. **Air Tankers**

This Project is an absolute **design for disaster** for at least 3 communities a major power distribution system and the many homes scattered adjacent to the project.

This Project sits in a dense stand of young conifers forming continuous horizontal and vertical (ladder) fuels. It is bordered on the West and North by Highway 299 with high potential for fire starts from vehicular accidents. Homes and many other ignitions sources surround the project and within-the turbines themselves and support systems.

The most devastating fires in this area come from the North East during strong gradient winds. **Our Forests fuels have changed** and under these conditions we've learned fires jump with ease roads and forest openings. The devastating Carr fire jumped the Sacramento River in two places.

This means **ALL** the fire fighting tools must be present for us to be successful.

This proposal sets up a condition that cannot be mitigated. 700 foot towers and blades scattered over thousands of acres combined with power lines **virtually eliminates** the option for using fixed wing aerial attack over a broad area making the adjacent communities and homes **indefensible** from fast moving large wildfires.

As a former Planning Section Chief I would never recommend assignment of fixed wing aerial attack to this project area and would greatly restrict the use of rotor aircraft.



**It couldn't have been made more clear recently** how absolutely critical it is to have **bombers** help save lives and communities. The condition of our Forests has changed so that **backing off and burning out and protecting structures has become routine. All with much much greater dependency on aircraft.**

This County has recently experienced 2 deadly and costly fires, the Carr and the Zogg. There was a recent headline article in the Record Searchlight about **Shasta County** filing suit against PG&E to recover costs incurred from the Zogg Fire. As you consider the benefits this project might bring to the State, I hope you will also **weigh** the costs. Recent Carr, Zogg, Camp, Fawn, Hirz and Dixie fires in this area have cost the State dearly. What are the potential costs, liability and **LOSS OF LIVES** that could result from **your** decision on this **DESIGN FOR DISASTER?**

**Finally**

**Remember Shasta County's General Plan sets "preserving quality of life, especially in rural areas and "safety of citizens and communities" as its paramount precepts. Therefore, the Commission must reject the proposed project already carefully reviewed and denied by Shasta County. The untenable alternative would be to ask the County to remove "Safety" as its plan precept.**

**/s/ Stephen Fitch**

**4/1/23**

**svfitches@yahoo.com**

**EXHIBIT D**

## Statement of Jim Barnes

- Past chairman of the Associated Aerial Firefighters
- Have been a Forestry Air Tanker Pilot for over thirty years.
- Have flown air attack on California wind farms.
- Have flown Air Attack from the Redding Air Attack Base protecting the vicinity of the current turbine proposal
- Have testified in Shasta County concerning the Fountain Wind Project before the Planning Commission and Board of Supervisors

I am Jim Barnes the immediate past chairman of the Associated Aerial Firefighters. The Associated Aerial Firefighters with over 100 members represents pilots from across the country and provide a forum to advocate for safety, effectiveness, and efficiency in wildland aerial fire-fighting. As an air tanker pilot myself for over 30ys. I have flown fires all over California including on **wind farm fires** and frequently flew out of the Redding Air Attack base as initial attack on fires all over Shasta County.

We in the Association have become aware of the recent Fountain Wind Project proposal, carefully reviewed it, and hope the Commission will consider our comments as they directly affect the safety of our pilots, several communities and the forests in Shasta County. This appears to be a very unsafe proposal to adjacent communities and aerial firefighters. Let me explain:

Aerial Firefighting in and around turbines presents a set of unique challenges that are problematic to say the least. I have worked fires at Altamont pass and in Tehachapi pass. The strategy employed in both cases was to not use fixed wing air tankers in the turbine fields at all except around the borders. At Altamont we almost always stopped the fire af-

ter it burned completely through the field usually at highway I-5. Except for one occasion when it spotted across the highway exposing about a mile of parked cars on the road to a burn over.

At Altamont and Tehachapi most of the turbine field was contained within light flashy fuels such as vast stands of grass lands. The proposed Fountain Project would be located in an area containing large stands of pyrophytic fuels such as chaparral, manzanita, digger pines and mixed conifers. The heat generated by such a fire, especially if it is wind driven, would be significantly greater than the heat produced by a fast-moving grass fire. This would pose a greater risk to ground Firefighters because of the lack of ability to provide them effective air support and the adjacent homesteads surrounding the communities of Round Mountain, Montgomery Creek and Hill crest. The Threat of fatal damage to the tower structures is also worthy of consideration, Not only because of material losses but as an additional hazard that could endanger firefighters on the ground.

High towers and high winds are a situation that shouts watch out when it comes to **aerial firefighting**. At some point, winds above 30 knots, air tankers operations would be suspended but even winds below that flowing through the high towers would generate eddy currents that would contribute greatly to the danger for aircraft trying to conduct retardant or water drops above the turbine field. To be effective typical drop altitudes are 150ft above ground and a bit lower crossing a ridge top. Dropping retardant above these 700ft. towers with height and wind dispersal will have little to no effect on the fire. A state investigator and current chairma of our organization who has been involved with over 200 fatal and serious injury aircraft accident investigations advises that these structures over 700' scattered over thousands of acres and poor visibility from smoke would be a "prescription for a fatal accident". From an air tanker pilot's point of view fighting such a fire would be a no-win situation.

Please consider our thoughts as you review this proposal.

/s/Jim Barnes

Recent Past Chairman

Associated Aerial Fighters

4/1/23

aapilots@sonic.net



**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Fwd: Wake Turbulence and Aerial Firefighting  
**Date:** Thursday, December 7, 2023 5:39:36 PM  
**Attachments:** [Wake Turbulence Impacts Light Aviation-Excerpt.pdf](#)

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External Email

Amy Moon and Sean Green, the Applicant Response to the Recreation 1 topic in Data Request 7 is another indicator that the North line of turbines are too close to Kiona Ridge and historical burn areas. Turbulence to light aircraft. Request was about paragliding, but applicant submitted documentation cautioning light aircraft.

The council should be aware of this impediment to aerial firefighting and the danger that turbines in close proximity pose to pilots and aircraft.

----- Forwarded message -----

**From:** **Dave Sharp** <[dave@tricityscares.org](mailto:dave@tricityscares.org)>  
**Date:** Sun, Dec 3, 2023, 2:09 PM  
**Subject:** Wake Turbulence and Aerial Firefighting  
**To:** Paul Krupin <[Paul@presari.com](mailto:Paul@presari.com)>  
**Cc:** Karen Brun <[karen@tricityscares.org](mailto:karen@tricityscares.org)>, Pam Minelli <[pam@tricityscares.org](mailto:pam@tricityscares.org)>

Buried at the very end of the Applicant response to Data Request 7 for the Revised ASC, under topic REC-1 is the following quote for light aviation: "*.....exercise caution if the flight path is within 10 rotor diameters.*" The applicant calculated a 3000' downwind turbulence caution zone that represents 10 rotor diameters. The 3000' distance apparently was calculated based upon the smallest diameter rotor offered rather than the worst-case diameter option in the ASC.

1. The Applicant response significantly understates the cautionary downwind far wake zone by using an incorrect rotor diameter in the calculation. The correct distance is 5,510' (1.1 mile) based upon worst case rotor diameter (551') in the RASC, not 3,000'. Their error understates the actual safe distance by 50%.
2. The response based upon the Data Recreation-1 response, yet light aircraft technical papers were referenced, but it should also be included as a danger to firefighters. This is an important issue with respect to use of small and large aircraft for firefighting.

Attached is the Response 7 that had the writeup about Wake Turbulence.

This is further evidence that the turbines are located too close to Kiona ridge and will impact aerial firefighting.

How do we ensure that since this type of information gets to the voting council members.

Attached are the last 4 pages of the data response.

David Sharp

Vice President, Tri-Cities CARES

Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)

Webpage: [www.tricityscares.org](http://www.tricityscares.org)

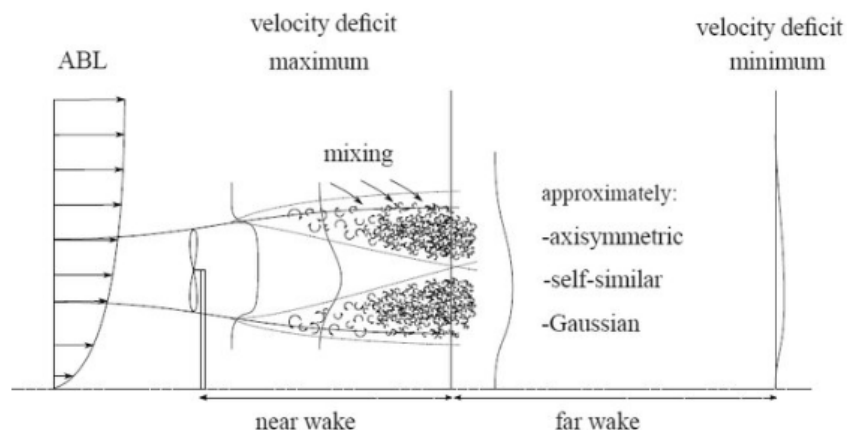
# Attachment FEIS-Recreation-1

## WIND TURBINE WAKE EFFECT

In any wind farm, operating wind turbine generators convert the kinetic energy of the free-stream wind flow into electricity through the rotation of blades over a large swept area that turns an internal generator in the nacelle of each unit. In the process of extracting kinetic energy from the incoming free-stream wind flow, every wind turbine will leave a 'wake' downwind of the turbine rotor swept area. This 'wake effect' can be described as a trail of reduced wind speeds and enhanced turbulence inside the 'wake zone'. The length and width of the wake zone behind each wind turbine is highly variable and will vary by specific atmospheric conditions including temperature profiles above the surface, wind speed intensity, barometric pressure, relative humidity and the resulting air density at any given moment.

Generally, wakes are characterized and described in two zones:

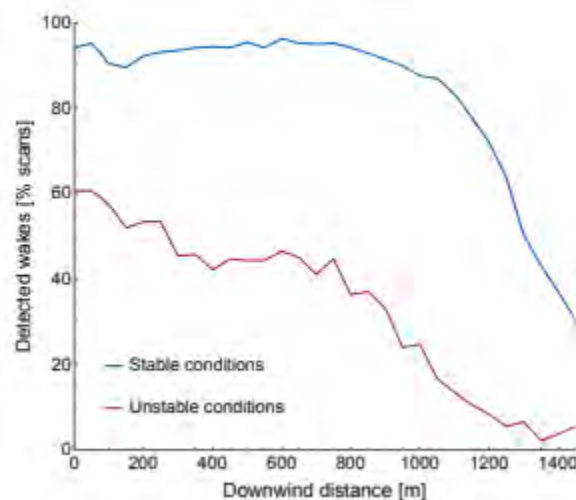
- The first is called the 'Near Wake' zone where the air flow immediately behind an operating wind turbine has the highest wind deficit (lowest wind speeds) as a large portion of kinetic energy has just been extracted and the highest turbulent kinetic energy (or turbulence). Typically, the Near Wake zone begins immediately behind the operating wind turbine and extends to approximately 3 to 5 rotor diameter lengths. For example, a 127-meter rotor diameter would typically see Near Wake zones extend as far as 380 to 635 meters (~ 1,250 to 2,000 feet downwind).
- The second area is called the 'Far Wake' zone which is the area where there is a transition between the highly turbulent airflow behind the wind turbine rotor to an area where the surrounding air flow from the lateral sides and above the wake begin to recover the wind flow. Typically, the Far Wake zone begins immediately behind the Near Wake (at ~ 3 to 5 rotor diameters) and could extend as far as 8 to 10 rotor diameters behind the operating wind turbine. A wind turbine with a 127 meter rotor diameter would typically see far wake effects extend out to 1000-1270 meters (~ 3280 – 4150 feet downwind). The Far Wake zone is characterized as an area of lower wind speeds than the free-stream wind flow, lower wind shear with height up to the blade-tip height of the rotor (~ 500 feet AGL), and air not as turbulent than the Near Wake zone. After the Far Wake zone, winds mostly recover into the free stream at distances > 10 rotor diameters. These distances can vary somewhat based on the atmospheric conditions and stability at specific times.



Many detailed research studies have been completed throughout the years investigating the effects of wind turbine wakes individually and as a group. These studies utilized instrumentation such as on-site met towers and remotes sensing devices such as LIDARs (Light Detection and Ranging) and SODARs (Sound Detection and Ranging).

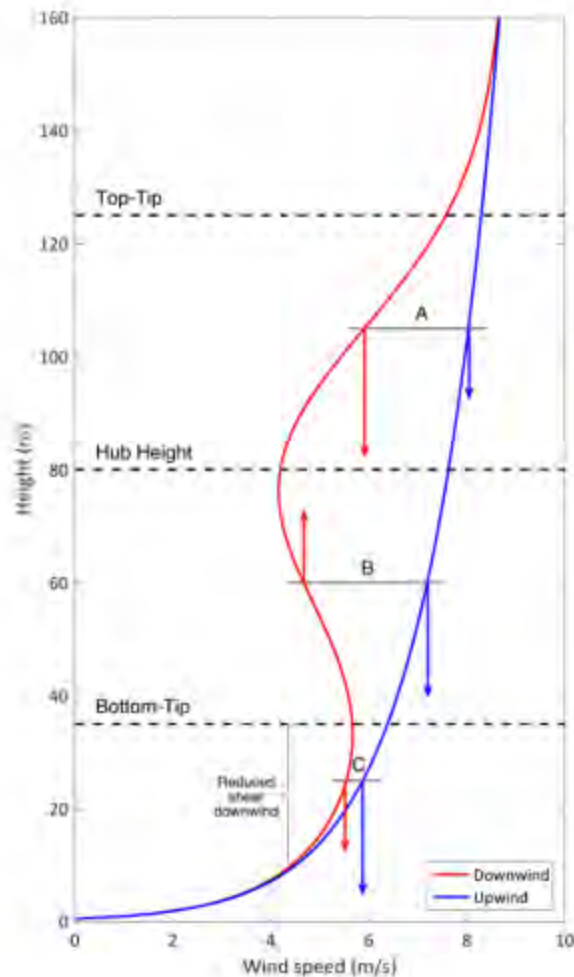
Overall, the general findings can be characterized by the following:

- The strongest wakes are those with the highest wind speed loss in the flow behind the wind turbine and longest downwind distance. The strongest wakes occur during nighttime stable atmospheric conditions.
- The weakest and shortest downwind wakes are typically in the daytime hours when heating of the surface and low-level atmospheric mixing is at its highest (during unstable atmospheric conditions).



- The wind speed velocity reduction decreases with distance from the wind turbine within the wake. In other words, the lowest winds and highest turbulence are immediately behind the turbine and then slowly recover over distance within the wake.
- The width of the wakes increases with downwind distance much like a cone shape in typical daytime atmospheric conditions.
- Wind turbine wakes can evolve over time and distance as wind speeds and temperatures are constantly changing over time. Wakes have been observed to exhibit different kinds of motions, even from inside the same wind farm. Motions such as meandering (snake-like back and forth motion behind the wind turbine), looping, and wave-like motion are possible.
- Above the surface, the wind speeds exhibit a wake like vertical profile where there is lower wind shear with height and in some cases, negative shear (wind speeds decreases with height) inside the wake zone.





Several studies have probed the physical structures of the Wake zones and the impact on light aviation. A summary of reports directly related to Wind Turbine wakes are listed below as References.

The implications for light aviation traffic in the vicinity of a wind farm are as follows:

- At wind speeds above cut in speed (approx. 3 mph), exercise caution if the flight path is within 10 rotor diameters (approx. 3,000 feet) downwind of the wind turbines. *Note: the nose of a wind turbine always faces up-wind and the rotor has a clock-wise rotation.*
- Atmospheric conditions can vary quickly causing changes in wind speed and direction, oftentimes causing unpredictable hazard.

**References:** Large turbine rotor diameter 551', danger mode within 5,551'  
Small turbine rotor diameter 459', danger zone 4,590'

Barthelmie, R.J., S.T. Frandsen, O. Rathmann, K. Hansen, E.S. Politis, J.M. Prospathopoulos, J.G. Schepers, K. Rados, D. Cabezon, W. Schlez, A. Neubert, and M. Heath. 2011. Flow and Wakes in Large Wind Farms: Final Report for UpWind WP8. Risø DTU National Laboratory for Sustainable Energy. Report number Risø-R-1765(EN). February.

Applicant gives incorrect information. Should be worst case rotor diameter.

- Bodini, N., D. Zardi, and J.K. Lundquist. 2017. Three-dimensional structure of wind turbine wakes as measured by scanning lidar. *Atmospheric Measurement Techniques* 10:2881-2896.
- Tomaszewski, J.M., J.K. Lundquist, M.J. Churchfield, and P.J. Moriarty. 2018. Do wind turbines pose roll hazards to light aircraft? *Wind Energy Science* 3:833-843.
- Wu, Sichent. 2011. *Effects of Wind Turbine Wakes on Microclimate Properties near the Ground*. Dissertation. University of Delaware.

From: [kmbrun@gmail.com](mailto:kmbrun@gmail.com)  
To: [EFSEC mi Comments](#)  
Subject: FW: Horse Heaven Energy Center FEIS Questions & Comments  
Date: Saturday, December 9, 2023 1:14:49 PM

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### External Email

After spending many hours reviewing this huge document, I have many questions and comments. This is the largest wind and solar project ever proposed for Washington State and one that has not received the arduous review and scrutiny that a project of its size and scale requires. The entire process has a rubber-stamped check-the-boxes feel...let's get this thing off the ground and the Tri-Cities be damned. I realize that the goal is to reduce Washington's carbon footprint but given that this power is, in all likelihood, going to be sent out of state, it will have zero impact on Washington's carbon goals.

#### 1. **Chapter 3 – Affected Environment**

Where are the visual simulations for Representative Viewpoints 17-23?

2. **Section 3.13.2.1** states that the Lease Boundary primarily falls within the jurisdiction of Fire Districts #1 and #5. **That is not entirely true.** [Fire District #2](#) serves Benton City and the rural areas surrounding Benton City including the area involved in the June 18<sup>th</sup> wildfire. Refer to the Office of Fire Management [maps](#) for Benton County. Who didn't do their homework?

#### 3. **Section 4.10, Visual Aspects, Light and Glare**

According to the referenced **Appendix 3.10-2 Updated SWCA Visual Study – Final EIS, Section 4.2.4.1**, the Applicant committed to “**Clustering or grouping turbines** to break up long lines of turbines”. Neither the FASC nor the FEIS provide evidence that this has been done. Why not? If they committed to it, then they should do it.

##### **Section 4.10.1.1, Visual Aspects Methodology**

The analysis of the Project's visual impacts focuses on three elements: landscape character, viewing locations, and compliance with state and county visual management guidance. The analysis uses the methods developed by the Clean Energy States Alliance (CESA), which suggest three evaluation criteria as they relate to determining whether impacts rise to the magnitude of “undue” or “unreasonable” (CESA 2011):

- Does the project violate a clear written aesthetic standard intended to protect the scenic values or aesthetics of the area or a particular scenic resource?
- Does the project dominate views from highly sensitive viewing areas or within the region as a whole?
- Has the developer **failed to take reasonable measures to**

**mitigate** the significant or avoidable impacts of the project?

From our perspective, the answer to every one of these questions is a resounding “YES”. Even SWCA states in:

#### **Section 4.2.2.6 Combined Impacts of Components**

- The combined impacts of the different Project components would result in a landscape character dominated by large-scale energy infrastructure,...
- ...the scale of the Project and prominence of the proposed turbines would result in high, long-term impacts to the existing landscape.
- Views from these locations (KOPs 3, 6, 12, 13 and 15) would be dominated by energy infrastructure as a result of the additive effects from each Project component, resulting in high, long-term impacts on these views. Since these impacts occur on viewpoints beyond the neighboring receptors, these effects would be regional in extent. In summary, activities during operation of all components of the Project would result in high, long-term, **unavoidable**, regional impacts on visual resources.
- The Horse Heaven Hills and northern ridgeline would, however, become dominated by energy infrastructure, with potential long duration views from areas within the communities between Benton City and Kennewick. These impacts on views would be most intense where unobstructed views of a large number of turbines occur.” Which, as those of us who live here, would impact the residences who are at or near the same elevation as HHH-West, not those who are in Badger Canyon within .5 miles of the Project.

Given the restricted grid injection capacity of 850 MW, why are the most onerous turbines not being removed or relocated? Doing so would significantly reduce the multiple impacts of those turbines currently located in the migration corridor, on cultural resource sites, in heavily used recreation areas, within the aerial firefighting corridor, and within proximity to populated residential areas. The “Significant Unavoidable Adverse Impacts” only exist because the Applicant refuses to consider any meaningful compromises on turbine location or quantity. It’s all about the money!

#### **4. In the FEIS, Public Health and Safety**

**PHS-126:** Fire Suppression Aircraft Access: In the event of a major wildfire occurring in an area where fire suppression aircraft may need access near the Project, whether related to the Project or resulting from another cause,



the Applicant would shut down turbines temporarily.

**Rationale:** This mitigation measure would allow access for fire suppression aircraft carrying water and fire suppression chemicals, as needed.

Had Judge Torem not denied testimony from two aerial firefighters with a combined experience of 84 years, you would know that the proposed mitigation is unacceptable for protecting the lives and property of those who live near the steeply sloped areas prone to wildfires. These professionals require a 4-mile buffer zone in which to descend, drop the retardant or water, and lift out again. FAA restricts any obstruction 499' tall within 20,000 feet from a runway. Commercial and passenger planes take off and land at the same height and speed as an aerial firefighting plane. Why would you think that having a 499' tower with no spinning blade would be different from a 499' building? The same restriction should apply. It makes no difference to an aerial firefighter whether the blades are spinning or not. It's the presence of the 499' tall turbines and the fact that they are inside the 4-mile buffer zone that matter.

5. **In Section 4.12.2.5**, the FEIS “describes measures to reduce or compensate for impacts related to recreation...”.

**R-2:** The Certificate Holder would provide a minimum of five informational boards approved by DNR and EFSEC at viewpoints within the Lease Boundary and/or in the surrounding communities associated with scenic areas of interest. The construction of the informational boards would be completed within five years of the beginning of construction.

**Rationale:** To mitigate the loss of uninterrupted views of scenic viewpoints and provide information to the public regarding the Project, the Project's expected years of operation and the reclamation of the Project. Additionally, photographs of the viewshed prior to the construction of the Project should be displayed, in color, on the informational boards.

Why would you think that posting informational boards on the operational Project and what it used to look like is going to mitigate the loss of uninterrupted views of scenic viewpoints? Just ludicrous.

6. In the FEIS, **Table 4.12-5b: Summary of Potential Impacts on Recreation during Operations**, the following appears:

Turbines would limit recreational activities (i.e., paragliding) that occur on public land near area of operation” with a Low magnitude of impact. Have you asked the paragliders if they agree with this rating? Your mitigation is to push them off to other areas but they selected this area for their recreational activity because it meets their criteria. If other areas were capable of doing so, they would've picked another place from which to paraglide.

7. **Table 4.12-5c** wherein EFSEC has determined that significant unavoidable

adverse impacts would occur during the operation stage.

Are these really unavoidable or have they been designated as such because neither the Applicant nor EFSEC is willing to scale this project back to a reasonable and much less impactful state? Why do the turbines have to sit on the Horse Heaven Hills ridgeline when, by sacrificing a small amount of generation, they could be pushed farther south and southwest? The Applicant and EFSEC are asking the Tri-Cities to make a huge sacrifice with very little being offered to balance that out.

8. **Section 4.13 Public Health and Safety.** Under **Applicant Commitments** list of applicable federal, state, and local health and safety standards in on **Page 4-503**, there is a noticeable absence of anything remotely related to aerial firefighting. Why is that? Did they not consider aerial firefighting to be an area of concern for public health and safety? We sure do.

On **Page 4-506**, the FEIS states: “Fire may result from turbine construction under Turbine Option 1 due to existing site conditions and the nature of construction activities. However, potential impacts related to fire could be meaningful, as **wildfire risk in the area is considered high** (Section 3.13.2.1). Impacts of a fire would be medium, temporary, feasible, and **limited in spatial extent**.” So the Applicant and EFSEC acknowledge the risk of wildfire but yet hamstringing firefighting ability by not providing a 4-mile buffer for aerial firefighting. Why is that? And what is meant by “limited in spatial extent”? Are you expecting a wildfire to stay in one place?

9. **Table 5-2: Cumulative Impacts with Proposed Action**

- **Air Quality:** Fugitive Dust (PM<sub>2.5</sub> and PM<sub>10</sub>) – Conclusion: The Proposed Action does not meaningfully contribute to the overall cumulative impact on air quality within the spatial and temporal setting. Where is the data that supports this conclusion? Just stating something doesn't make it so.
- **Vegetation** - Conclusion: The Proposed Action would meaningfully contribute to cumulative impacts on Priority Habitat and special status plant species.
- **Wildlife and Habitat** - Conclusion: The Proposed Action would meaningfully contribute to cumulative impacts on Priority Habitat and special status plant species.
- **Historic and Cultural Resources** - Conclusion: Due to changes in the nature and use of the landscape, the Proposed Action would meaningfully contribute to a cumulative impact on historic and cultural resources.

- **Visual Aspects, Light and Glare** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on visual aspects within the spatial setting.
- **Noise and Vibration** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on the local noise environment in the spatial setting.
- **Recreation** - Conclusion: The Proposed Action meaningfully contributes to a cumulative impact on recreational resources due to changes in the use, quality of the experience, and the health and safety of recreationists.
- **Transportation** – Conclusion: Depending on the construction timing of RFDs, the Proposed Action has the potential to meaningfully contribute to impacts on transportation within the spatial and temporal setting.

Of the 14 Resources listed in this table, 7 meaningfully contribute to a cumulative impact and 1 has the potential to do so. Another, Public Health and Safety, was not thought to have a meaningful impact from fire, smoke and haze, or hazardous materials release. That designation should be reconsidered since wildfires, whether caused by lightning, human irresponsibility, or a turbine, solar, panel, or BESS malfunction, have significant potential for harm to the public. Given that more than half of these resources are significantly impacted, why is neither the Applicant nor EFSEC taking a step back and seriously considering what else should be done to change this? Relocating the turbines currently sited within the migration and historic/cultural resources corridors and recreational areas would also reduce the impacts on vegetation and people (i.e., visual, light, glare, noise and vibration).

#### 10. Section 5.2.2 – Identification of Meaningful Contributions to Cumulative Impacts and Determination of Significant from the Proposed Action

- **Vegetation** - The potential exists for a final design that lessens the residual impact and reduces the Proposed Action's contribution to cumulative impacts on priority habitats and native plant species.
- **Wildlife and Habitat** – The potential exists for a final design that lessens the residual impact and reduces the Proposed Action's contribution to cumulative impacts on special status wildlife species and priority habitats.
- **Historic and Cultural Resources** - Cumulative impacts from ground disturbance, viewshed alteration, and restricted access to Traditional Cultural Properties are likely to alter the nature and use of the landscape. Cumulative impacts from past and present actions and RFDs may affect

the location, setting, feeling, and/or association of historic and cultural resources, resulting in a potential loss of the integrity of these resources.

- **Visual Aspects** - Mitigation measures have been identified for these impacts that, when implemented, are expected to reduce the magnitude of effect. These effects include dominating the area's landscape character through the introduction of large-scale energy infrastructure, as well as dominating views from viewing locations where the setting would appear heavily modified.
- **Noise** - Impacts from long-term noise sources could add to the present developments and RFDs in the local settings.
- **Recreation** - Cumulative loss of the use for recreation resources occurs when lands, frequently used for recreation activities, are taken out of use during the construction and operation of non-recreation projects or recreation activities are indirectly impacted by projects (e.g., visual, noise, etc.).
- **Transportation** - Cumulative impacts from past and present actions and RFDs have the potential to affect the level of service of traffic routes, cause loss of access to public resources, and decrease roadway safety if constructed or decommissioned contemporaneously.

Why were Light and Glare not addressed in Section 5.2.2?

#### 11. Table 5-3: Cumulative Impact Analysis Summary

Of the 17 topics listed in this table, all but one (vibration during construction and decommissioning) acknowledge that the proposed action meaningfully contributes to a cumulative impact. It appears to any intelligent person that you all should back to the drawing board. This project is not ready for prime-time. What rationale do you have for proceeding with this project when there are so many negative impacts – many of which could be resolved with compromise on the part of the Applicant and EFSEC? EFSEC should not be in the business of making sure that the Applicant gets what they want and disregarding everyone else.

12. According to **WAC 463-60-085(2) Fair treatment**. The application shall describe how the proposal's design and mitigation measures ensure that no group of people, including any racial, ethnic, or socioeconomic group, bear a disproportionate share of the environmental or socioeconomic impacts resulting from the construction and operation of the proposed facility.

Statistics provided by TCC during the adjudication shows that this project will impact 20 times more people than all the rest of the wind and solar projects in the entire state. That definitely shows that the residents of the Tri-Cities will bear a disproportionate share of the environmental impacts. How can

that be justified?

Karen Brun  
Kennewick, WA  
509-392-1156



**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#); [Bumpus, Sonia \(EFSEC\)](#)  
**Subject:** Tricities CARES-Fugitive Dust Comment-  
**Date:** Wednesday, December 13, 2023 1:11:45 PM  
**Attachments:** [Fugitive Dust Emissions Analysis-Comment EFSEC.pdf](#)

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External Email

Sonia, the Council needs to review this email and attachment.

Tri-Cities CARES offers comments to FEIS Appendix 3.2-1-Emissions Calculations, and Appendix 3.2-2-Tetra Tech Dispersion Modeling Emissions Calculations. A more detailed discussion is included in the attachment to this email. We question the calculations and methodologies used to tabulate and model the particulate emissions.

Our greater concern is chronic and excessive PM10 and PM25 and impact to public health. Department of Ecology Website:

***"Particulate pollution affects the airways and lungs and can cause problems in other parts of the human body. It's especially bad for those with chronic heart and lung disease (like asthma, bronchitis, and emphysema), children, and the elderly. It worsens these diseases, which can lead to hospitalization or even early death".***

## **Environmental Rule #1. The solution to pollution is not dilution!**

### **Construction Phase**

Yet, this is what has been done here. The project dispersion modeling excludes the construction activities phase. That phase generates 99.5% of PM10 emissions. By excluding the major source of emissions, the modeling results were diluted. This is a very large and widespread project with a massive amount of emissions. These emissions have not been included in modeling of an area that has been over the National Ambient Air Quality Standard (NAAQS) for both PM10 and PM 2.5 numerous times. As a result of the exclusion of construction emissions, the EIS modeling result appears to be understated, and we believe, flawed.

Without an area wide model, the EIS will not be able to accurately determine whether the project meets the NAAQS, State, or Benton Clean Air standard during the construction phase.

### **O&M-Ongoing Operations**

The calculation for ongoing operations did not include windblown dust from exposed areas resulting from the project, and vehicle traffic (wheel contact with roads) on paved and unpaved roads. Those will be the major sources of fugitive dust. The only reason the new unpaved roads exist is to support the project and should have been included. The calculation only used vehicle exhaust emissions, brake wear and tire wear. Without the complete calculation, ongoing emissions from the new source are diluted and understated. The calculation needs to be expanded to include all PM sources.

**The solution to pollution is not dilution!**

David Sharp

Tri-Cities CARES

Email: [dave@tricitescares.org](mailto:dave@tricitescares.org)

Webpage: [www.tricitescares.org](http://www.tricitescares.org)

# Horse Heaven Hills Wind Project

## FEIS-Comments and Analysis Fugitive Dust

### Dave Sharp-Tricities CARES

**Executive Summary, Final Environmental Impact Statement-Fugitive Dust-** A post FEIS comment is appropriate for fugitive dust. The first and only dispersion model was not provided until late October 2023. The FEIS contains incorrect calculations and conclusions.

The Horse Heaven Hills Wind Project has the potential to create routine “dust bowl” type conditions, with associated adverse health impacts, for the communities North of the project and the greater metropolitan area of the Tri-Cities. Benton County historically has been in non-attainment status with the National Ambient Air Quality Standard (NAAQS) indicating systemic fugitive dust problems. The following bullet points a summary of major issues identified.

- Horse Heaven project fugitive dust emissions from construction activities have not been modeled. **This represents 99.5% of the total project PM10 emissions.**
- The HH project emissions will add an increment over background emissions, which are already high. Impacts to the adjacent communities are not known.
- The Project should be treated as a single source that include construction activity, and the Batch Plant, and Diesel Engines [Batch Plant].
- Emissions calculated for Ongoing Operations [O&M] are incorrect and understated. The FEIS then concluded emissions were de minimis based upon that incorrect calculation.
- Emissions calculations did not utilize factors representative of the local area’s fine silty soil and low moisture.
- A water source has not been secured. Without ample water for control, fugitive dust emissions will increase significantly.
- The FEIS has not provided data to assess the significance of the fugitive dust impact, and should not be used as basis for a Determination of Non-Significance [DNS].
- How can a Final Environmental Impact Statement be issued if the final Impact has not been calculated, quantified, or is not known?
- Downwind NAAQs monitors should be installed for PM10 and PM2.5 in the Badger Valley.
- The FEIS should be reopened for this Human Health topic.

#### Discussion-Project Location

The project consists of over 100 square miles of land in a swath 25 miles long located just South of the Tri-Cities and communities.

The project developer chose a location that is contrary to customary and general wind industry practice, in close proximity to a high population urban area. The Tri-Cities is the third largest and fastest growing metropolitan area in the State with over 300,000 people. Benton City and Finley are a scant 1 mile from the project, with Kennewick and Richland municipal boundaries are approximately 2.5 miles distant.

There were numerous public comments, photographs, air quality monitoring data, technical papers and testimony that **fugitive dust is already a problem** in the Tri-Cities area. The project would add to those emissions. Nearly 100 miles of unpaved roads and crane paths will be constructed solely to support construction and ongoing operations. Prevailing wind direction brings the dust emissions into the Badger Valley and beyond. The majority of dust emanates from the dryland wheat areas where the project will be located generally upwind of population, cities, and communities.

### **Fugitive Dust-General**

Fugitive dust is a criteria pollutant regulated nationwide by the EPA through the National Ambient Air Quality Standards (NAAQS). PM-10, and PM-2.5 are of particular concern because their small size allows inhalation to the lungs. In Washington, Department of Ecology is responsible for PM monitoring and compliance.

From Dept of Ecology Website: *"Particulate pollution affects the airways and lungs, and can cause problems in other parts of the human body. It's especially bad for those with chronic heart and lung disease (like asthma, bronchitis, and emphysema), children, and the elderly. It worsens these diseases, which can lead to hospitalization or even early death".*

**Final Environmental Impact Statement**-Supplemental Emissions calculations and modeling results that were seen for the first time in the FEIS raise questions about the increment of fugitive dust that will be added from the entire project. The calculations and dispersion model for the Batch Plant Engine Sources [Batch Plant] in FEIS Appendix 3.2-2 was not in the Draft EIS, and was only seen by the public at the end of October 2023. The largest emission source by far, construction activity emissions has not been modeled.

### **Emissions Calculations Review Findings (Summary)**

#### **Construction Activity-**

1. Construction Emissions-1,100 Tons-The major source of particulate emissions by far come from construction activities (FEIS Appendix 3.2-1); approximately 1,100 tons/year for PM10 for Project Phase 1 alone; Another 1,000 tons for Phase 2. **No area modeling was performed to include construction activities which account for 99.5% of project emissions.**
2. Batch Plant Emissions-5.5 Tons-The Batch Plant emits approximately 5.5 tons/year. Area modeling was performed. Batch plant modeling barely stayed within NAAQS exceedance limits when modeling potential to emit emissions scenarios. That raises serious questions about the modeling that **was not performed** with a factor 200 times the Batch Plant emissions.

3. Whole project dispersion modeling needs to be performed for Phase 1 and Phase 2. Turbine locations crowd the Northern Lease boundary and are much closer to communities than the Batch Plant.
4. Emissions calculations must use local conditions of soil and meteorological data rather than general AP-42 factors discussed below under Tri-Cities Cares review.

#### **Post Construction Ongoing O&M Activities [O&M]**

1. Appendix 3.2-1 incorrectly calculated O&M fugitive dust emissions. The FEIS declared the fugitive dust from O&M to be de minimis based upon the incorrect calculation.
2. The fugitive dust calculation needs correction, O&M details need to be added, and a project area dispersion model should be performed for O&M.
3. AP-42 factors- Same as item #4 above.

**Overall-**The project should be considered a single new source, emissions calculated and dispersion modeled accordingly.

#### **Tri-Cities CARES review of FEIS Emissions Calculations-Details**

**References:** 1. Final FEIS-Horse Heaven Wind Project, 2. Appendix 4.3-1 Emissions Calculations, 3. Appendix 4.3-2 Tetra Tech Air Quality Dispersion Modeling Evaluation, and 4. USEPA AP-42 Compilation of Air Emissions Factors-Chapter 13

1. The project has not secured a source of water for the project. Throughout the construction phases the calculations show that dust control by use of water is 70 to 75% depending upon the calculation. What metric will be used to determine whether dust control methods are not controlled properly? Will the standard be visible fugitive dust (20% opacity)? The project should not proceed any further without a water supply.
2. The FEIS language indicates that water is to be used for dust control, but the window is open for the contractor to use other means in place of water such as compressed schedules, staging, “alternative methods”, etc., to use less or perhaps even no water. Without adequate water, emissions could be up to 3-4 times higher. The Applicant should perform alternate calculations with less of control efficiency if their intent is to economize water use, or not use water for dust control.
3. The major source of particulate emissions is from construction activities; approximately 1,100 tons/year for PM10 phase 1, and 1,000 in phase 2. **Emissions from construction activities are roughly 200 times that of the Batch Plant emissions.** The FEIS did not model these emissions. The limited modeling performed is not adequate to assess the overall project area emissions and impact to downwind population. A “whole site” model should be used.
4. The emissions calculation for ongoing operation is incorrect and understates emissions. The calculation needs to be redone and dispersion modeling should be performed for O&M activities post construction. The calculation should include:
  - a. Windblown dust from new permanently disturbed areas.



- b. Vehicle wheel contact to paved and unpaved roads. Road travel miles should include all vehicle traffic including employees, and contracted employees of the wind turbine supplier, other support contractors, substation access, and estimates of crane travel, Solar panel washing and vehicle support.
  - c. Provide the dust control measures that will be utilized post construction, if any.
- 5. Local soil and meteorology data should be utilized in the AP42 calculations rather than the general AP factors, as recommended by AP42: [AP42, Section 13.2.2 Unpaved Roads - Updated November 2006 \(epa.gov\)](#) Reference Quote, page 2: *“Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.”*
  - a. The project lease is located in one of the dustiest and driest areas in the State with soil characterized as Ritzville Silt Loam (FEIS Chapter Figure 3.2-3 Lease Boundary Soil Data). Silt Loam is characterized as having very fine particulates. All AP-42 based emissions calculations containing a silt should utilize local values. From AP42, Chapter 13.2.2.2-Emissions Calculation and Correction Parameters *“It should be noted that **the ranges of silt content vary over two orders of magnitude. Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.**”* Reference testimony by Chris Wiley from the adjudication hearing describing the fine dust in the Horse Heave Hills flowing like powder.
  - b. Wind speed-Meteorological data for ground level windspeed should be from the representative area. Wind speed was data from the Tri-Cities airport. That data understates actual windspeed compared to data on the HHH. A significant calculation factor for windblow dust is wind speed.
  - c. Moisture-Any AP-42 emissions calculation should utilize moisture values expected in this local area, in particular on roads traffic used post construction that are more likely categorized as public roads with light duty vehicle traffic that use no water or dust control mitigation.

### **Conclusion**

The FEIS does not account for and analyze fugitive dust emissions impact to residents of Benton County. The issues identified warrant EFSEC reexamine the FEIS emissions calculations and modeling methodology. If the DNS is equivalent to a federal PSD review for a new source, it was not performed for the Horse Heaven project and the FEIS is incomplete.

Discounting visual and aesthetic issues is one thing; discounting human health and safety are another.

David Sharp, PE (retired)-Before retirement I was involved with new emissions source projects with fugitive dust emissions. I have had experience with AP-42 calculations.

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Public Safety Comment and other Areas of Concern-Kiona Ridge Trail  
**Date:** Sunday, December 17, 2023 10:54:30 PM

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External Email

Although I provided testimony on this subject, there were no cross examination questions, and I want to ensure that the Council is aware of, and understands this issue.

Hiking on the Public BLM Resource area post project will expose the general public to unacceptable risk that is completely avoidable. The area described below has a number of critical impact issues that can be avoided with common sense mitigation.

The following is from the Updated ASC: ***“Section 2.19 Security Concerns-The Project is located in an area that contains a low population density (see Section 4.4), and the construction and operation of the Project is anticipated to have minimal impacts on the security and safety of the local population. The following safety measures would be taken to reduce the risk of property damage (though sabotage, terrorism, or vandalism) at the facility as well as protect the public from personal injury: The Turbine towers would be sited away from existing roadways and residences per the applicable setback requirements described in Section 2.23.”***

The setback that the Applicant uses from tower to adjacent property is 500'. Thousands of hikers per year use this facility and will be that close, or even closer if they stay on the existing hiking trail. How about 20-50 feet? That is the distance from towers to the trail in some places.

There was testimony in the adjudicative process regarding the proximity of the northernmost row of turbines (#’s 1, 2, 3 and 4) to the BLM Resource area and the highly used Kiona Ridge trail at the West end of Phase 2, and the danger that large rotating equipment poses. The risks can be described as catastrophic consequences

from a common operating issue such as a mechanical malfunction, or in cold weather areas such as ours, "ice throw" from turbine blades.

The testimony referenced a procedure to mitigate ice throw. The turbine manufacturer(GE) provided a distance recommendation and a procedure to minimize the problem. Ice throw is a well known issue, and at least one State mandates mitigation to address ice throw. No such mention was made in the FEIS. The question should be, who will be liable if there is an accident that was entirely predictable? The turbine manufacturer disclosed the problem and offered mitigation. The Applicant remains silent on the issue as has EFSEC. The adjudicative decision is not public, but we hope that Mr. Torem recognizes that two of the biggest concerns, public safety and cultural property issues should not trump profit.

It also should be noted that the Applicant chose to remove 3 turbines just to the South of the Kiona Ridge and very close to the turbines being discussed. We have not seen the rationale, but an EFSEC staff member, Mr. Green, mentioned visual reasons in the FEIS preview in October. What rationale can explain removing unobjectionable turbines for visual and aesthetic reasons when they are 2 1/2 miles from a key observation point that the public cannot access, and at the same time ignoring the four turbines mentioned above?

There needs to be special consideration by EFSEC to either remove these objectionable turbines, or move them back to a distance to where they are not a public safety issue. The lease boundary adjoins a BLM Resource area, but the Applicant has provided an "adjoining property" setback equivalent to 1 turbine height setback. The adjoining land is designated by the County as GMAAG, but will never be used as such. Nothing can be grown on these windswept rocky ridges and steep slopes that descend to the Yakima River Basin. It is BLM land and a public resource. We hope it will stay that way. The setback used is simply disproportionate to the situation and consequences that could occur.

This is a special setback case and one that the county rules did not anticipate would ever happen. The setback distance should be at least the equivalent of what they would be from a residence; 2500 feet, 4 times rotor span, which is a previous EFSEC precedent from residences.

However, there is more to this story. The area needs to be protected and conserved for safe public use, but to protect cultural resources as described below. The Project trespasses on a critical area of cultural concern to the Yakama Nation. The Kiona Ridge Trail follows that ridge, on which the Applicant has chosen to place 4 turbines. This trail, in use by Native Americans for millennia, will be gone forever as significant earthmoving would flatten the ridge and alter the very landscape of the trail, meaning that after the project is gone, the resource cannot be restored.

EFSEC is urged to recognize that this particular area has multiple areas of concern, and the Kiona Ridge areas should be protected from development. These turbines should be removed for multiple significant avoidable issues that can be easily mitigated.

The Tri-City area has a local conservation organization that has raised over a million dollars of private funds and with thousands of hours of volunteer work, have developed and conserved two hiking trails to elevated viewpoints. Their mission is to preserve ridges for hiking and recreation purposes.

This is a healthy dose of irony with one group raising money to develop recreation opportunities while the project Applicant, incentivized by taxpayer subsidies, is degrading and limiting activity in another.

David Sharp  
Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse heaven Hills Wind Farm  
**Date:** Monday, December 18, 2023 9:11:54 AM

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**From:** Geneva Carroll <genevacarroll@yahoo.com>  
**Sent:** Sunday, December 17, 2023 11:37 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Horse heaven Hills Wind Farm

External Email

The proposed HHH Wind Farm is dangerous and ugly.

The power it is supposed to generate goes to Western Washington. Let them have the wind farms.

Do not allow our Horse Heaven Hills to be used for this purpose!

Thank you,

Geneva Carroll



**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse heaven wind project  
**Date:** Monday, December 18, 2023 9:12:13 AM

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**From:** Brent Strecker <brentstrecker@gmail.com>  
**Sent:** Sunday, December 17, 2023 12:35 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Horse heaven wind project

External Email

Please do not recommend the senseless Horse Heaven Wind project at the expense of ruining our home that we have worked so hard for.

Brent and Karen Strecker  
35401 S. Valley Vista  
Kennewick WA 99338

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Please Reduce the Size of Horse Heaven Hills Wind Farm Project  
**Date:** Monday, December 18, 2023 11:44:58 AM

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**From:** Miguel Orr <miguel.ziz192@gmail.com>  
**Sent:** Monday, December 18, 2023 10:01 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Please Reduce the Size of Horse Heaven Hills Wind Farm Project

External Email

Dear Washington Energy Facility Site Evaluation Council,

I am calling on you to restrict the construction of turbines in the Horse Heaven Hills Wind Farm that will be sited on relatively undisturbed shrub steppe land and within a 2-mile radius of ferruginous hawk nesting sites. I grew up in Prosser, Washington, am a Washington resident, and am very passionate about the region I grew up in. Constructing energy infrastructure on relatively undisturbed shrub steppe land harms an already endangered ecosystem and the precious animals that call it home and limits the Yakama Nation's access to key cultural sites and treaty-protected rights to hunt and gather. Green energy is important for our future, but cannot come at the cost of our already endangered ecosystems and the rights of our region's Indigenous peoples. Please do your job to protect the environment and peoples of our region and do not allow the construction of turbines within 2 miles of ferruginous hawk nesting sites and on relatively undisturbed shrub steppe habitat.

Best,

Miguel Symonds Orr

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Horse Heaven Hills Wind & Solar Comments Dec 20th  
**Date:** Wednesday, December 20, 2023 9:39:28 AM

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**From:** David McDonald <macclan47@gmail.com>  
**Sent:** Tuesday, December 19, 2023 8:42 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Horse Heaven Hills Wind & Solar Comments Dec 20th

External Email

December 19, 2023

Washington Energy Facility Site Evaluation Council  
621 Woodland Square Loop SE  
PO Box 43172  
Olympia, WA 98503-3172  
Proposal

Re: Horse Heaven Wind Farm

Dear Council Members:

I am concerned the Horse Heaven Hills wind and solar farm FEIS is still lacking in a number of areas.

There are far better ways to address our needs for generating electricity that do not require the destruction of large swathes of habitat like the proposed project does. You cannot support President Biden's "America the Beautiful" initiative to preserve wildlife habitat by covering up some of the last remaining habitat areas in Benton County with industrial scale solar panels and massive wind turbines. The cumulative impact on Eastern Washington's unspoiled habitat caused by multiple industrial sized wind and solar projects operating or proposed needs to be considered. The cumulative impact of new transmission towers, power lines criss crossing Eastern Washington along with security fencing and dirt service roads needs to be considered also.

Large urban areas are responsible for creating an urban heat island effect that is skewing global temperatures up. Yet industrial scale solar and wind farms are never located near these urban areas where the power is needed. It is small communities like the Tri-Cities that bear the environmental and social costs of these projects. Where is the environmental and social justice in forcing this large project on an area with less population, with lower median incomes and a greater ethnic population than the Puget Sound area where the power is needed most. Why does the Tri-Cities have to bear this

burden for the benefit of Western Washington. There are plenty of windy areas in Western Washington.

With the burden of this project comes the visual blight that it will create for the Tri-Cities. The residents of the Tri-Cities will be required to endure this visual blight, not the people that most need the power. The FEIS lacks any comprehensive discussion on the impact the visual blight will have on the home owners and property owners nearest the wind turbines and solar panels. There is a high probability that the value of the properties within close proximity to the solar panels and turbines will be diminished.

These property owners will then bear the burden of lower values for the benefit of the power users in Western Washington. With approval of this project the EFSEC will be taking part of nearby properties without compensation which is counter to one of the goals of the Growth Management Act. These impacts need to be studied more and proper mitigation should be provided. There are other ways of providing dispatchable electricity that do not create an eyesore for so many people.

Construction projects in Eastern Washington require significant dust control measures to protect air quality and public health. Most of the dust control measures require the use of large quantities of water. Does this industrial power project have a source of construction water? Water rights for industrial/commercial use may not be the same as water rights used for farming. Farm wells may not legally be available for construction dust control. Does the project have the proper water permitting? Can it even get the proper water permitting?

Water is a necessary component of controlling fugitive dust caused by construction activity. Fugitive dust creates major health concerns for residents of the Tri-Cities. Vacant lots, construction sites and dirt or gravel roadways all contribute to this health problem. Adding more non-hard surfaced roads near the Tri-Cities will only contribute to additional fugitive dust and health problems. Increased fugitive dust in the air increases health risks for residents of the Tri-Cities, not for the people in Western Washington that need the power. The FEIS does not consider the fugitive dust problem created by over 100 miles of non-hard surfaced service roads. There are alternate ways of creating firm electrical power that do not require the construction of 105 miles of roads or the occupation over hundreds of square miles land needed for habitat or farming.

There is also still a significant concern about the harm this project will do to the Ferruginous Hawks that frequent the proposed industrial power site. A recent commentary likened wind turbines to "Cuisinarts in the sky" because of the undeniable fact of the harm massive wind turbines do to birds of prey. Birds of prey are being killed all over the world by wind turbine farms. The Ferruginous Hawks in Benton County need to be protected from the wind turbines.

The last item of major concern related to this industrial power project in an area that is not zoned for industrial purposes is the problem of yearly wildfires. The hot dry weather in Eastern Washington during the summer creates just the right conditions for wildfires. Every summer there is a wildfire in, near or around the Tri-Cities. The size and scale of this wind turbine project is very concerning when thinking about our wildfire potential each summer.

Eastern Washington wildfires often need to be fought and suppressed by the use of aerial water bombers. People and property can be best protected from wildfires by the rapid response of aerial water bombers. However, because of its size and location this wind turbine project will impede or drastically limit the use of water bombers along the southern reaches of the Tri-Cities where they may be needed the most during a wildfire event. Local residents and their property need to be protected from wildfires. The government has a responsibility to ensure the safety, welfare and benefit of the general public. Permitting a large number of very tall wind turbines within close proximity to homes, schools and other buildings does not ensure the safety and welfare of the public as it relates to wildfires. The turbines will make it more difficult to protect people and property during wildfires. The wind turbines in the proposed project potentially could make wildfires south of the Tri-Cities more dangerous and damaging for life and property.

Please consider the above comments in your deliberations.

Thank You

David McDonald  
10312 W. Argent Rd  
Pasco, Washington



**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Fugitive Dust on Roads  
**Date:** Thursday, December 21, 2023 11:34:35 AM

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**From:** Hafkemeyer, Ami (EFSEC) <ami.hafkemeyer@efsec.wa.gov>  
**Sent:** Thursday, December 21, 2023 11:34:28 AM (UTC-08:00) Pacific Time (US & Canada)  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>; Greene, Sean (EFSEC) <sean.greene@efsec.wa.gov>  
**Subject:** RE: Fugitive Dust on Roads

Put it in comments for now. I believe the use of water suppression would be covered in the construction dust plan, or plan to that effect.

Best wishes,  
Amí Hafkemeyer  
Director of Siting and Compliance  
[ami.hafkemeyer@efsec.wa.gov](mailto:ami.hafkemeyer@efsec.wa.gov)  
Office 360.664.1305  
Cell 360.972.5833

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**From:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Sent:** Thursday, December 21, 2023 8:17 AM  
**To:** Hafkemeyer, Ami (EFSEC) <ami.hafkemeyer@efsec.wa.gov>; Greene, Sean (EFSEC) <sean.greene@efsec.wa.gov>  
**Subject:** FW: Fugitive Dust on Roads

Unsure if you're wanting to answer this or just put it to comments.

Thanks,

*Andrea Grantham*  
(she/her)

Energy Facility Site Evaluation Council  
Administrative Assistant 3  
Email: [andrea.grantham@efsec.wa.gov](mailto:andrea.grantham@efsec.wa.gov)  
EFSEC Email: [efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov)  
EFSEC phone number: (360) 664-1345  
Address: 621 Woodland Square Loop SE, Lacey WA 98503-3172  
Mailstop/P.O. Box: 43172  
[www.efsec.wa.gov](http://www.efsec.wa.gov)

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**From:** Dave Sharp <[dave@tricitescares.org](mailto:dave@tricitescares.org)>  
**Sent:** Wednesday, December 20, 2023 1:19 PM

**To:** EFSEC (EFSEC) <[efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov)>

**Subject:** Fugitive Dust on Roads

External Email

This question is directed to Mr. Greens.

Fugitive dust will be a big issue. Does the EIS require the contractor to use water on roads to control the dust? The emissions calculations in the EIS use 70 and 75% control factors that are what would be obtained using water. However, I see no stipulation that water must be used. If they do not use water, the emissions will rise by a factor of 4, all other variables remaining the same. Thank You.

David Sharp

Vice President, Tri-Cities CARES

Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)

Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Additional Wind Farm  
**Date:** Friday, December 29, 2023 8:50:15 AM

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**From:** Gary Dukelow <duffer1a@gmail.com>  
**Sent:** Friday, December 29, 2023 8:27 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Additional Wind Farm

External Email

I am opposed to the proposed 150-250 wind turbines south of the Tri-Cities. They will produce maximum power in only the strongest winds. At only 10 years of life, blades and gearboxes are needing to be replaced. The cost to tear down a single turbine is \$200,000, not including any payback from selling or recycling valuable materials, which is heavily labor intensive and not always cost effective. Instead of decommissioning, more often the site will be 'repowered' which means replacing the turbines with newer technology.

We need to move to construct more nuclear powered facilities. This wind farm just postpones the nuclear option.

Gary Dukelow

**From:** [kmbrun@gmail.com](mailto:kmbrun@gmail.com)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Horse Heaven Hills Wind/Solar Project  
**Date:** Tuesday, January 9, 2024 1:06:54 PM

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External Email

It is my understanding that EFSEC will be reviewing and making a decision on January 24<sup>th</sup> about the final recommendation to be sent to Governor Inslee on the HHH Wind/Solar Project. It is also my understanding that the public is supposed to be able to comment. That said, I do not find any indication that the proposed recommendation will be made available to the public prior to the January 24<sup>th</sup> meeting. It will be impossible to comment with any specificity on a document we have not seen.

I urge you to make that document available with sufficient time for the public to review it and make specific comments on its contents. Not doing so shows a definite indifference to the public and puts a black mark on EFSEC's report card.

Karen Brun  
Kennewick, WA

**From:** [Lonnie Dittmore](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Horse Heaven Wind farm  
**Date:** Tuesday, January 16, 2024 2:40:48 PM

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#### External Email

Solar panels are at best about 20% efficient. They convert almost 0% of the UV light that hits them. None of the visible spectrum and only some of the IR spectrum. At the same time as they are absorbing light they are absorbing heat from the sun. This absorbed heat is radiated into the adjacent atmosphere. It should be obvious what happens next. When air is warmed it rises. Even small differences in ordinary land surfaces are capable of creating powerful forces of weather like thunderstorms and tornadoes. These weather phenomena are initiated and reinforced by land features as they are blown downwind. It is all too obvious to me what will happen with the heat generated by an entire solar farm. Solar farms will become thunderstorm and tornado incubators and magnets.

Solar panels are dark and and they emit energy to the space above them when they are not being radiated. This is known as black-body radiation. Satellites flying in space use this phenomenon to cool internal components. If they didn't do this they would fry themselves.

So solar farms not only produce more heat in summer than the original land that they were installed on, but they also produce more cooling in winter, thus exacerbating weather extremes.

So I conclude with this. There is nothing green about green energy except the dirty money flowing into corrupt pockets.

There is no such thing as green energy. The science doesn't exist. The technology doesn't exist. The engineering doesn't exist. We are being pushed to save the planet with solutions that are worse than the problems.



**From:** [Rick Dunn](#)  
**To:** [EFSEC.mt Comments](#)  
**Cc:** [Krupin, Paul \(WaTech Guest\)](#); [Karen Brun](#); ["Rick Aramburu"](#); ["Dave Sharp"](#); [Carol Cohoe](#); [Pam Minelli](#)  
**Subject:** Horse Heaven Wind Farm Comments - Wind Power in Washington Produces Zero or Less Energy During Recent Polar Vortex Weather Event  
**Date:** Wednesday, January 17, 2024 9:46:35 AM  
**Attachments:** [image002.png](#)  
[image003.png](#)

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### External Email

The Substack article I authored (shown at the end of this email) features a review of actual wind power production inside the Bonneville Power Administration Balancing Area (BPAT) during an 11-day period in late November 2023 through December 2. The article highlights the observable reality we deal with every year in Washington; as electricity demand shifts to a winter pattern, you cannot count on wind power inside Washington state or in the Columbia Gorge for reliable generating capacity.

And if that example were not an adequate enough representation of why I oppose the Horse Heaven Wind Farm (HHWF), I have provided a graph of how the 2,827 MW of wind power in the BPAT footprint is performing during the current polar-vortex weather event we are experiencing at the time of my writing of this email.

Yes, you are seeing it right, the 2,827 MW of nameplate wind farm generating capacity is actually drawing a net -1 megawatt-hours (MWh) from the grid at the same time solar power is producing 0 MWh and night time temperatures in the Tri-Cities are beginning to drop from a high of 18 degrees to a dangerously low 4 degrees. And just as we need dependable generating capacity the most, Washington wind is essentially non-existent. If you take the time to read my Substack article you will see I make reference to one of my favorite quotes when it comes to the clean energy debate: "averages are the enemy of reliability planning".

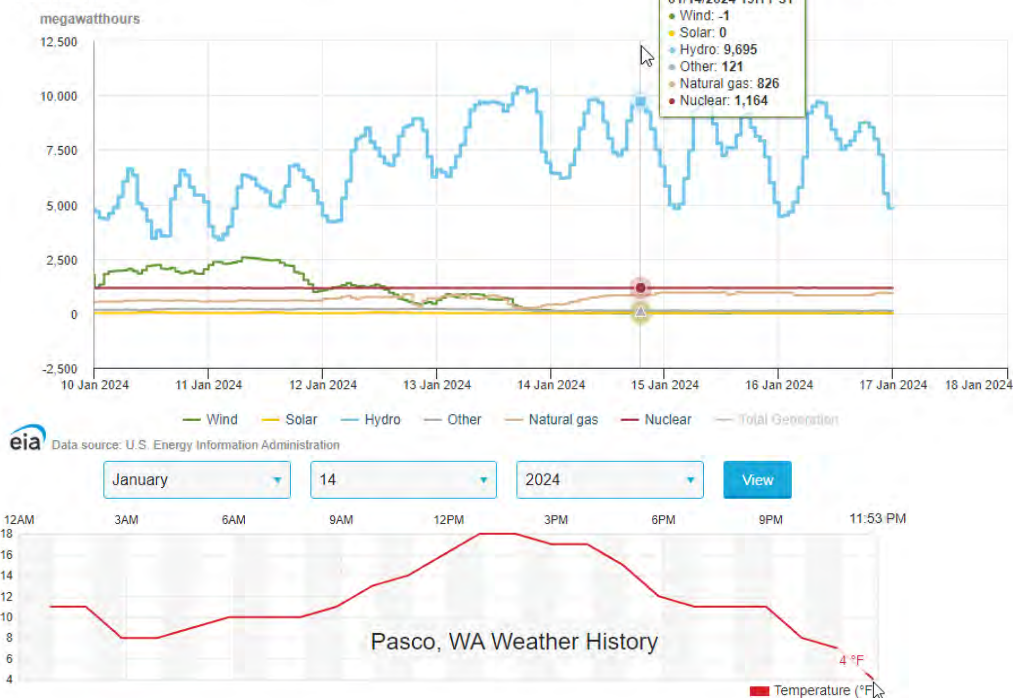
Washington's clean energy policies that are force-feeding unreliable and land-intensive wind farms is foolish and dangerous; and will unnecessarily require sacrifices to the environment and ecology that in the end will not deliver what is being falsely promised (affordable, environmentally responsible and **reliable**) clean energy.

In closing, I offer a quote from my testimony filed with EFSEC on February 1, 2023: "I appeal to EFSEC members as fellow citizens to take a hard look at the numbers and to not approve the HHWF. You must be able to stand on solid ground when making your decision, not some vague notion of a clean energy future that refuses to come to terms with the land use and environmental impacts you are endorsing. This will be your legacy for decades to come and if you approve the HHWF, the damage will be done. And for what?"

Respectfully Submitted,

**Rick Dunn**  
General Manager, Benton PUD

Bonneville Power Administration (BPAT) electricity generation by energy source 1/10/2024 – 1/17/2024, Pacific Time



**From:** Rick Dunn from Rick Dunn - Pro Nuclear, Experience & Common Sense

**Sent:** Saturday, January 13, 2024 7:45 PM

**To:** [paul@presari.com](mailto:paul@presari.com)

**Subject:** Sawing Off the Branch We're Sitting On and Deepening our Dependence on Northwest Hydro for 'Blackout Insurance'

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## [Sawing Off the Branch We're Sitting On and Deepening our Dependence on Northwest Hydro for 'Blackout Insurance'](#)

Washington and Oregon have Teamed with the Federal Government to Undermine the Very Hydropower on Which 100% Clean Electricity Mandates were Based

[RICK DUNN](#)

JAN 14



[READ IN APP](#)

Reliable electricity is critical to every aspect of modern civilization, including food, shelter, medical care, education, and entertainment. When you think about it, electric utilities are really in the health, safety, and wellbeing business.

And while customers and policy makers rightly engage in holding utilities accountable for providing affordable and environmentally responsible electricity, when it comes to delivering on reliability, there is *nobody with more skin in the game than utilities*.

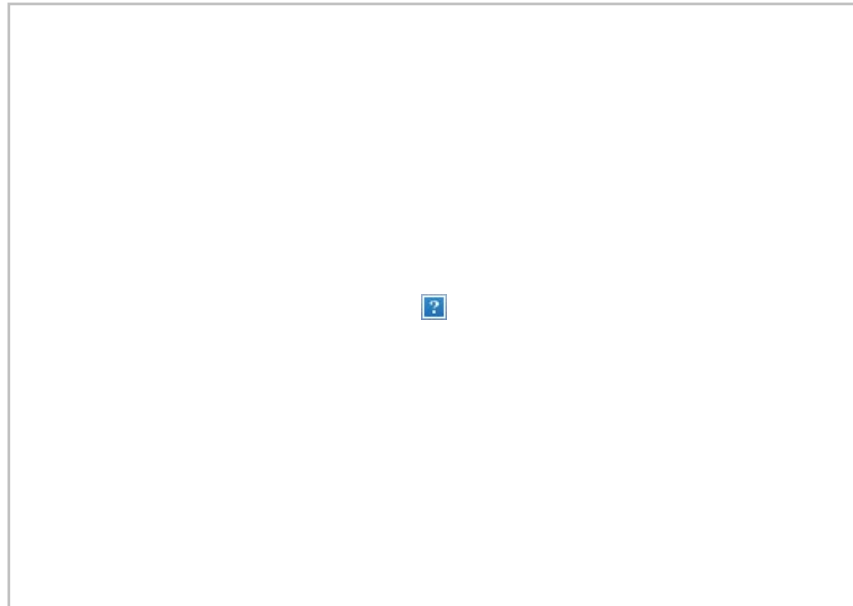
Failure to “keep the lights on” can be a *matter of life and death* and will always be the metric by which utilities will receive their harshest critiques and ultimate judgments.

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## ***CLEAN ENERGY LAWS & THE POLITICS OF HYDRO***

Unfortunately, overly aggressive clean energy laws in Washington and Oregon have boxed many northwest utilities into a corner by taking reliable technologies off the table before we have dependable carbon-free replacements like nuclear in place.

One frustrating irony is that some of the same entities who helped force-feed a deepening dependence on wind and solar power, are continuing to irresponsibly call for the *erosion of carbon-free hydroelectric generating capacity*. The very hydropower on which Washington and Oregon's 100% carbon-free electricity laws and bragging rights were established.

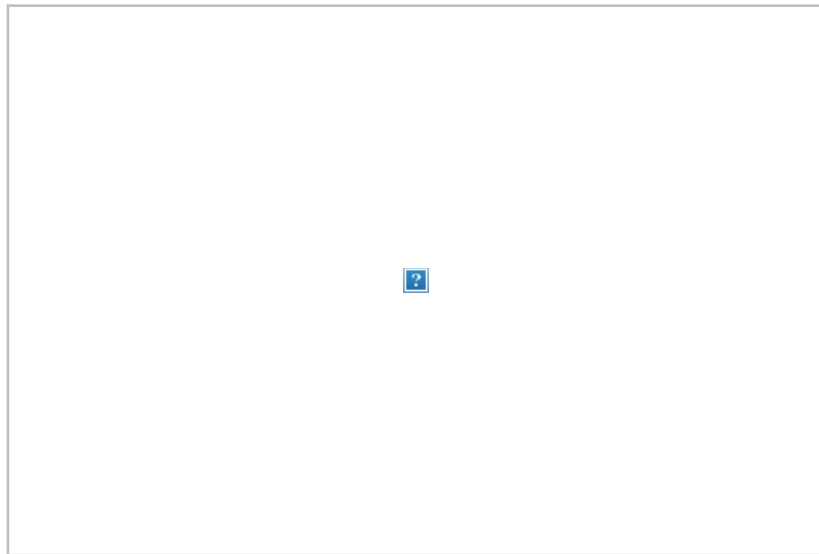


### **Art Credit: Marjean, my beautiful wife and best friend for more than 40 years**

And rather than celebrating existing nation-leading clean and low-cost energy capabilities, highly-funded special-interest-groups have capitalized on a shift in political power, together with emotionally charged arguments and pseudoscience, to undermine hydropower while *falsely promoting* wind and solar technologies backed up by batteries as environmentally benign, low-cost and operationally equivalent replacements.

While the general public is likely unaware, it's important citizens understand political leaders and agencies in Washington and Oregon have been working behind the scenes for a number of years to diminish hydropower through regulatory actions like endorsement of *risky and excessive spillway flows*.

The next time you drive by a hydroelectric dam and observe frothy downstream river conditions created by multiple spillway waterfalls, keep in mind no electricity is being generated with this water. And as a consequence of high volumes of plunging water, the total dissolved gas (TDG) levels in the river are increasing.



### McNary Dam on Columbia River. Photo courtesy of U.S. Army Corps of Engineers

And when TDG levels get too high, salmon and other aquatic species can be ***injured or even die***. In the case of salmon smolt, high TDG levels can cause gas bubble disease (GBD), a non-infectious, physically induced trauma.

While salmon science is complex it is important to know, with support from Washington and Oregon agencies, federal dam operations have been changed in recent years to allow long periods of 125% TDG levels; which is ***well above the 110% criteria*** previously enforced by state water quality regulators to avoid acute levels of GBD and the salmon mortality that can come with it.

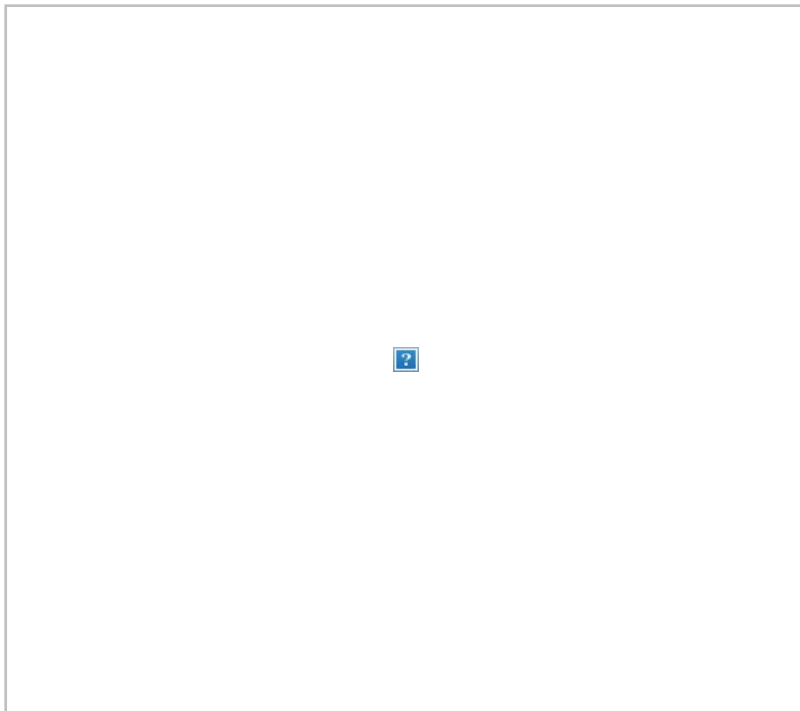
It has yet to be determined whether dangerously high spill is helping or hurting salmon. But one thing is for sure, these risky operations are reducing the amount of electricity generated by dams.

Additionally, over the past three years, state officials in Washington and Oregon have helped set the stage for ***possible future degradation*** of hydropower through a much broader than intended application of water temperature regulations included in the federal Clean Water Act.

In summary, US Environmental Protection Agency (EPA) water temperature regulations are now being unfairly applied to each of the eight federal dams located on the lower portions of the Columbia and Snake rivers. While nobody wants river temperatures to be too high for salmon survival, Columbia and Snake River temperatures at the Canadian and Idaho borders are often too warm to meet state requirements. So the ***standards may be impossible to meet*** and may set the dams up to fail.

And as if it wasn't going to be hard enough for Washington and Oregon utilities to balance affordability and reliability while meeting the electrify-everything clean energy policies of their respective states, we are now forced to contend with an unprecedented effort by our states to coordinate with the federal government in ***undermining hydropower like never before***.

This coordination culminated in the Biden Administration's public release of a United States Government (USG) "commitments" document December 14, 2023 that puts the ***full force of the federal government*** behind further eroding support for hydropower by going as far as advocating for future breaching of the Lower Snake River (LSR) dams.



Source: Annette Cary, Tri-City Herald, November 28, 2023

While it depends on who you ask as to whether LSR dam breaching is a real possibility, *anti-hydro interest groups are publicly celebrating* the USG commitments as a “roadmap” to do just that. And no matter how you slice it, *LSR dam breaching has now been normalized* by the Biden Administration as one of several “center piece actions” required to restore salmon runs to non-specific “healthy and harvestable abundances” while claiming “replacement energy” in the form of intermittent and variable wind and solar can provide the basis for a breaching decision.

To add insult to injury, the Biden Administration developed their comprehensive plan using a legal strategy which *intentionally excluded utility and hydropower interest groups* from their negotiations with anti-hydro entities, four tribal nations, and yes, once again, the states of Washington and Oregon.

Scott Simms, CEO & Executive Director of the Public Power Council summed it up succinctly in a December 14, 2023 press release . . . “Almost two years of a closed-door process that began with a pro-dam breach agenda from the US Government ended today with, not surprisingly, *a blueprint for how to devalue, deplete and ultimately demolish* our region’s clean, renewable federal hydro power projects.”

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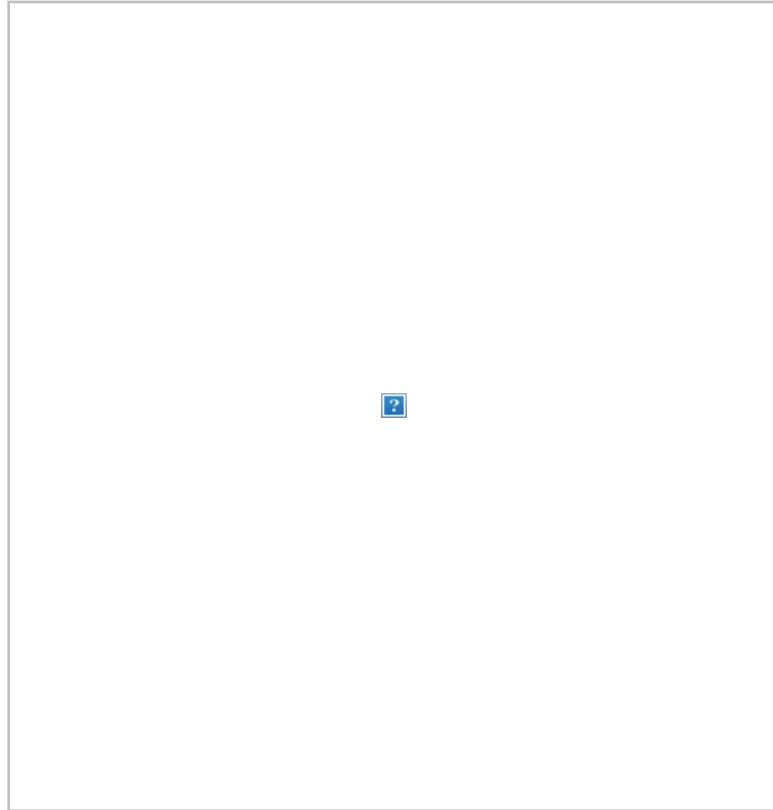
#### ***SO HOW BIG A DEAL IS NORTHWEST HYDRO?***

Not only would LSR dam breaching eliminate sources of emissions-free electricity, it would also remove 3,483 nameplate megawatts (MW) of generators that historically have delivered as much as 2,500 MW of dependable generating capacity when it’s most needed.

While anti-hydro interests always downplay the annual amount of electricity produced by the LSR dams, they fail to mention the transmission grid stability services and up to **25% of operating reserves** these dams provide to the Bonneville Power Administration (BPA). Reserves are the backup capability standing by to meet critically high demand during a polar-vortex winter weather event or when other generators experience an unplanned outage. Basically, operating reserves are “*blackout insurance*”.

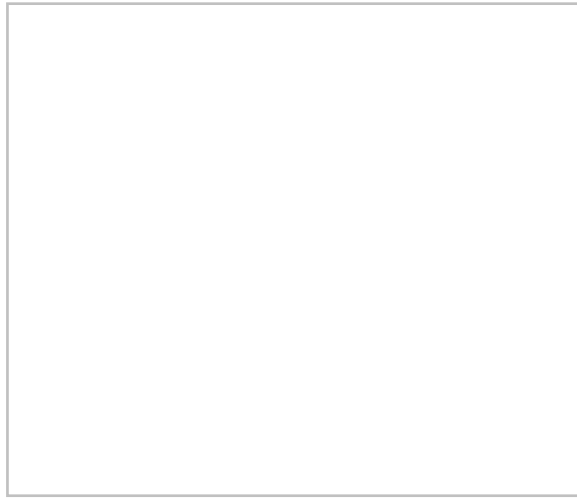


Not only does BPA market the output of the Federal Columbia River Power System (FCRPS) to 142 customers (including *127 not-for-profit utilities*) located throughout the Northwest who count on the electricity derived from 31 hydroelectric dams, they are also one of 38 balancing area authorities (BAA) in the western power grid.



**Source: Western Electricity Coordinating Council; BPA is a federal agency responsible for marketing the output of 31 federal dams and the CGS nuclear plant as well as operating 75% of the Pacific Northwest Transmission Grid**

BAAs are responsible for coordinating regional exchanges of electricity and for maintaining *minute-by-minute* power grid *demand and supply balance* which is most challenging during extreme temperature and weather conditions.

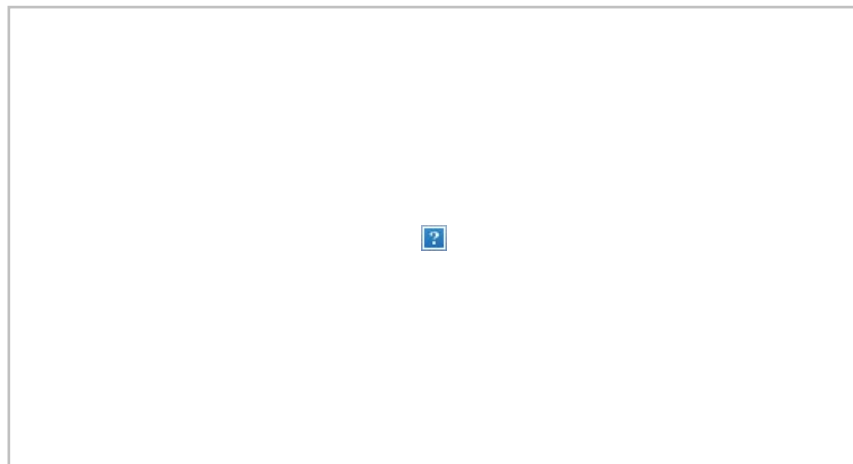


### **Demand & Supply Balance is an Unforgiving Law of Power Grid Physics with Blackouts as a Consequence of Failure**

One of the elements included in Biden’s USG commitments and supporting documents is to provide federal funds to form a new Pacific Northwest Tribal Energy Program with the goal of tribal development of between 1,000 MW and 3,000 MW of wind and solar generation backed up by energy storage; which in theory could be used as *replacement power* for the LSR dams in the event Congress authorizes breach in the future.

Setting aside the legal arguments as to why the USG cannot commit to “sole sourcing” BPA replacement power, lets take a look at the reality of BPA’s balancing area responsibilities today and what it would look like to “replace” the LSR dams with wind and solar farms.

First, it’s helpful to know Pacific Northwest hydro is capable of producing just over 16,000 average megawatts (MWa) or almost half of the annual electricity generated in the region. And on average, *BPA’s federal-dams represent around 50%* of the total regional capability or about 8,000 MWa.



Source: Northwest Power and Conservation Council

While these are big energy numbers, when it comes to power grid reliability, *averages are mostly irrelevant*. What counts is what generation shows up during specific hours, on particular days, and under critically high demand conditions.

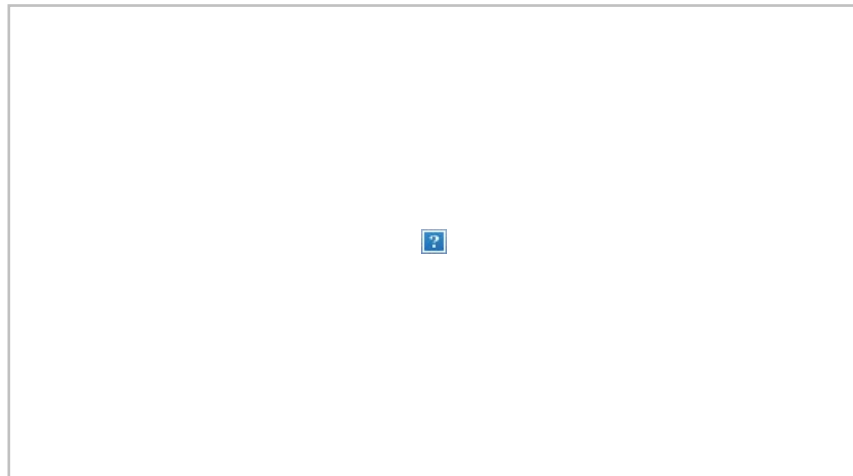
One of my favorite quotes in recent years is something northwest utility expert and consultant Randy Hardy said during a regional meeting . . . “*averages are the enemy of reliability planning*”. What Mr. Hardy was alluding to is that utilities are expected to deliver electricity around the clock no matter what the weather and with 100% always-on customer expectations. Utility customers will not (and should not) accept that utilities are planning to keep the lights on most of the time, on average.

With that said, utilities do not plan the grid to provide 100% reliable power. A common planning standard is referred to as a “1-in-10” which translates to one day (24 hours) in ten years or 2.4 loss-of-load-hours (LOLH) per year, regardless of the magnitude or number of outages. The point of bringing up these numbers is to emphasize that to meet modern grid reliability planning standards, utilities must have generating technologies in place that can be *counted on down to the hour*.

This means generators that have predictable fuel supplies and are *controllable* and capable of operating across a range of outputs optimized for electricity demand currently on the grid; and what is forecasted for future days, months, and years. In utility vernacular, generators with these traits are referred to as *dispatchable*.

While this may go without saying, *dispatchable does not include wind and solar* farms which only produce electricity proportionate to wind speeds and the position of the sun in the sky respectively.

In addition to being controllable, dispatchable generators also have the ability to operate at their maximum (nameplate) generating capacity when called upon. Pacific Northwest total hydro nameplate generating capacity is over 34,000 megawatts (MW). Of this amount, BPA manages just over 22,000 MW (65% of the total).

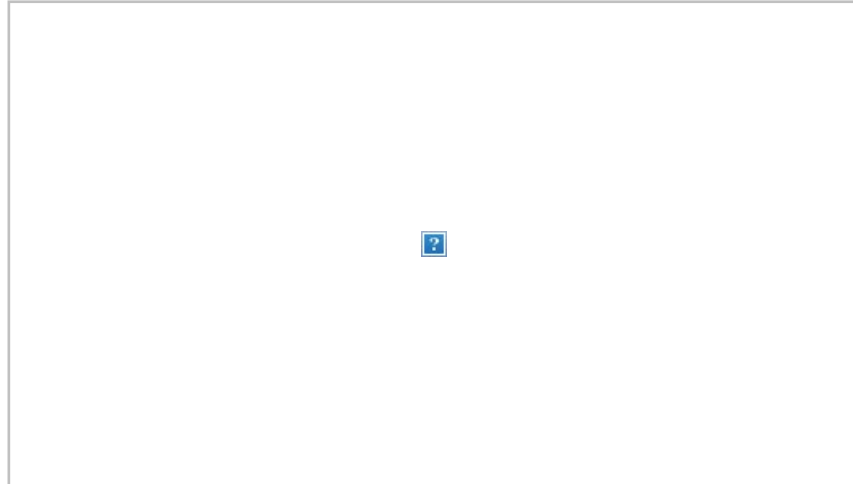


Source: Northwest Power and Conservation Council

While hydropower is a great technology in many ways, it is also a variable generation resource subject to available water supplies and whether turbine-generators are out of service on a scheduled or unscheduled basis.

Given these variables, BPA hydro can be counted on to produce just over 16,000 MW during peak demand hours. This level cannot be maintained across all hours due to water constraints, but according to their most recent “Loads and Resources Study” federal hydro can be counted on to produce just over 11,800 MW across the hours of highest winter demand for electricity in January. So clearly, the *2,500 MW provided by the LSR dams is significant*.

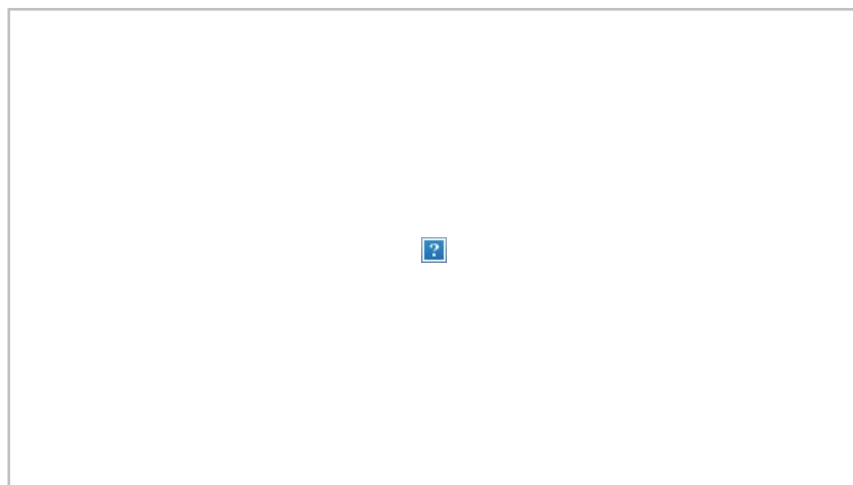
Now, let's take a look at some recent days in the life of the BPA functioning as a Balancing Area Authority (BPAT). While the eleven-day period illustrated in the following graph did not include particularly cold weather, it does provide a recent and real-world example of how critical *controllable generating technologies* like hydro are to keeping the lights on.



### **Only Controllable Generating Technologies Can Provide the Continuous and Perfect Balancing of Demand and Supply Required by Power Grid Physics**

As is always the case, the demand for electricity follows a pattern corresponding to the season of the year and the *daily rhythm of modern life*. In the case of late fall (winter), the daily pattern includes early morning and late evening maximums corresponding to hours of highest residential space heating occurring simultaneously with the use of appliances and other electrical equipment that define the “good life”.

In the previous graph you can see BPAT experienced a maximum demand of 9,534 megawatt-hours which occurred between 7 am and 8 am on November 28th. And in the next graph, you can see the generation technologies being used by BPAT to achieve demand and supply balance each hour and at the time of maximum demand.



**BPAT Wind Nameplate = 2,827 MW; Solar = 138 MW. Wind increases to maximum of 1,727 MW**

**(61% of nameplate) after peak demand period has passed.**

Clearly, hydro dominates the BPAT generation supply stack with the hourly shape of output following the same pattern of the demand curve shown previously. Nuclear which represents the Columbia Generating Station along with natural gas can be seen to be operating in an always on fashion (flat line) with some adjustments to their output to prescribed levels. This operating mode is what is referred to as “*base-load*” capability.

It should be noted, while BPAT is providing grid balancing services for just over 1,000 MW of natural gas, this generation is *not part* of BPA’s utility customer wholesale power supply portfolio. The same can be said for the vast majority of the 2,827 MW of Wind and 138 MW of Solar. The output from these technologies would normally be part of an exchange BPAT makes with another BAA elsewhere in the region or may be serving a BPA customer utilities’ demand inside the BPAT footprint.

The key take away from reviewing the BPA generation stack is to note hydro is providing *both base-load and demand (load) following* capability.

Additionally, you will note that wind power is supplying *near zero* generation across the majority of the 11 day period with only 61% (1,727 MW) of the nameplate capacity showing up randomly after the highest demand period has passed. And solar generation within BPAT’s footprint is too small at this point to make a difference.

Just imagine how this *multi-day wind drought* scenario would play out during a deeply cold winter weather event without the controllable generating capacity of hydropower. And the idea that 2,500 MW of LSR dam generating capacity can easily be replaced by 1,000 to 3,000 MW of wind and solar backed up by batteries is clearly suspect.

In fact, a 2022 study commissioned by BPA revealed, using currently available technologies without the help of new natural gas power plants, it would require an “*impractically large*” 10,600 MW of wind and 1,400 MW of solar to do the job under a deep decarbonization scenario driven by Washington and Oregon clean energy laws. And batteries were shown not to be economical due to “antagonistic” interactions characterized by the inability to store enough energy during periods of simultaneously low hydro, wind and solar output.

And just to get a picture of what this would look like ecologically speaking, the prescribed amount of wind would cover an area equivalent to between *20 and 40 times* the Seattle land area and the solar farms would require more than *4.2 million* individual panels.

Additionally, the wind and solar replacement plan would cost between \$277 to \$517 per megawatt-hour (MWh) compared to the LSR dams which cost between \$13 and \$17 per MWh. This multiple orders of magnitude increase in costs would drive northwest retail electricity rates in 2045 to levels between *34% and 65% higher* than today. The BPA study did show these big increases would be nullified if technologies like advanced nuclear, hydrogen turbines and carbon-capture are available and cost-effective; but there are some heavy lifts required to get to that point.

The BPA study also assumed the rest of the Pacific Northwest hydropower system would stay in place and be operated the way it is today. Not under some diminished condition resulting from *additional regulatory constraints* orchestrated by Washington and Oregon, with an assist from the US Government.

Another *critically important* point for citizens and elected officials to understand is that BPA’s *firm* (essentially guaranteed), nation-leading, and low-cost output from federal dams is already *100% spoken for* through contractual allocations to their utility customers; i.e. there is no surplus.



This means going forward, “routine increases” in electricity demand of less than ten average megawatts served with BPA power will be priced at their “Tier-2” rate which is currently **72% higher** than their coveted “Tier-1” rate. Tier-1 rates represent the low-cost power the northwest has long been known for that keeps attracting economic development interest. News flash, ***there’s none left!***

And as for economic development opportunities associated with electricity intensive manufacturing and industry demanding ten average megawatts or more, BPA offers a “New-Resource” rate which on average is currently **136% higher** than their Tier-1 rate. Suffice it to say, there are no takers to date, at least as far as I know.

While BPA is not the only game in town, their Tier-2 and New-Resource rates are a reflection of the cost utilities can expect to pay to secure additional dependable supply for at least the next four to five years. And after that, all indications are the ***glory days*** of low-cost electricity in the northwest ***are over***.

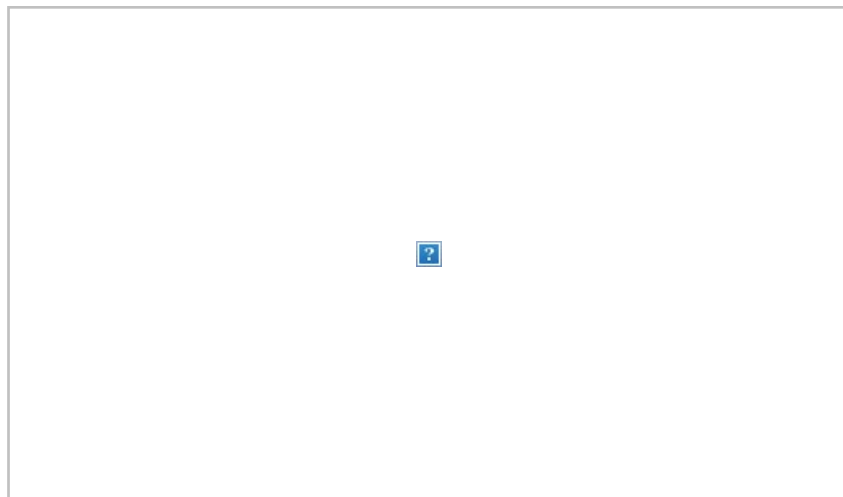
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### ***WE ARE GOING TO LEAN ON NORTHWEST HYDRO AND NATURAL GAS MORE THAN EVER AS COAL SHUTS DOWN***

And if you think Northwest hydropower is only critical to BPA and its utility customers, think again. BPA’s hydro resources along with the other 50% of non-federal hydro located throughout the Pacific Northwest are also critical to big municipalities like Seattle and Tacoma as well as investor-owned utilities (IOUs) who are the ***predominant owners*** of coal and natural gas power plants in the region.

As planned shutdowns of coal plants proceed and punitive financial penalties included in Washington and Oregon clean energy laws make natural-gas more expensive, IOUs will continue to ***hope for surplus hydropower*** as a means of economically balancing their demand and supply.

To put this in perspective, lets look at the same 11-day period previously analyzed for BPAT but expand the footprint to include the aggregate demand and supply balancing for the geographical area shown inside the dark gray boundary on the following U.S. map.

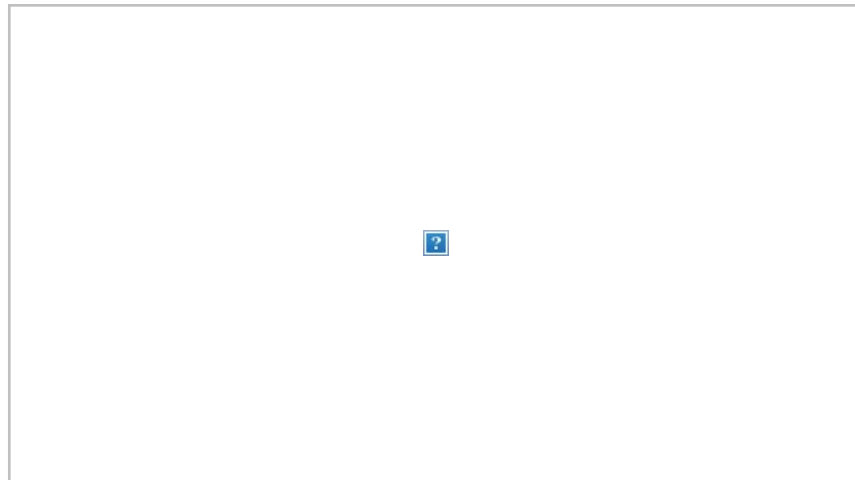


**Dark Gray Boundary Line Includes BAAs within Eastern Montana, Northern Nevada, Utah, Wyoming and Colorado**

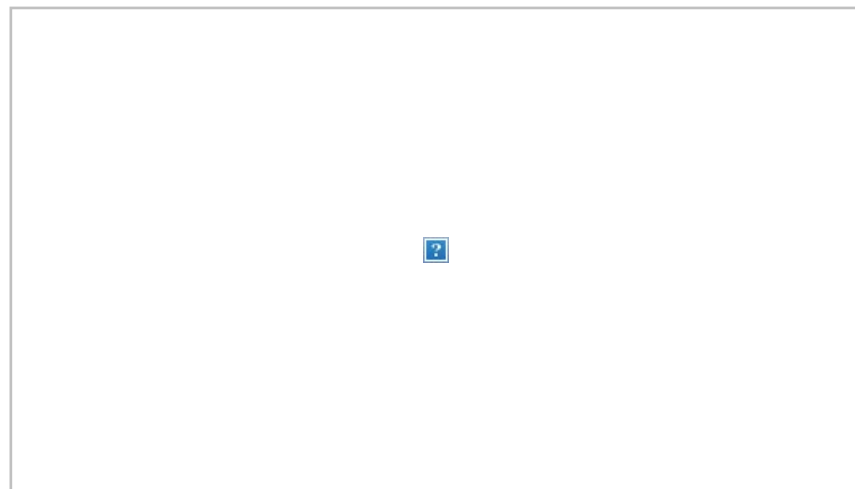
In the highly interconnected power grid illustrated by the BAA map of circles and lines, the lines represent transmission

interconnections that allow certain amounts of electricity to flow from one BAA to another. Keep in mind, just because there are transmission lines, doesn't mean electricity can easily be routed precisely where it needs to go. More on that in a future post.

For the same 11-day period we previously looked at for BPAT, the aggregate electricity demand across the greater Northwest (NW) power grid reached 51,351 megawatt-hours on November 29th, once again between the hours of 7 am and 8 am.



In the next set of graphs, you can see the different patterns and levels of generation from the various technologies used to meet demand across the NW geographical area that extends beyond the Pacific Northwest into Eastern Montana, Northern Nevada, Utah, Wyoming and Colorado.



**LOOK CLOSELY! Hydro is not expected to grow in capacity and may go down if politicians have their way. So how do we avoid blackouts if we shut down coal and they are trying to bankrupt natural gas?**

Once again, just like inside the BPAT footprint, *hydro* is the single technology providing the *most base-load and balancing* power inside the greater Northwest (NW) footprint, followed by natural gas and then coal.

Imagine on November 24th at 10 pm trying to meet 45,000 MW of electricity demand without the nearly 25,000 MW of dependable coal and natural gas generating capacity that showed up to assist 16,000 MW of hydro that night. And ask your elected officials this. If hydro capacity is going to shrink, then how do we *avoid blackouts* if we shut down coal and your policies are aimed at bankrupting natural gas?

As for solar. Not only does it have a '*night-time problem*' when it's producing 0 MW, it is also subject to big changes like the 2,500 MW drop in maximum mid-day production that occurred over the first two days of the period we're reviewing.

And as for wind, you can definitely aggregate a whole lot of wind farms across a big geographical area to produce a big MW number for a relatively short time. But the problem is you can *lose all of that generating capacity* relatively quickly when mother nature doesn't cooperate. This is illustrated by the more than 12,000 MW difference in wind generation that occurred between the low of 450 MW on November 24th and the high of 12,500 MW on December 2nd.

Yes, I know batteries are beginning to be deployed. But it's not a simple matter to predict when to charge batteries and when to discharge them. And batteries don't come cheap in terms of both dollars and cost to the environment. Particularly when you consider the volume of electricity we are talking about today. And don't forget Washington and Oregon policy makers are saying we need to *double the capacity* of the power grid in order to electrify transportation and natural-gas end uses.

Scroll back to the previous graphs, then try to imagine what the Northwest would do without the 17,500 MW of hydropower that showed up and did the heavy lifting to balance demand and supply across so many states.

It truly is unimaginable, but yet we have political leaders who have legislated the rapid shutdown of coal and are *demonizing and attempting to bankrupt* natural gas; while simultaneously advocating for the *removal* of the Lower Snake River dams and setting up hydro to fail.

---

## CONCLUSIONS

When it comes to grid demand and supply balancing, controllable hydropower is to the Northwest as natural gas plants are to California and most of the rest of the United States. And based on multiple studies and common sense, many utilities are deeply concerned drought conditions affecting hydro, together with an unwarranted belief that uncontrollable wind and solar can replace coal and natural gas power, may be walking us closer-and-closer to a *blackout cliff*.

To compound the growing reliability risks, Northwest utilities are facing significant uncertainty in planning for an 'electrified' future driven by inflation, supply chain constraints and long lead times that come with capital intensive and impactful infrastructure projects. Thankfully *hydropower is standing in the gap* for now.

The next round of Northwest coal plant shutdowns will be in 2025 when the total amount of capacity removed from the grid will reach 4,000 megawatts (MW). This is equivalent to removing the dependable electricity provided by four Columbia Generating Station nuclear plants.

While plans to retrofit two coal-fired power generation facilities with natural gas burners have been proposed, one in Nevada and another in Wyoming, going forward hydropower will *increasingly carry the grid reliability burden*.

Unlike the intermittent and variable generation from wind farms, the availability of affordable and reliable electricity provided by Northwest hydro has been considered a certainty for decades. But we *must not take it for granted*.

Electric utility customers always expect their service provider to hold the line on rates. And they will always hold their local power company responsible when the lights go out. Citizens must recognize that political leaders and the *special interest groups* that fund their campaigns *will not pay the price for blackouts*, utilities will.

Please understand, the Lower Snake River dams are *not surplus, outdated or expensive*. Nor are any of the other federal dams on the main stem Columbia and Snake River. They are the basis of the low-cost power supply portfolios of 127 not-for-profit utilities in the Pacific Northwest today and are the foundation of 100% clean electricity goals. And we *cannot get there by 2045 without hydro*.

We *must demand more* from our elected state and federal officials and hold them accountable for the uncertainty they are promoting with their unwarranted belief in weather dependent wind and solar technologies. And as for their unjustified and dangerous “Hail Marry” attempt to save salmon by advocating breach of the LSR dams, does anyone really believe this action would not be the first domino in the game being played by anti-hydro interests to further diminish and even eliminate hydropower in some cases.

How about we use our limited intellectual and financial capital to find some common ground where we continue to *invest* in improving salmon survival while also prioritizing the preservation of natural landscapes through the development of *energy-dense*, small-footprint, always-on technologies like nuclear and natural gas.

And we must stop electing “*energy ignorant*” politicians driven more by ideology than science and engineering and a true desire for human flourishing. Our collective *health, safety and well being* depend on it. We all want a better future for our children and grandchildren. But if we don’t get involved and demand a change of course soon, a lot of damage will be done, both to natural landscapes and our pocket books. And it will be very difficult to unwind.

Thanks for reading Rick Dunn - Pro Nuclear, Experience & Common Sense ! Subscribe for free to receive new posts and support my work.



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**From:** [Bayard, Trina](#)  
**To:** [Bumpus, Sonia \(EFSEC\)](#); [Drew, Kathleen \(EFSEC\)](#); [Moon, Amy \(EFSEC\)](#)  
**Cc:** [EFSEC mi Comments](#)  
**Subject:** Request for Jan 24 materials for Horse Heave Action Item  
**Date:** Wednesday, January 17, 2024 5:38:43 PM  
**Attachments:** [Audubon WA request for Jan 24 Horse Heaven Action Item materials 1 17 2024.pdf](#)

---

External Email

Dear Ms. Bumpus, Chair Drew, and Ms. Moon,

Please see attached for our request for timely release of documents related to the Jan. 24 Action Item for Horse Heaven Wind Project.

Thank you,

Trina

--

**Trina Bayard, Ph.D.**

Interim Executive Director

Director of Bird Conservation

206.704.4303

Pronouns: she/her

**Audubon Washington**

5902 Lake Washington Blvd. S.

Seattle, WA 98118

[wa.audubon.org](http://wa.audubon.org)



January 17, 2024

Sonia Bumpus  
EFSEC Director

Kathleen Drew  
Chair, Energy Facility Site Evaluation Council

Amy Moon  
Siting and Compliance Lead

621 Woodland Square Loop SE  
PO Box 43172

Olympia, WA 98503-3172

Delivery Via Email: [sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov); [kathleen.drew@efsec.wa.gov](mailto:kathleen.drew@efsec.wa.gov);  
[amy.moon@efsec.wa.gov](mailto:amy.moon@efsec.wa.gov)

**Re: Request for January 24 Action Item Documents for Horse Heaven Wind Project**

Dear Ms. Bumpus, Chair Drew, and Ms. Moon:

We received the January 4, 2024 email notice that EFSEC has scheduled the next Monthly Council Meeting for January 24, 2024. We also received two email notices on January 12th about the agenda and the upcoming action item, specifying a public comment period of three days prior to the January 24th meeting. It appears that the Council will be discussing and possibly voting on its final recommendation to the Governor regarding the project.

We are requesting that you make the final draft report and decision documents available publicly prior to public comment period and allow the public adequate time to review and provide meaningful comments to the Council before a final action is taken, even if this means delaying a final decision and recommendation. Transparency and meaningful opportunities for public comment are essential to legitimizing the EFSEC process, which is important both for this project and for setting precedent for future large-scale clean energy projects.

Thank you for your time and attention.

Sincerely,



Trina Bayard, PhD  
Interim Executive Director  
Director of Bird Conservation

**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: Scout Clean Energy  
**Date:** Friday, February 9, 2024 8:07:18 AM

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**From:** Virginia Fitzpatrick <virginiaf51@yahoo.com>  
**Sent:** Thursday, February 8, 2024 9:11 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Scout Clean Energy

External Email

Dear Energy Commissioners,

First I would like to commend your actions with Scout Clean Energy in your December meeting. As leaders of our state I expect you to do your due diligence, and not just accept the information that Scout Clean Energy provides.

I have many concerns about this green energy rush. My research showed all these BIG Megawatt promises end up producing about 30% of what they tout. You have to dig for any information about actual results

of all these “green farms”. If such a great amount of alternative energy is produced - why not advertise it?

Our “Governor recently banned eight chemicals and/or chemical classes will be banned on Jan. 1, 2025 when intentionally added to the product.

- ortho-phthalates
- perfluoroalkyl and polyfluoroalkyl substances
- formaldehyde and chemicals determined by Ecology to release formaldehyde
- methylene glycol
- mercury and mercury compounds
- triclosan
- m-phenylenediamine and its salts
- o-phenylenediamine and its salts

Lead and lead compounds are also

restricted when intentionally added or meet a certain threshold.”

One of my concerns is allowing so many components from countries that do not share our concerns for safety.

What countries are producing these solar panels that Scout Clean Energy intends to use?

What about the solar panels debris? (and there will be) Is there a comprehensive plan for clean up?

Will these companies put millions in trust for clean up?

We’ve all seen and heard about the discarded windmills?

A lot of rural people oppose destroying the areas where we choose to live. The visual and potential toxic pollution coming from

these “green farms” is anything but green.  
Has anyone considered using Hanford???  
Seems like a perfect place to me, basically  
already a wasteland.

The feds would probably lease it cheaply,

Thank you for your attention to my  
concerns.

Please respond to my questions.

Sincerely,

Virginia Fitzpatrick  
Goldendale WA

Sent from my iPad



**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Turbine #'s 162 and 243-Applicant Removal Commitment  
**Date:** Saturday, February 17, 2024 3:26:21 PM  
**Attachments:** [Public Comment Turbines 162 and 243-Final.pdf](#)  
[20240109 Horse Heaven FEIS Council Exclusion Considerations X01-1-Final Markup.pdf](#)

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External Email

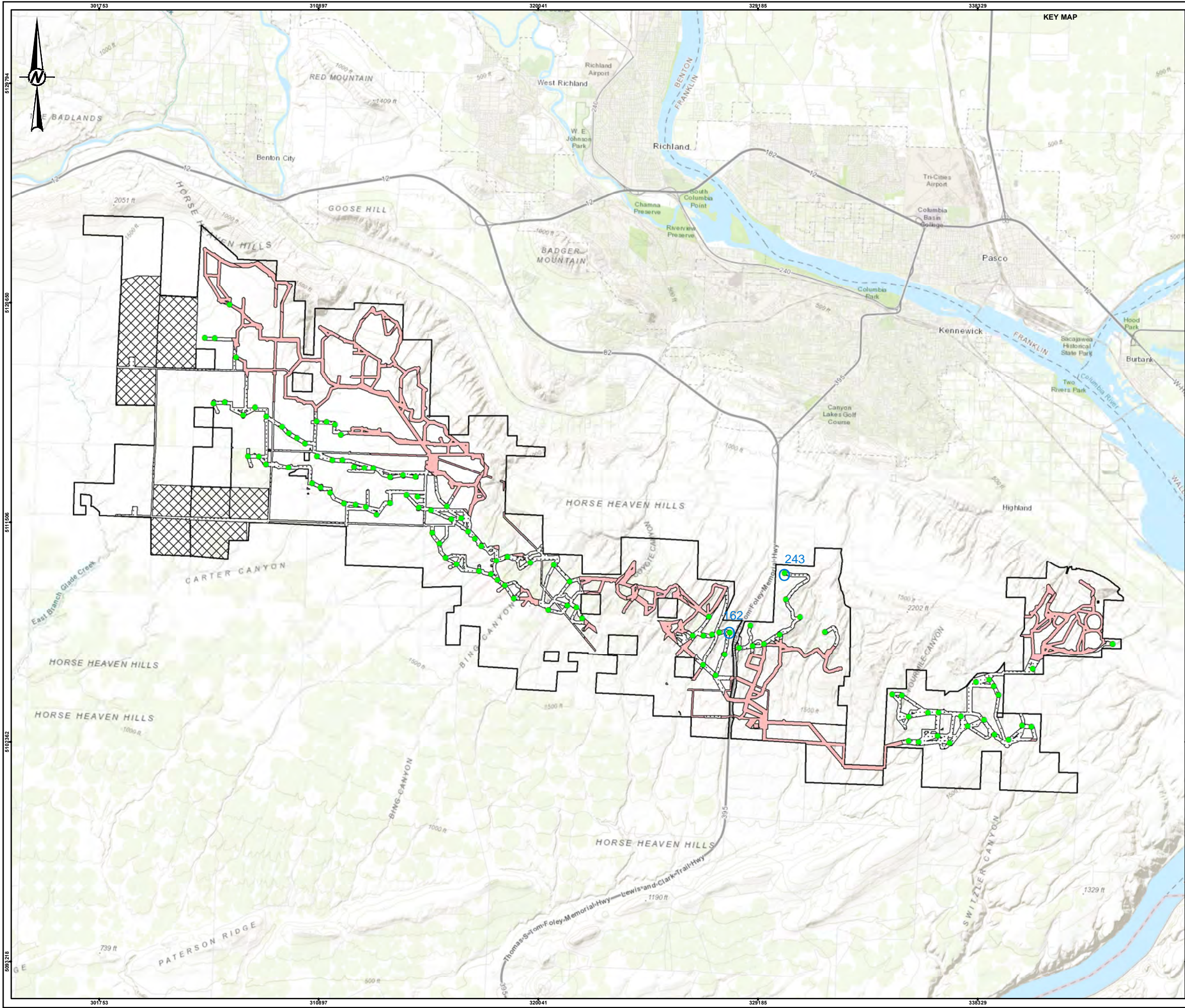
Shawn and Amy,

Attached is a comment regarding turbine #'s 162 and 243. The Applicant committed to removing several turbines including those mentioned after considering all comments. See Chapter 2 Proposed Action and Alternatives, Section 2.2.3.

Attached is the formal comment, and the Map Option X01-1 with turbines identified.

David Sharp  
Vice President, Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)





**LEGEND**

- Project Lease Boundary
- Solar Siting Area
- Micrositing Corridor - No Turbines
- Micrositing Corridor - Turbines
- Proposed Turbine - Option 1

**NOTE(S)**

1. ALL INFRASTRUCTURE REMOVED:  
- WITHIN HIGH OR ABOVE WILDLIFE MOVEMENT CORRIDORS

2. PROJECT COMPONENTS (TURBINES, SOLAR ARRAYS, AND BESS) REMOVED:  
- WITHIN MEDIUM OR ABOVE WILDLIFE MOVEMENT CORRIDORS  
- WITHIN THE 2MI FEHAST BUFFER

**REFERENCE(S)**

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 11N  
2. MOVEMENT CORRIDORS: WDFW 2021  
([https://wacconnected.org/cp\\_addendumanalyses/](https://wacconnected.org/cp_addendumanalyses/))

**CLIENT**

STATE OF WASHINGTON ENERGY FACILITY SITE EVALUATION COUNCIL

**PROJECT**

HORSE HEAVEN WIND FARM

**TITLE**

TURBINE LAYOUT OPTION 1  
REMOVAL OF TURBINES - FOR COUNCIL REVIEW CONSIDERATION NO. 1

CONSULTANT	YYYY-MM-DD	2024-01-08
DESIGNED	MK	
PREPARED	SCH	
REVIEWED	JP	
APPROVED	AH/SG/AM	

PROJECT NO.	CONTROL	REV.	FIGURE
31405435.000	01	0	X0.1-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



Public Comment-Horse Heaven Hills Project

Dave Sharp

Tri-Cities CARES

**Subject: Scout Post-Adjudication Commitments, Turbines #162, and #243.**

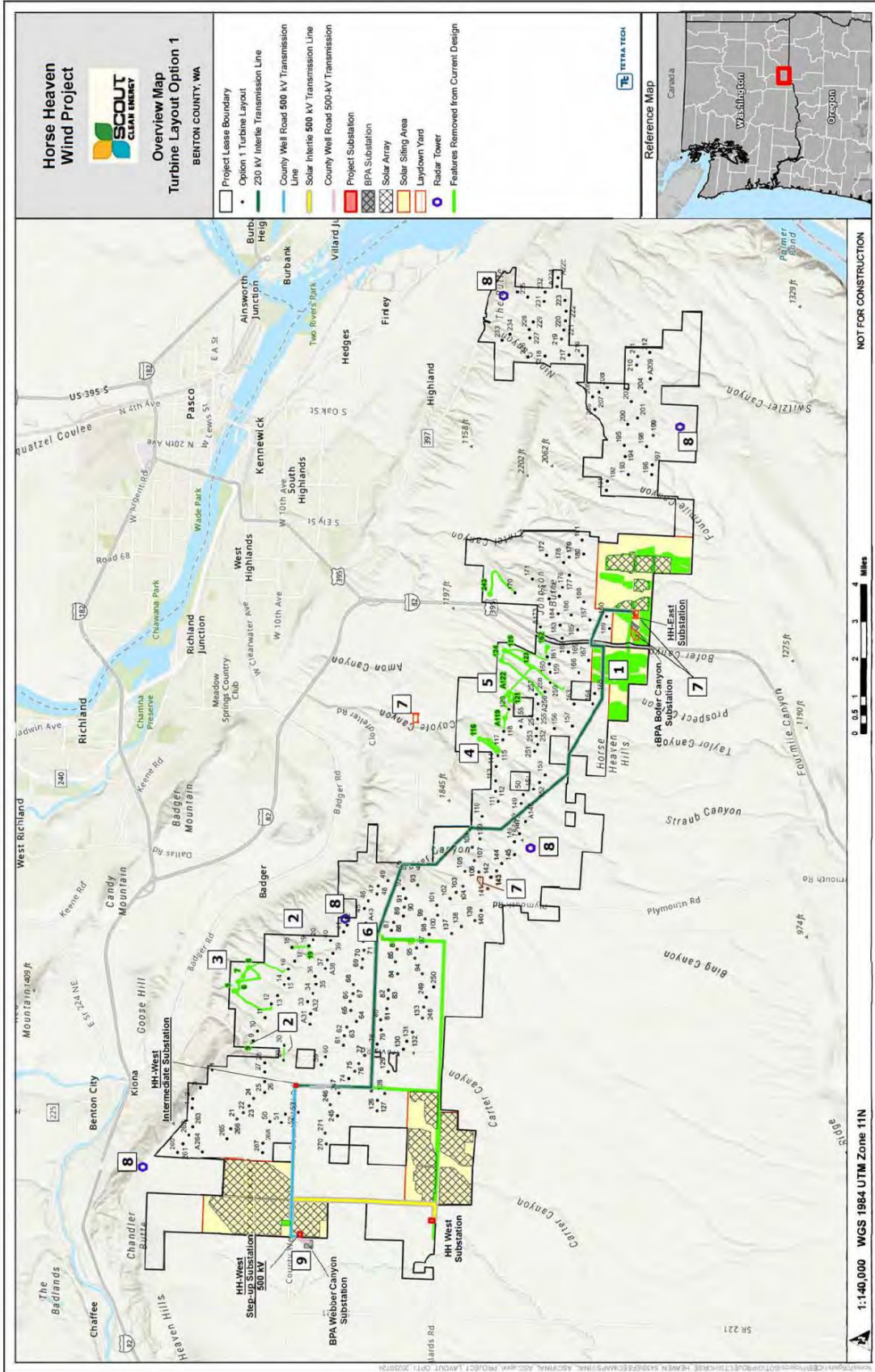
EIS Chapter 2 **Proposed Action and Alternatives** Section 2.2.3 page removed 9 turbines from option 1, and 3 turbines from Option 2. The Applicant provided changes in the Final ASC following comments and input from regulatory agencies, changes to applicable regulations, testimony from adjudicative hearings, and information received from the BPA. Additional Applicant commitments were identified and finalized in the Applicant's Final ASC. Turbine 162 and 243 were removed as well as 7 others from Phase 1.

The Council Deliberation maps prepared by Staff and shared with the Council brought two of the turbines back. Like all of the other turbines that have been voluntarily removed those turbines should be removed because of Applicant the commitments.

There Applicant provided their rationale which included visual impacts. There are others reasons:

- There have been numerous public comments about the proximity and prominence of the towers to Kennewick, homeowners' property and recreation areas. Turbine #243 stands out as the most Northerly turbine and closest to the Kennewick City limits. The location will likely restrict access to the Johnson Butte Trailhead, and the trail itself.
- Turbine #162 appears to be the closest turbine to Highway 395, appearing to be only ~550' West of the highway. There is an existing power line running between the turbine and the highway approximately 250-300' from the centerline of the tower. Considering the different size turbines and blade lengths proposed, the horizontal clearance would be only ~50-100 feet.
- The issue of aerial firefighting has not been totally resolved. However, an appropriate use of aerial firefighting would be to protect public roadways, and to prevent wildfires from spreading over a natural barrier provided by the highway right of way. Note that a horizontal setback of 550' will only effectively be ~300' because of the turbine blade length protruding into the setback space.

Tri-City CARES respectfully requests that EFSEC staff remove them from Option X01-1 maps provided.







**From:** [Lisa Wooley](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** Aerial fire fighting in the Horse Heaven Hills  
**Date:** Sunday, February 18, 2024 10:08:20 PM

---

External Email

To Whom It May Concern:

I am writing to express my concern regarding the impact the proposed wind farm in the Horse Heaven Hills would have on aerial fire fighting.

Wild fires occur frequently around the Horse Heaven Hills in the summer and fall, so much so, that we refer to these months as fire season. We can often see the smoke from these fires as they start from our back porch and we watch and pray for our neighbors and firefighters that the fires will be put out quickly.

It's difficult to express the sense of relief we feel as we see the aerial support fly in. We know lives are at risk, both human and animal, as well as homes and businesses. Our firefighters on the ground need the aerial support to quickly put out these fires. So far as a team our firefighters on the ground and the aerial support have been able to do this and do it very well.

Please do not put our community at risk by putting windmills in areas that are prone to wildfires. We need to continue to be able to effectively protect our homes and land and to ensure we continue to support our firefighters to have every option available to put these fires out quickly.

I have included a few pictures from our last fire season in 2023. I have many more from previous years. This is a real ongoing issue that I beg you to take seriously as you consider where to place windmills.

Thank you for your time and consideration.

Respectfully,

Lisa Wooley











[Sent from Yahoo Mail on Android](#)





Scout Clean Energy LLC  
1805 29<sup>th</sup> Street, Suite 2050  
Boulder, CO 80301  
(303) 284-7566

RECEIVED

April 15, 2024

APR 17 2024

ENERGY FACILITY SITE  
EVALUATION COUNCIL

**VIA UPS OVERNIGHT DELIVERY**

Energy Facility Site Evaluation Council  
621 Woodland Square Loop SE  
Lacey, WA 98503

**Re: Horse Heaven – Additional Courtesy Copies of Notable Comment Letters**

To the Energy Facility Site Evaluation Council:

Please find enclosed hard copies of several additional notable public comments on the Council's recommendation on the Horse Heaven Project Site Certification Agreement. Provided are copies for each of the Councilmembers, Benton County representative, and EFSEC Director Bumpus, along with two extra copies as needed.

Scout respectfully requests that these copies be promptly distributed to each of the designated recipients.

Thank you,

*Scout Clean Energy*



April 10, 2024

Kathleen Drew  
Elizabeth Osborne  
Eli Levitt  
Mike Livingston  
Lenny Young  
Stacey Brewster  
Energy Facility Site Evaluation Council  
621 Woodland Square Loop SE  
Olympia, WA 98503-3172

RE: Horse Heaven Clean Energy Center

Dear Chair Kathleen Drew and Council Members,

The Northwest & Intermountain Power Producers Coalition (“NIPPC”) appreciates the opportunity to submit comments regarding the certification of the Horse Heaven Clean Energy Center (“Horse Heaven”). NIPPC generally does not submit comments regarding the merits of any specific individual project’s application before the Energy Facility Site Evaluation Council (“EFSEC”), and does not comment here on any particular merits of Horse Heaven. NIPPC is submitting comments regarding the Horse Heaven application because of a unique and potentially long-term adverse effect on facility development in general and on Washington’s ability to meet its carbon reduction mandates. NIPPC urges EFSEC to revisit its process, both for this application and for other open or future applications, to ensure that proposed mitigation measures for energy facilities are well-reasoned and well-supported. Additionally, NIPPC urges EFSEC to limit late-stage shifts in recommendations to those clearly justified by available evidence in the record.

NIPPC is a membership-based advocacy group representing competitive electricity market participants in the Pacific Northwest and Intermountain region. NIPPC has a diverse membership which includes independent power producers active in the Pacific Northwest and Western energy markets. The purpose of NIPPC is to represent the interests of non-utility market participants in developing rules and policies that help achieve cost effective power sales and a competitive electric power supply market in the Pacific Northwest. A competitive electric market in the Pacific Northwest is key to the development and repowering of projects in Washington that will allow the state to meet its clean energy goals in the most cost effective and reliable manner.

Having reviewed the EFSEC Horse Heaven certification process, NIPPC is concerned about a problematic precedent that may be created. In particular, NIPPC highlights the risks to the



broader power sector of two mitigation measures proposed by EFSEC as conditions for project approval: (1) adopting unpublished draft guidance establishing a continuous 2-mile setback zone around all active and historic ferruginous hawk nests, and (2) prohibiting infrastructure within a broad set of wildlife movement corridors mapped as part of an agency working group for transportation planning. Both of these approaches diverge from other standards NIPPC is aware of, including past EFSEC practice, and appear to have been only weakly vetted at a late stage in the application process.

NIPPC fears that EFSEC's recommendations in this project application will significantly limit the availability of renewable energy sites in Washington, regardless of the project developer. NIPPC notes that the measures proposed as certification conditions in EFSEC's review of this application appear to differ dramatically from other states and the federal government. For example, other jurisdictions that manage ferruginous hawk habitat have temporary setbacks of 0.5 to 1 mile for active nests.<sup>1</sup> While individual states appropriately retain discretion to set their own standards, the proposed departure from mitigation measures used for other projects appears to have little supporting rationale in the application record, including any apparent active nests reported in annual raptor nest survey efforts around the project. These particular conditions and the process by which they were recommended may erode the power sector's confidence in the siting process and could pose a material risk to Washington's energy transition, with deep potential reductions in land available for building or repowering energy facilities.

NIPPC urges EFSEC to revisit its approach in this application and other applications going forward to rely on well-reasoned, well-supported, and reasonable conservation measures. NIPPC emphasizes the importance of limiting late-stage shifts in recommendations to those justified by scientific or other relevant, publicly available evidence in the record. An effective, disciplined EFSEC process is vital to maintaining a competitive electric market in Washington and to building and repowering the facilities needed for utilities and other entities to comply with the state's decarbonization laws.

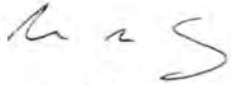
Thank you for considering our perspective.

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<sup>1</sup> See, e.g., Laura A. Romin and James A. Muck, *Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances*, Table 2 at 29 (Jan. 2002), available at: [https://www.fws.gov/sites/default/files/documents/Utah\\_Field\\_Office\\_Raptor\\_Guidance.pdf](https://www.fws.gov/sites/default/files/documents/Utah_Field_Office_Raptor_Guidance.pdf); U.S. Fish and Wildlife Service, *Region 6 Wildlife Buffer Recommendations for Wind Energy Projects* at 1 (Mar. 31, 2021), available at: <https://www.fws.gov/sites/default/files/documents/usfws-r6-wildlife-buffer-recommendations-wind-energy-projects-v3-2021.pdf>; Wyoming Ecological Services Field Office, *Protections for Raptors*, Table 1 at 5 at (Mar. 9, 2022), available at: <https://www.fws.gov/sites/default/files/documents/wyoming-ecological-services-field-office-raptor-guidelines-2022-03-09.pdf>.

NIPPC Horse Heaven Letter  
April 10, 2024

Sincerely,

A handwritten signature in dark ink, appearing to read 'S. Gray', with a stylized flourish at the end.

Spencer Gray

Executive Director  
Northwest & Intermountain Power Producers Coalition  
[sgray@nippc.org](mailto:sgray@nippc.org)  
(503) 482-9191



GE VERNOVA

April 9, 2024

Energy Facility Site Evaluation Council (EFSEC)  
621 Woodland Square Loop SE  
Lacey, WA 98503

**Re: Horse Heaven Clean Energy Center Project – Stakeholder Comments and Concerns on EFSEC Draft SCA and Draft Governor’s Recommendation**

Dear Chair Drew and Councilmembers:

GE Vernova appreciates the opportunity to file the following comments to the Energy Facility Site Evaluation Council (EFSEC) regarding the House Heaven Clean Energy Center Project (the Project). As the nation’s leading energy and technology innovation company, GE Vernova is committed to working with regulators and stakeholders at all levels as we work toward a successful energy transition.

As a project partner on the Project as well as a potential equity investor and equipment provider on other renewable energy projects under development in the state of Washington, GE Vernova respectfully shares these comments and concerns regarding the requirements EFSEC is placing on the Project as laid out in the Draft Site Certification Agreement (SCA) and the Draft Report to the Governor, issued on April 1st, 2024. Our goal as a global leader in wind turbine manufacturing is to support permitting initiatives to deploy clean energy in an efficient, environmentally sound and cost-effective manner.

**EXECUTIVE SUMMARY**

The State of Washington has positioned itself as a leader in the clean energy transition. First by passing the Clean Energy Transition Act (CETA), and most recently as a partner of the Pacific Northwest Hydrogen Association’s (PNWH2) regional hydrogen hub, selected by the U.S. Department of Energy (DOE). Energy stakeholders recognize the state’s leadership and for this reason are actively developing over 3,000 gigawatts of wind power projects across the state.

However, the recommendations and requirements by EFSEC in the Project’s SCA will risk threatening both this Project and the state’s overarching clean energy goals. For example, the Council’s requirement establishing a 2-mile radius surrounding ferruginous hawk nests where no wind turbines can be sited is **the most restrictive setback for the species in North America and provides for no allowance to confirm whether a formally identified nest even exists in 2024 or is still capable of being used.** There is also no consideration of seasonal usage or habitat suitability. EFSEC’s 2-mile radius restriction goes well beyond the 1-mile/1600 meter setback the U.S. Fish and Wildlife Service Region 6 recommends for active existing ferruginous hawk nests.

This new requirement could impact not only Horse Heaven, but all future wind projects, creating an unpragmatic hurdle toward the state’s clean energy goals. This could significantly chill the willingness of investors and lenders to finance renewable energy projects in the State of Washington.



## **BACKGROUND ON GE VERNOVA**

GE Vernova has pioneered technologies that have spurred world-transforming changes in the energy industry and are actively involved in all segments of the energy sector. We have long manufactured products designed to meet stringent government standards, while meeting customer requirements for safe, efficient, reliable, resilient, and affordable energy. Our technology produces one-third of the world's electricity, and our power generation equipment is deployed in more than 140 countries. In addition, GE Vernova equips 90% of transmission utilities worldwide, and 40% of the world's electricity flows via our software.

GE Vernova is unique among U.S. companies in designing and manufacturing industry-leading wind, gas, steam, and hydro-powered turbines, nuclear power generation technologies, power quality equipment, and hybrid power solutions, while incorporating the latest digital innovation. GE Vernova leads grid modernization and resilience efforts with a defense-in-depth approach to the design, development, deployment, and service of the world's most critical power systems. We service the products we sell, and we offer equipment upgrades that increase our products' efficiency and availability. Finally, through our Advanced Research Center (ARC), our scientists and engineers are focused on developing and improving breakthrough technologies to accelerate the energy transition including hydrogen, carbon capture and sequestration, and small modular reactors.

We have always embraced our diverse portfolio of energy products and solutions across GE Vernova. On April 2, 2024, we launched GE Vernova as a new, independent company, that will focus entirely on succeeding in the energy transition. We will be represented by approximately 70,000 employees worldwide and will use the combination of our technologies and expertise to help accelerate decarbonization efforts across the United States, while supporting domestic energy manufacturing and jobs—today and in the future.

Critical to GE Vernova's success is our commitment to sustainability. We will build on the 130-year history of GE to build a more sustainable electric system with a framework to electrify, decarbonize, conserve, and thrive. It is under this framework that we will work with governments, partners, customers, and other stakeholders, including the state of Washington.

GE Vernova's onshore wind business was established in 2002. According to the American Clean Power Association's Annual Market Report 2023, GE Vernova has 57% of the onshore wind turbine market, which we have held over the past six years. We have an established fleet of wind turbines in Washington and are eager to increase our wind turbine footprint in the state to help meet Washington's admirable clean energy targets.

## **CLEAN ENERGY IN WASHINGTON STATE**

According to the U.S. Energy Information Administration (EIA), in 2022, hydroelectric power accounted for 67% of Washington's total electricity net generation from both utility-scale and small scale. Natural gas, nonhydroelectric renewable resources (mostly wind), nuclear energy, and coal provide almost all the rest of Washington's in-state electricity generation. Natural gas is the second largest in-state source of net generation, and it fueled 12% of the state's total electricity generation in 2022. Renewable resources other than hydroelectric power accounted for about 9% of state generation.

According to the American Clean Power Association's (ACP) state fact sheet, Washington currently has 3,606 megawatts of operating wind, solar and energy storage capacity, employs more than 9,600 people in the clean energy industry, and \$8 billion of capital has been invested in wind, solar and energy storage in the state.

Washington is committed to take further steps to decarbonize and add more renewable generation to the state's grid. On May 7, 2019, Governor Jay Inslee signed into law the Clean Energy Transformation Act (CETA) to ensure the state's electricity supply is free of greenhouse gas emissions by 2045. CETA will require the development and installation of more carbon free resources, such as wind and solar to reach a 100% clean electricity supply.

According to the Department of Commerce, "by 2045, utilities must supply Washington customers with electricity that is 100% renewable or non-emitting with no provision for offsets." This can only be achieved by starting now and requiring urgency and near-term action.

Governor Inslee recognizes the sense of urgency. In his January 9, 2024, State of the State Address he stated:

And the need for climate action is felt daily for Washingtonians living with pollution.

There are neighborhoods today in Washington where people are dying two and a half years younger on average because of pollution.

This pollution is harmful to the lives of Washingtonians in communities like Everett, Wenatchee, Mattawa, Spokane, **the Tri-Cities**, the Yakima Valley, Shoreline, South King County, and Tacoma. There are neighborhoods in these communities where people are forced to live sicker and die younger because of this pollution. [Emphasis Added.]

His message on urgency was also raised during a July of 2023 interview on ABC's "This Week" where he said, "[the] Earth is screaming at us," and went on to discuss the role of states:

I do want to note that, that this is not just something for the federal government. States can act. Our state is acting. We have 23 states in the U.S. Climate Alliance. And this is necessary. We've had tremendous action under President Biden's leadership with the Inflation Reduction Act.

The Governor further stated in the interview:

But **we need to go further and faster. And states can go further and faster.** And we are doing that.<sup>1</sup> [Emphasis Added.]

In addition, in October of 2023 the U.S. Department of Energy selected the Pacific Northwest Hydrogen Association's (PNWH2) Hub as a Regional Clean Hydrogen Hub. The coalition includes Washington, Oregon and Montana, and regional representatives from Tribal nations, labor, business and industry, higher education, and the environmental community. In an October 2023 Washington State Standard article, the Washington State Department of Commerce acknowledged that no new energy projects were specified in the region's hydrogen hub proposal, but they are working closely with renewable electricity project developers to ensure a stable, growing supply of clean energy is available to meet hydrogen production needs." This is in alignment with other analyses on renewable energy needs, including the 2021 Washington State Energy Strategy that anticipates a need to approximately double

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<sup>1</sup> This Week' Transcript 7-23-23: Gov. Jay Inslee, Mayor Grace Elena Garner & Rep. Michael McCaul;  
<https://abcnews.go.com/Politics/week-transcript-7-23-23-gov-jay-inslee/story?id=101581481>

renewable capacity by 2050. Furthermore, in a letter to support a H2 Hub application, Governor Inslee listed the need to focus on wind and solar stating:

“Focus on Renewables: Washington has the lowest carbon intensive grid in the United States. The opportunity to develop truly green hydrogen and understand how it fits into a modern decarbonized economy is possible today in the state of Washington. No other region is as advanced in this area.”

However, a successful PNWH2 Hub can only be done with additional renewable energy projects being developed and commissioned now.

The development opportunities are due to strong public policies and programs in place, such as CETA, the U.S. clean energy tax credits, and the PNWH2 Hub. Combined, these initiatives are set to dramatically increase Washington’s state’s ability to meet its climate targets and ensure the state moves further and faster.

**However, the State’s climate targets, the ability to address pollution faster, and future energy growth opportunities will all be severely challenged by the unpragmatic constraints being placed on one Project.** If EFSEC proceeds with its restrictive recommendations on the Horse Heaven wind farm it will not only put the State’s climate targets at risk, but all future renewable projects, jobs, investments, and environmental benefits will also be at risk.

#### **UNPRAGMATIC REQUIREMENTS IN THE SITE CERTIFICATION AGREEMENT (SCA)**

On Monday, April 1, 2024, EFSEC made public a Draft Report to the Governor and the SCA. The most challenging requirement in the SCA is the requirement to establish a 2-mile radius surrounding ferruginous hawk nests where no wind turbines can be sited. This requirement is unpragmatic and overly burdensome, and goes well beyond what other North American environmental agencies have required.

Specifically, the SCA states:

The Certificate Holder shall not site any wind turbines within core habitat in ferruginous hawk territories, defined as the area within a 2-mile radius surrounding ferruginous hawk nests documented in the WDFW Priority Habitats and Species (PHS) data at the time of construction. Other primary Project components, specifically solar arrays and BESS, shall not be sited within 0.5 miles of a documented ferruginous hawk nest. Siting of solar arrays or BESS within 0.5-2 miles of a known ferruginous hawk nest or secondary project components (i.e., roads, transmission lines, substations, etc.) within 2 miles of a documented ferruginous hawk nest may be considered if the Certificate Holder is able to demonstrate all of the following:

1. The nest site is no longer available,
2. Foraging habitat is no longer viable to the species, and
3. Compensation habitat would provide a net gain in ferruginous hawk habitat.

Project infrastructure shall not be sited within two miles of a ferruginous hawk nest without prior consultation with the PTAG and approval by EFSEC and will require a project specific Ferruginous Hawk Mitigation and Management Plan (see Appendix 2; Spec-5 Ferruginous Hawk).



Results of ferruginous hawk monitoring programs and adaptive management would continue through Project operation and decommissioning with review by the TAC and approval by EFSEC.

The two main concerns with the 2-mile radius recommendation are:

- 1) EFSEC is establishing a nest setback requirement that is the most restrictive setback ever considered, significantly beyond what the U.S. Fish and Wildlife Service Region 6 recommends as well as what other states and Canadian provinces have established, and
- 2) The requirement was established with historical nest data from the Washington Department of Fish and Wildlife (WDFW) which we understand is not based on current information on whether a nest is active, within an area that can support habitat, or even if the nest still exists.

On the first point, most of the states in the ferruginous hawks breeding range have relied on the U.S. Fish and Wildlife Services (USFWS) Region 6 wildlife buffer guidance for wind projects, which recommends a 1600 meter (or approximately 1-mile) nest setback from active and occupied documented nests. USFWS Region 6 covers Colorado, Kansas, Montana, North Dakota, Nebraska, South Dakota, Utah, and Wyoming. Both Colorado and Utah have established their own requirements of a 0.5-mile nest setback for active and occupied ferruginous hawk nests. The Canadian provinces of Alberta and Manitoba have implemented a 1000 meter (0.62-mile) nest setback requirement for active ferruginous hawk nests. The setback requirement imposed in the SCA goes well beyond the guidance adopted by other North American jurisdictions.

Regarding the data used in determining the 2-mile radius requirement, EFSEC is relying on incomplete, non-public, and non-peer-reviewed information. All wind farm projects now conduct science-based pre-construction nest surveys documenting all active and non-active raptor nests in the vicinity of the project site. This up-to-date current nest data should be the basis of any setback requirements rather than a historical database which has not been scientifically peer-reviewed to determine the current existence of active or potentially active nests in areas that can support ferruginous hawk habitat. The WDFW data should be updated to remove nests that are gone or are no longer viable because the nest's surrounding habitat is marginable or non-existent.

Furthermore, the USFWS guidance and standards adopted by other states and provinces give due consideration to the status of the nest (i.e., whether it still exists and is active or not) and whether the surrounding area is still capable of providing supporting habitat. The EFSEC proposal adopts the most restrictive setback radius requirement for ferruginous hawk nests in North America without any consideration to the nest's status or the surrounding area.

From our perspective, the adoption of draft non-peer reviewed unprecedented policy for mitigation measure represents arbitrary and capricious requirements that are scientifically unjustifiable.

### IMPACT ON FUTURE PROJECTS

As stated by the Governor, we agree Washington State can do better, move faster, and go further. Onshore wind developers are currently contemplating multiple projects in Washington State. In fact, based on information we have compiled, there are **currently over 3,000 megawatts of active onshore wind development projects in development**. If completed, these projects could result in an additional \$5-6 billion of clean energy infrastructure investment into the state.

However, EFSEC is creating greater risk and undermining the wind industry's confidence in the State's review process. Development of a wind, solar, and storage project requires significant time, capital, and perseverance to obtain the requisite land, power sale contacts, equipment supply contracts, and permits necessary to achieve a "ready to build" status where hundreds of millions of dollars in equity investment, construction loan financing, and tax equity financing are needed to bring the Project to fruition. Equity investors and lenders will not invest time and capital in a renewable energy project if there is uncertainty in the size and scope of the project that will ultimately be approved by the governmental regulatory agencies.

Here, the FEIS provided a clear roadmap for the size and scope of the Project. The Council has departed from the FEIS findings and recommendations without a record-based justification for doing so, and has taken steps to fundamentally alter the configuration of the Horse Heaven project. This course of action sends a strong signal to the renewables industry and its investors and lenders that it is now much more difficult and unpredictable to permit projects in Washington state. This ill-advised approach could significantly chill the willingness of investors and lenders to finance projects that are seemingly well advanced in permitting only to face last minute hurdles and changes advanced by EFSEC.

The Council's actions on the Horse Heaven project will frustrate the State's goals for renewable energy during a time of significant project development across the country spurred by the federal clean energy tax credits in the Inflation Reduction Act. Investors and lenders in renewable energy projects will invest their scarce capital in projects that have a much greater certainty of obtaining permits without the fear of last-minute changes and restrictions that are contrary to the findings and recommendations from the subject matter experts who conducted the underlying studies and prepared the environmental review documents.

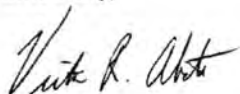
### CONCLUSION

GE Vernova appreciates the opportunity to comment on the Horse Heaven Project. As a project partner, we want to see the Project become a success because of the many benefits it will bring to the state. However, a successful Project will also set a precedent, inviting others to invest, build and operate renewable energy projects in Washington state.

We also strongly believe the State of Washington is at a pivotal point. If EFSEC's current proposal is approved, it will not only negatively impact the Project, but we believe future renewable energy projects may be impacted. If Horse Heaven and future projects are impacted, this will put at risk future investments, jobs, and environmental benefits for the state.

Again, thank you for your consideration of these comments and please do not hesitate to let us know if we can provide any clarifications or additional information.

Sincerely,



Victor R. Abate  
CEO, GE Vernova Wind





**Portland General Electric**  
121 SW Salmon Street • Portland, OR 97204  
portlandgeneral.com

April 10, 2024

State of Washington  
Energy Facility Site Evaluation Council  
621 Woodland Square Loop SE  
Olympia, WA 98503

RE: Horse Heaven Clean Energy Center Project - Comments on EFSEC Proposed Final Action

Chair Kathleen Drew and Councilmembers,

Portland General Electric (PGE) appreciates the opportunity to submit comments on the Horse Heaven Clean Energy Center Project (Horse Heaven Project). PGE is filing comments in the project docket to express concern with the process experienced by this project and to convey the potential unfavorable impact these proceedings could have not only on Washington's renewable energy industry, but on the broader region's ability to procure clean energy resources and meet shared climate goals.

PGE is a fully integrated Oregon electric utility that serves over 900,000 customers with a service area population of 2 million Oregonians. PGE is focused on decarbonizing our power supply in line with Oregon's ambitious clean electricity targets while delivering reliable and affordable service to customers.

Procedural clarity throughout the siting application process is critical for development of renewable projects. In the case of the Horse Heaven Project, significant changes proposed late in the siting process have raised questions about the commercial and technical viability of the project and the procedural confidence on which investment in the project was based. If the Horse Heaven Project is altered as proposed by the Council in its Draft Report to the Governor and Draft Site Certification Agreement, energy developers will see increased uncertainty about siting in Washington state since project mitigation measures have changed throughout the permitting process. As a result, developers may choose not to invest in developing renewable energy projects in Washington state.

To achieve Oregon's ambitious electricity decarbonization targets while meeting growing demand, PGE anticipates needing approximately 3,500-4,500 MWs of new non-emitting resources and storage between now and 2030. Like many other utilities, we will be looking to procure more renewables from around the Pacific Northwest to meet these goals and do so through a Request for Proposal (RFP). The RFP is a competitive bidding process through which a utility solicits



**Portland General Electric**  
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[portlandgeneral.com](http://portlandgeneral.com)

proposals for electricity generation facilities, such as new solar and wind plants, battery storage facilities, or transmission capacity. The evaluation of bidders from throughout the Pacific Northwest in the RFP process includes an appraisal of timing and capability to bring projects online. For bidders to be successful in a utility RFP process, a predictable and reasonable siting process is critical.

Thank you for your focus on issues that will ensure a robust renewable energy industry in Washington state and protect the broader region's ability to procure clean energy resources to meet shared climate goals.

Sincerely,

Greg Alderson  
Manager, Government Affairs  
Portland General Electric





April 8, 2024

Energy Facility Site Evaluation Council  
621 Woodland Square Loop SE  
Lacey, WA 98503

**Re: Horse Heaven Clean Energy Center Project – Stakeholder Comments and Concerns on EFSEC Proposed Final Action, April 8, 2024**

Dear Chair Drew and Councilmembers:

The American Clean Power Association (ACP)<sup>1</sup> and the Energy and Wildlife Action Coalition (EWAC)<sup>2</sup> appreciate the opportunity to submit comments on the Horse Heaven Clean Energy Center Project (Horse Heaven Project). ACP is the national trade association representing the renewable energy industry in the United States which includes ACP's 800+ member companies. EWAC is a national trade association representing renewable energy companies and electric utilities in matters related to wildlife and natural resource policies, of which Scout Clean Energy is a member. Neither ACP nor EWAC file comments regarding permitting outcomes for specific projects, and we neither support nor oppose the Horse Heaven Project. As you will see below, we are filing comments in this project docket to express our serious concerns with the precedent that could be set by the procedural challenges experienced by this project and to convey the detrimental impact the outcome of these proceedings – if not remedied – will have on

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<sup>1</sup> ACP is the national trade association representing the renewable energy industry in the United States, including in all aspects of offshore wind energy, bringing together over 800 member companies and a national workforce located across all 50 states with a common interest in encouraging the deployment and expansion of renewable energy resources in the United States. By uniting the power of wind, solar, storage, and transmission companies and their allied industries, ACP seeks to enable the transformation of the U.S. power grid to a low-cost, reliable, and renewable power system. Additional information is at <http://www.cleanpower.org>

<sup>2</sup> EWAC is a national trade association, formed in 2014, whose members consist of electric utilities, electric transmission providers, and renewable energy entities operating throughout the United States, and related trade associations. The fundamental goals of EWAC are to evaluate, develop, and promote sound environmental policies for federally protected wildlife and closely related natural resources while ensuring the continued generation and transmission of reliable and affordable electricity. EWAC supports public policies, based on sound science, that protect wildlife and natural resources in a reasonable, consistent, and cost-effective manner. EWAC is a majority-rules organization and therefore specific decisions made by the EWAC Policy Committee may not always reflect the positions of every member.



Washington's renewable energy industry and the state's ability to meet its climate objectives.

### **Background**

Washington's current renewable energy industry represents an \$8 billion investment in wind, solar, and energy storage projects in the state. This investment has produced 3,606 megawatts (MW) of operating wind, solar, and energy storage capacity in Washington and significantly benefits the state's economy. The renewable energy industry is also an important job creator in Washington with a workforce of more than 9,600 people. Renewable energy projects invest in local communities, providing property, state, and local taxes totaling nearly \$30 million annually. Additionally, renewable energy projects provide extra income to farmers, ranchers, and other private landowners through lease payments totaling over \$27 million annually<sup>3</sup>.

The state's pipeline of 680 MW of renewable energy projects in construction represents an additional \$1 billion investment<sup>4</sup>. Further, based on data provided by wind turbine manufacturers, there are an additional 12 wind projects totaling approximately 3,000 MW of capacity in active development in the state. The Clean Energy Transformation Act<sup>5</sup> (CETA) in Washington and the federal Inflation Reduction Act<sup>6</sup> are poised to sustain and even increase the pace of development and investment in the state. However, a breakdown in the Energy Facility Site Evaluation Council (EFSEC) site certification process (EFSEC process) could threaten those future investments and the resulting economic and environmental benefits.

### **The Council's major changes to infrastructure siting requirements for the Horse Heaven Project are not based on sound science or other rational basis and will work against CETA by unnecessarily restricting responsible renewable energy development.**

A fair and reliable permitting process requires that any changes to recommendations made in the Final Environmental Impact Statement (FEIS) are necessary, evidence-based, and well-reasoned. The purpose of the FEIS's thorough project review is to ensure responsible renewable energy development. However, in the example of the Horse Heaven Project, the Council's proposed late-stage changes to the FEIS-recommended measures ignore that careful review and the best available science and guidance. The

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<sup>3</sup> ACP Washington State Fact Sheet ("ACP Fact Sheet"), current through 3Q 2023: [Washington\\_clean\\_energy\\_factsheet.pdf](https://www.cleanpower.org/washington-clean-energy-factsheet.pdf) ([cleanpower.org](https://www.cleanpower.org))

<sup>4</sup> ACP Fact Sheet

<sup>5</sup> SB 5116, 2019 <http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf?q=20210822161309>

<sup>6</sup> Public Law 117-169, available at:

<https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf>





Council's shifting requirements for ferruginous hawk and habitat connectivity measures go beyond standard practice in the State, which is defined by the 2009 Washington Department of Fish and Wildlife (WDFW) Wind Power Guidelines<sup>7</sup> that have served as stable policy guidance for the renewable industry for over a decade. They also go beyond the recommendations and guidance of the U.S. Fish and Wildlife Service and other jurisdictions of which ACP is aware. The new requirements incorporate disjointed elements from unpublished guidance and rely on studies that are neither peer-reviewed nor project-specific and in at least one case extrapolate analysis and conditions from an unrelated industry sector with no explanation as to the applicability in this case. EFSEC is incorrectly adopting unpublished draft WDFW management recommendations for the ferruginous hawk into a regulatory framework in a move that is unprecedented for any other state-listed species. Similarly, EFSEC is utilizing desktop wildlife corridor modeling, completed over a decade ago, which was intended to inform transportation planning and conservation planning, as a regulatory overlay aimed at excluding new energy infrastructure. There is no evidence that these new requirements will result in any conservation gains beyond those provided by the wildlife measures already recommended in the FEIS. Thus, they will unnecessarily restrict responsible renewable energy development.

In fact, applying these new requirements may hinder conservation efforts in Washington by compromising the state's ability to comply with CETA. CETA requires all electricity used in Washington to come from sources that emit no greenhouse gases by 2045. Currently, 7.9% of Washington's electricity comes from wind, solar, and energy storage facilities<sup>8</sup>. To meet CETA's requirements, the pace of renewable energy development in Washington needs to increase – but a loss of confidence in the EFSEC process and the precedent that would be set by the overly restrictive wildlife measures being considered in the Horse Heaven Project review would instead have a chilling effect.

**Arbitrary changes late in the permitting process erode procedural confidence and will have a chilling effect on future renewable energy investment in Washington.**

The major changes in infrastructure siting requirements that have been introduced for the first time during the Horse Heaven Project's recent Council meetings will erode industry confidence in the EFSEC process. These Council meetings occurred at a stage in the EFSEC process when major capital investments had been made to develop the proposed project and negotiations with state agency staff had reached a successful resolution. Such investment requires a high degree of confidence in the expediency, procedural reliability, and fairness of the EFSEC process. Confidence can be developed through transparency

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<sup>7</sup> Washington Department of Fish and Wildlife. 2009. Wind Power Guidelines. Olympia, WA. 30pp.

[Washington Department of Fish and Wildlife Wind Power Guidelines](#)

<sup>8</sup> ACP Fact Sheet





and predictability of the review process. Unfortunately, EFSEC's recent actions risk undermining the clean energy industry's confidence in the review process through the precedents being set in this current proceeding.

Sweeping changes to the layout and capacity of a project made during the Council meetings have the potential to make it impossible to actually develop a project even if approved by EFSEC. A project that is permitted but cannot be financed and built because of unreasonable permit conditions imposed at the last minute in a multi-year review process should not be viewed as a success. Approved projects that nevertheless cannot be built due to unreasonable conditions will not provide any economic benefit and will not help the State get closer to meeting its mandated climate objectives.

Significant Council meeting changes that threaten the viability of a project, particularly changes that appear to be made arbitrarily and without sound scientific or other reasoned basis, indicate a disregard for both the investment in the project and the procedural confidence on which that investment was based. If the Horse Heaven Project is altered as proposed during the December and January Council meetings, it will signal to the rest of the renewable energy industry that the EFSEC process represents an extremely costly high-stakes gamble with their resources and capital. As a result, developers will be less likely to make the necessary investments to develop and permit projects through the EFSEC process.

**This situation creates uncertainty for the future repowering of operating projects in the state, further compromising Washington's ability to meet CETA requirements without any conservation gains.**

Renewable energy projects, particularly wind projects, currently operating in the vicinity of the Horse Heaven Project and throughout the state are likely to consider future repowering to increase project generation capacity, extend project operating lifespan, or both. Repowering is one of the least environmentally impactful actions that can be undertaken to boost renewable energy generation capacity and should be encouraged through state permitting processes. However, the precedent that would be set by the overly restrictive wildlife and habitat measures from the Horse Heaven Project review creates uncertainty for projects considering whether to exercise this option. If existing projects face restrictions or are entirely prohibited from repowering due to unsupported wildlife measures, Washington's ability to meet CETA requirements and the state's conservation goals will be further compromised.

**Conclusion**

Thank you for the opportunity to comment on the Horse Heaven Project and for your focus on these issues. ACP and EWAC urge restoration of a fair and reliable EFSEC process that recommends well-supported and reasonable conservation measures and limits late-stage shifts in recommendations only to those necessary, well-reasoned, and



justified by science or other publicly available evidence in the record. Doing so will help to ensure Washington state can achieve its climate objectives and reap the economic benefits of a growing renewable energy industry. Please don't hesitate to let us know if we can provide any additional information.

Sincerely,

Tom Vinson  
Vice President, Policy and Regulatory Affairs  
American Clean Power Association (ACP)

Quintana Hayden  
Senior Director, Wildlife and Federal Lands  
American Clean Power Association (ACP)

John M. Anderson  
Executive Director  
Energy and Wildlife Action Coalition (EWAC)



April 10, 2024

Chair Kathleen Drew  
Energy Facility Site Evaluation Council  
P.O. Box 43172  
Olympia, WA 98504

**Re: Horse Heaven Clean Energy Center Project – Stakeholder Comments and Concerns on  
EFSEC Draft Site Certification Agreement, April 10, 2024**

Dear Chair Drew and Councilmembers:

## **I. INTRODUCTION**

Renewable Northwest is a regional, non-profit renewable energy advocacy organization, dedicated to decarbonizing the region by accelerating the transition to renewable electricity. Our members are a combination of renewable energy businesses and environmental and consumer groups.

Renewable Northwest is grateful for the opportunity to again provide comments related to the certification of the Horse Heaven Clean Energy Center (“Horse Heaven Project” or “Project”). Renewable Northwest previously provided comment during the open comment period on the Draft Environmental Impact Statement (EIS) for the proposed Horse Heaven Project. As stated previously, we wish to be clear that Renewable Northwest takes no position on the Horse Heaven Project itself. We maintain an organizational policy to not weigh in on individual projects, except in rare circumstances. This being one of those circumstances, we write to alert the Council of the dangerous precedent that EFSEC’s current trajectory sets for the development of renewable energy in Washington state, and consequently the fate of Washington’s clean energy transition.

In the last few months, we have heard broad concern from clean energy developers within Renewable Northwest membership about the Council’s approach to the Horse Heaven Project. The Council’s actions with respect to Horse Heaven have set off alarm bells for the broader clean energy community. This community is collectively dedicated to helping Washington achieve its nation-leading and deeply necessary clean energy and climate policy but is increasingly concerned that the state’s current permitting environment may prevent policy success.

## **II. FEEDBACK**



### **Role of the Energy Facility Site Evaluation Council**

In 2022, the Energy Facility Site Evaluation Council (EFSEC) was modernized under HB 1812 explicitly to aid Washington's transformative clean energy transition.<sup>1</sup> The Council's work is guided by this overarching policy consideration, which is set forth explicitly in statute:

*It is the policy of the state of Washington to reduce dependence on fossil fuels by recognizing the need for clean energy in order to strengthen the state's economy, meet the state's greenhouse gas reduction obligations, and mitigate the significant near-term and long-term impacts from climate change while conducting a public process that is transparent and inclusive to all with particular attention to overburdened communities.*

The agency is tasked with weighing challenging land use values decisions, while improving the existing energy siting review process:

*It is the intent to seek courses of action that will balance the increasing demands for energy facility location and operation in conjunction with the broad interests of the public. In addition, it is the intent of the legislature to streamline application review for energy facilities to meet the state's energy goals.*

Furthermore, the agency must seek courses of action that:

*... avoid costly duplication in the siting process and ensure that decisions are made timely and without unnecessary delay while also encouraging meaningful public comment and participation in energy facility decisions.*

Renewable Northwest has chosen to comment on the Horse Heaven Project, as we believe EFSEC's recent actions suggest that the agency is departing from its intended purpose, as prescribed by the legislature. This departure jeopardizes the State's transition away from fossil fuels. The Council's role delineates a need to balance the development of clean electricity with environmental, cultural, Tribal, and public concerns. EFSEC's recent decision-making suggests the Council has continually prioritized these listed concerns over the urgent need for in-state clean electricity. As a result, the Council has imposed lengthy, unpredictable timelines and costly, unpredictable consequences on clean energy developers. It is our understanding that some of these consequences may have been based on concerns that the applicant never had the opportunity to respond to or that were unsupported by record evidence. Members of Renewable Northwest have communicated that it is becoming too expensive and too risky to develop projects in Washington under this permitting regime. Continuing this course of action may prevent Washington from meeting its Clean Energy Transformation Act (CETA) obligations and state energy goals, and may have direct impacts on local, vulnerable populations burdened by air pollution. We wish to illustrate these concerns in the comments below.

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<sup>1</sup> Energy Facility Site Evaluation Council—Modification, HB 1812, 67th Leg. (2022).  
<https://lawfilesexternal.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/House/1812-S2.SL.pdf?q=20240308095611>

### **Precedent-Setting Environmental Mitigation Decisions**

It is imperative that clean energy siting processes and decisions be transparently and consistently applied statewide, if Washington is to meet its CETA obligations. In Renewable Northwest's previous comments related to measures adopted in the Project's Draft EIS dated February 1, 2023, we raised process-related concerns regarding the use of unpublished, draft guidelines in decision-making. At the time, we wrote:

*The Draft EIS departs from well-established and well-vetted practices enshrined in the Washington Department of Fish and Wildlife's ("WDFW") collaboratively developed Wind Power Guidelines. We recommend that these changes—and any change to established policy—occur, if at all, through a similarly inclusive process rather than project-specific SEPA review.*

Renewable Northwest maintains that the environmental mitigation decisions proposed in Horse Heaven's Final EIS represent significant changes to established policy. The use of a 2-mile buffer for ferruginous hawk nests and the use of maps created by the Washington Wildlife Habitat Connectivity Working Group carry implications for existing and future clean energy projects in Washington state. Project-specific SEPA review is not the avenue for sweeping, precedent-setting siting and permitting decisions.

However, these concerns have now been overshadowed by EFSEC's dramatic departure from the Final EIS itself and from scientifically-informed decision-making. Where the Final EIS allowed for the use of site-specific data to demonstrate lack of actual impacts, the Draft Site Certification Agreement removes that option and leans into unvetted tools as the final say in where development can and cannot occur. The result is that benefits to wildlife are speculative, while harm to the clean energy development necessary to abate climate change and protect threatened species is real and tangible. It is unclear how these actions sufficiently balance the increasing demands for clean energy and reduce our dependence on fossil fuels.

### **Use of Unpublished Guidelines in Decision-making**

In the Horse Heaven Draft Site Certification Agreement, the Council has decided to adhere to WDFW's draft, unpublished management recommendations for priority species, rather than WDFW's existing published wind energy siting guidelines.<sup>2</sup> Renewable Northwest's—and the project applicant's—first encounter with these proposed mitigation requirements was their introduction into the Horse Heaven EFSEC adjudication hearings. Currently in Washington, clean energy developers abide by the 2009 *Washington Department of Fish and Wildlife Wind Power Guidelines*, which were developed through an inclusive policy-making process.<sup>3</sup> Regarding the Horse Heaven Project, EFSEC has instead chosen to abide by nonpublic ferruginous hawk guidelines that reach beyond the agency's public siting guidelines. As such, the Council has created a moving target, whereby clean energy developers attempt to permit projects following publicly available guidance, yet decisions are made using an alternate set of internal criteria. This inefficient decision-making process is financially unsustainable for clean energy developers, who must then operate under an unpredictable permitting regime. Lastly, this process hinders clean energy development and wastes critical time in the race to CETA's statutory requirement of greenhouse gas neutral electricity by 2030. Because the underlying management recommendations were not established

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<sup>2</sup> Waston, J. W. and Azerrad, J. M. 2023, July 5. [\*WDFW Draft Management Recommendations for Washington's Priority Species: Ferruginous Hawk\*](#).

<sup>3</sup> WDFW. 2009. [\*Wind Power Guidelines\*](#). Olympia, WA.



using a public process, there has been no opportunity for experts outside the agency to vet whether the recommendations will actually protect species substantially enough to offset the recommendations' harm to Washington's clean energy goals.

### **Departure from Final Environmental Impact Statement**

The Final EIS should represent, at its late stage in the environmental review process, comprehensive project review and signposts for responsible renewable energy development. After the release of the Final EIS for the Horse Heaven Project, the Council proposed ad-hoc project changes that go beyond the Final EIS's proposed environmental mitigation measures and do not reflect careful, scientific review. For example, the Final EIS recommends the following mitigation measures for ferruginous hawk nests:

*The Applicant would avoid siting Project components within core habitat in ferruginous hawk territories, defined as the habitat within a 2-mile radius surrounding ferruginous hawk nests documented in PHS data and in Horse Heaven Wind Farm, LLC (2022). Siting of features within 2 miles of a known ferruginous hawk nest may be considered if the Applicant is able to demonstrate that the nest site and foraging habitat is no longer available to the species and that compensation habitat, as described below, would provide a net gain in ferruginous hawk habitat.<sup>4</sup>*

However, during the Council's December 20, 2023 meeting, the Council proposed eliminating this science-based exception and maintaining a 2-mile radius despite lack of viable habitat. Similarly, the Council eliminated the science-based exception for wildlife movement corridors (discussed in detail below under **Hab-1**), making changes that go beyond the mitigation measures recommended in the Final EIS. These two decisions alone eliminate at least 53% of the Horse Heaven Project, with no allowable exception for site-level scientific findings. Due to the structure of wind facilities and the need for connecting power lines and access roads, an *additional* 17% of turbines are also now at risk of removal from the Project.

We use these numbers to illustrate the impact of unplanned-for environmental mitigation measures and the impact of last-minute decisions by EFSEC. The Council's actions move away from the established site certification processes and past Council practice; they also set a precedent that mitigation measures can suddenly change at any stage during project permitting.

Major changes to infrastructure siting requirements that are introduced for the first time, late in the overall site certification process, erode industry confidence in the EFSEC permitting process. Clean energy project proposals require significant financial investment; in order to make such an investment, developers in turn require a high degree of confidence in the expediency, procedural reliability, and fairness of the EFSEC process.

### **Lack of Scientific Basis for Decisions**

During the Horse Heaven Project site certification process, EFSEC has repeatedly drawn upon new, previously unused metrics and tools for environmental mitigation decisions. As stated, Renewable

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<sup>4</sup> EFSEC. 2023, October. [\*Horse Heaven Wind Farm Final Environmental Impact Statement\*](#) (pp. ES-34).

Northwest is concerned with the use of draft guidelines and we reiterate that project-specific SEPA review is not the appropriate process for creating precedent-setting policy. Additionally, several of these new mitigation guidelines lack scientific basis or justification.

**Spec-5:** For the Horse Heaven Project, EFSEC is imposing a 2-mile setback around any historically documented ferruginous hawk nest, regardless of loss of habitat or nesting viability. As we understand, the severity of this setback is not a hawk mitigation measure that exists elsewhere in the United States or Canada. While ferruginous hawk may have a relatively small territory in Washington, we do not have assurance that sweeping new environmental mitigation measures will not similarly be applied by the Council ad-hoc to any number of other endangered species within the state, given that this measure has been imposed out of alignment with existing clean energy siting guidelines.

This restriction would likely impact clean energy projects already existing in the EFSEC permitting pipeline. For instance, a new policy this strict—if applied consistently—would prohibit repowering of existing clean energy projects currently located within the 2-mile ferruginous hawk nest buffer area. No clean energy developers in Washington were made aware of this restriction when their sites were originally proposed (or permitted). These guidelines will also presumably impact generation upgrades to existing projects and other transmission infrastructure projects throughout central Washington. We reiterate that shifting siting regulations after project proposal has significant financial impact on developers and serves as a deterrent for future projects.

The Council has proposed using the locations of historical ferruginous hawk nests found in the WDFW Priority Habitats and Species (PHS) Database.<sup>5</sup> However, WDFW's own website states the limitation of its mapping technology:

*PHS map data is meant to serve as a starting point to identify priority habitats and species. It is not meant to replace or preempt more detailed field-based, site-level mapping. Site-specific surveys are usually needed to rule out the presence of priority habitats or species.*

Renewable Northwest then questions why all historical PHS-documented ferruginous hawk nests, regardless of said site-specific surveys, should be used as a metric for official clean energy site certification or land use decisions. This does not appear to be the intention of the tool itself.

**Hab-1:** Similar to Spec-5, EFSEC again departs from the Horse Heaven Final EIS with its unprecedented decision pertaining to wildlife corridors. The draft Site Certification Agreement determines that “Primary Project components shall not be constructed within movement corridors modeled as medium to very high linkage” according to maps produced by the Washington Wildlife Habitat Connectivity Working Group (2012). Horse Heaven's Final EIS originally allowed for a process to seek approval from EFSEC for siting project infrastructure in modeled wildlife movement corridors. EFSEC's decision to remove site-level exceptions and granularity from project siting is, again, a misuse of tools not designed to directly regulate clean energy projects. The Washington Wildlife Habitat Connectivity Working Group

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<sup>5</sup> WDFW. [\*Priority Habitats and Species: Maps\*](#).



report does not identify any intention of directly using this landscape modeling effort as specific setback or avoidance areas.<sup>6</sup> The report states the limitations of its ecoregional analysis:

*There are limitations to the analysis which may include: (1) errors and limitations in spatial data, (2) reduced applicability outside the Columbia Plateau project area, (3) incomplete assessment of important habitats or linkages, (4) insufficient detail to prioritize habitats or linkages at a finer scale, and (5) lack of adequate field data to validate all model assumptions.*

This tool has not been applied towards project review and certification by EFSEC in the 12 years since its publication, so we fail to understand its sudden application to Horse Heaven. Renewable Northwest recommends the **Hab-1** mitigation measure be, at minimum, reverted to the version from the Final EIS, which allows for a more appropriate use of the tool.

As with WDFW's PHS database, Renewable Northwest continues to feel that EFSEC is using environmental mitigation tools in a way that aims to eliminate the impacts of siting clean energy, without sufficiently balancing Washington's dramatic and urgent need for these projects.

### III. CONCLUSION

We appreciate the opportunity to submit comments once more regarding the Horse Heaven Project. The Washington State legislature has invested years of work into streamlining clean energy siting and permitting processes; we urge the Council to not regress on these improvements.

Respectfully submitted this 10th day of April, 2024,

/s/ Kate Brouns

Washington Policy Manager

Renewable Northwest

[kate@renewablenw.org](mailto:kate@renewablenw.org)

/s/ Max Greene

Deputy Director

Renewable Northwest

[max@renewablenw.org](mailto:max@renewablenw.org)

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<sup>6</sup> WHCWG.

[https://waconnected.org/wp-content/themes/whcwg/docs/WHCWG\\_ColumbiaPlateauEcoregion\\_2012.pdf](https://waconnected.org/wp-content/themes/whcwg/docs/WHCWG_ColumbiaPlateauEcoregion_2012.pdf)

**To:** Comments@efsec.wa.gov  
**From:** efsec@efsec.wa.gov  
**Received:** 2023-12-29T16:50:14+00:00  
**Subject:** FW: Additional Wind Farm  
**Has attachment?** False

---

**From:** Gary Dukelow <duffer1a@gmail.com>  
**Sent:** Friday, December 29, 2023 8:27 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Additional Wind Farm

External Email

I am opposed to the proposed 150-250 wind turbines south of the Tri-Cities. They will produce maximum power in only the strongest winds. At only 10 years of life, blades and gearboxes are needing to be replaced. The cost to teardown a single turbine is \$200,000, not including any payback from selling or recycling valuable materials, which is heavily labor intensive and not always cost effective. Instead of decommissioning, more often the site will be 'repowered' which means replacing the turbines with newer technology. We need to move to construct more nuclear powered facilities. This wind farm just postpones the nuclear option.

Gary Dukelow

**Attachments:**

☐

**To:** Comments@efsec.wa.gov

**From:** kmbrun@gmail.com

**Received:** 2024-01-09T21:06:53+00:00

**Subject:** Horse Heaven Hills Wind/Solar Project

**Has attachment?** False

External Email

It is my understanding that EFSEC will be reviewing and making a decision on January 24<sup>th</sup> about the final recommendation to be sent to Governor Inslee on the HHH Wind/Solar Project. It is also my understanding that the public is supposed to be able to comment. That said, I do not find any indication that the proposed recommendation will be made available to the public prior to the January 24<sup>th</sup> meeting. It will be impossible to comment with any specificity on a document we have not seen.

I urge you to make that document available with sufficient time for the public to review it and make specific comments on its contents. Not doing so shows a definite indifference to the public and puts a black mark on EFSEC's report card.

Karen Brun

Kennewick, WA

**Attachments:**

□



**To:** Comments@efsec.wa.gov

**From:** lditte@icloud.com

**Received:** 2024-01-16T22:40:48+00:00

**Subject:** Horse Heaven Wind farm

**Has attachment?** False

External Email Solar panels are at best about 20% efficient. They convert almost 0% of the UV light that hits them. None of the visible spectrum and only some of the IR spectrum. At the same time as they are absorbing light they are absorbing heat from the sun. This absorbed heat is radiated into the adjacent atmosphere. It should be obvious what happens next. When air is warmed it rises. Even small differences in ordinary land surfaces are capable of creating powerful forces of weather like thunderstorms and tornadoes. These weather phenomena are initiated and reinforced by land features as they are blown downwind. It is all too obvious to me what will happen with the heat generated by an entire solar farm. Solar farms will become thunderstorm and tornado incubators and magnets. Solar panels are dark and and they emit energy to the space above them when they are not being radiated. This is known as black-body radiation. Satellites flying in space use this phenomenon to cool internal components. If they didn't do this they would fry themselves. So solar farms not only produce more heat in summer than the original land that they were installed on, but they also produce more cooling in winter, thus exacerbating weather extremes. So I conclude with this. There is nothing green about green energy except the dirty money flowing into corrupt pockets. There is no such thing as green energy. The science doesn't exist. The technology doesn't exist. The engineering doesn't exist. We are being pushed to save the planet with solutions that are worse than the problems.

**Attachments:**

□

January 17, 2024

Sonia Bumpus  
EFSEC Director

Kathleen Drew  
Chair, Energy Facility Site Evaluation Council

Amy Moon  
Siting and Compliance Lead

621 Woodland Square Loop SE  
PO Box 43172  
Olympia, WA 98503-3172

Delivery Via Email: [sonia.bumpus@efsec.wa.gov](mailto:sonia.bumpus@efsec.wa.gov); [kathleen.drew@efsec.wa.gov](mailto:kathleen.drew@efsec.wa.gov);  
[amy.moon@efsec.wa.gov](mailto:amy.moon@efsec.wa.gov)

**Re: Request for January 24 Action Item Documents for Horse Heaven Wind Project**

Dear Ms. Bumpus, Chair Drew, and Ms. Moon:

We received the January 4, 2024 email notice that EFSEC has scheduled the next Monthly Council Meeting for January 24, 2024. We also received two email notices on January 12th about the agenda and the upcoming action item, specifying a public comment period of three days prior to the January 24th meeting. It appears that the Council will be discussing and possibly voting on its final recommendation to the Governor regarding the project.

We are requesting that you make the final draft report and decision documents available publicly prior to public comment period and allow the public adequate time to review and provide meaningful comments to the Council before a final action is taken, even if this means delaying a final decision and recommendation. Transparency and meaningful opportunities for public comment are essential to legitimizing the EFSEC process, which is important both for this project and for setting precedent for future large-scale clean energy projects.

Thank you for your time and attention.

Sincerely,



Trina Bayard, PhD  
Interim Executive Director  
Director of Bird Conservation

**To:** cease2020@aol.com

**From:** cease2020@aol.com

**Received:** 2024-01-24T02:55:13+00:00

**Subject:** C.E.A.S.E. Inslee at it again destroying lives

**Has attachment?** False

External Email

[Bill to ban natural gas revived, passes in Washington House - MyNorthwest.com](#) Greg Wagner  
C.E.A.S.E.

**Attachments:**

☐

To: Comments@efsec.wa.gov  
From: efsec@efsec.wa.gov  
Received: 2024-02-09T16:07:18+00:00  
Subject: FW: Scout Clean Energy  
Has attachment? False

---

From: Virginia Fitzpatrick <virginiaf51@yahoo.com>  
Sent: Thursday, February 8, 2024 9:11 PM  
To: EFSEC (EFSEC) <efsec@efsec.wa.gov>  
Subject: Scout Clean Energy

External Email

Dear Energy Commissioners,  
First I would like to commend your actions with Scout CleanEnergy in your December meeting. As leaders of our state I expect you to do your due diligence, and not just accept the information that Scout Clean Energy provides.

I have many concerns about this green energy rush. My research showed all these BIG Megawatt promises end up producing about 30% of what they tout. You have to dig for any information about actual results of all these “green farms”. If such a great amount of alternative energy is produced - why not advertise it?

Our “Governor recently bannedeight chemicals and/or chemical classes will be bannedon Jan. 1, 2025when intentionally added to the product.

- ortho-phthalates

- perfluoroalkyl and polyfluoroalkyl substances
- formaldehyde and chemicals determined by Ecology to release formaldehyde
- methylene glycol
- mercury and mercury compounds
- triclosan
- m-phenylenediamine and its salts
- o-phenylenediamine and its salts

Lead and lead compounds are also restricted when intentionally added or meet a certain threshold.”

One of my concerns is allowing so many components from countries that do not share our concerns for safety.

What countries are producing these solar panels that Scout Clean Energy intends to use?

What about the solar panels debris? (and there will be) Is there a comprehensive plan for clean up?

Will these companies put millions in trust for clean up?

We’ve all seen and heard about the discarded windmills?

A lot of rural people oppose destroying the areas



where we choose to live. The visual and potential toxic pollution coming from these “green farms” is anything but green.

Has anyone considered using Hanford??? Seems like a perfect place to me, basically already a wasteland.

The feds would probably lease it cheaply,  
Thank you for your attention to my concerns.  
Please respond to my questions.

Sincerely,

Virginia Fitzpatrick

Goldendale WA

Sent from my iPad

Attachments:

□

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Turbine #'s 162 and 243-Applicant Removal Commitment  
**Date:** Saturday, February 17, 2024 3:26:21 PM  
**Attachments:** [Public Comment Turbines 162 and 243-Final.pdf](#)  
[20240109 Horse Heaven FEIS Council Exclusion Considerations X01-1-Final Markup.pdf](#)

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External Email

Shawn and Amy,

Attached is a comment regarding turbine #'s 162 and 243. The Applicant committed to removing several turbines including those mentioned after considering all comments. See Chapter 2 Proposed Action and Alternatives, Section 2.2.3.

Attached is the formal comment, and the Map Option X01-1 with turbines identified.

David Sharp  
Vice President, Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

Public Comment-Horse Heaven Hills Project

Dave Sharp

Tri-Cities CARES

**Subject: Scout Post-Adjudication Commitments, Turbines #162, and #243.**

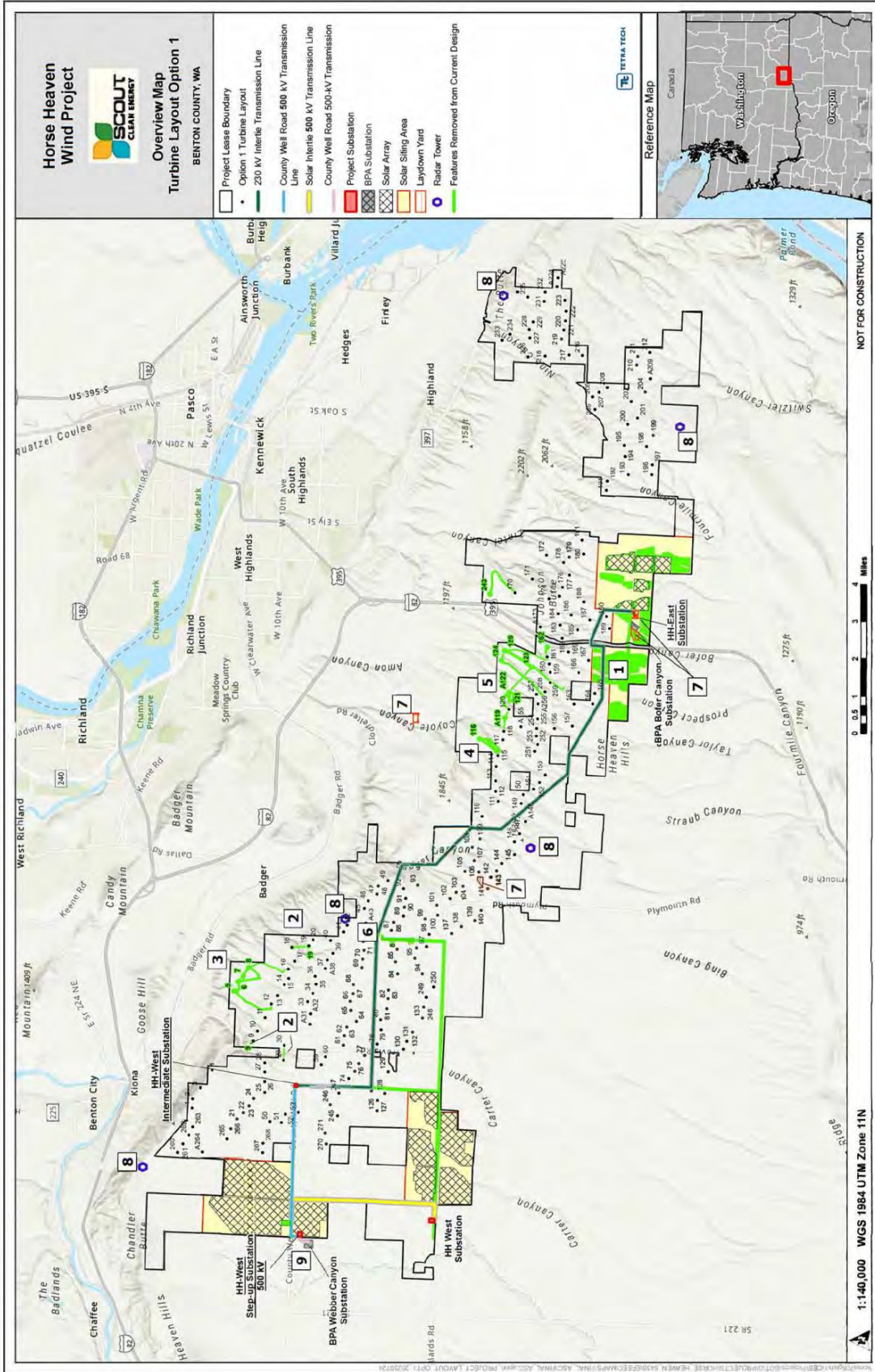
EIS Chapter 2 **Proposed Action and Alternatives** Section 2.2.3 page removed 9 turbines from option 1, and 3 turbines from Option 2. The Applicant provided changes in the Final ASC following comments and input from regulatory agencies, changes to applicable regulations, testimony from adjudicative hearings, and information received from the BPA. Additional Applicant commitments were identified and finalized in the Applicant's Final ASC. Turbine 162 and 243 were removed as well as 7 others from Phase 1.

The Council Deliberation maps prepared by Staff and shared with the Council brought two of the turbines back. Like all of the other turbines that have been voluntarily removed those turbines should be removed because of Applicant the commitments.

There Applicant provided their rationale which included visual impacts. There are others reasons:

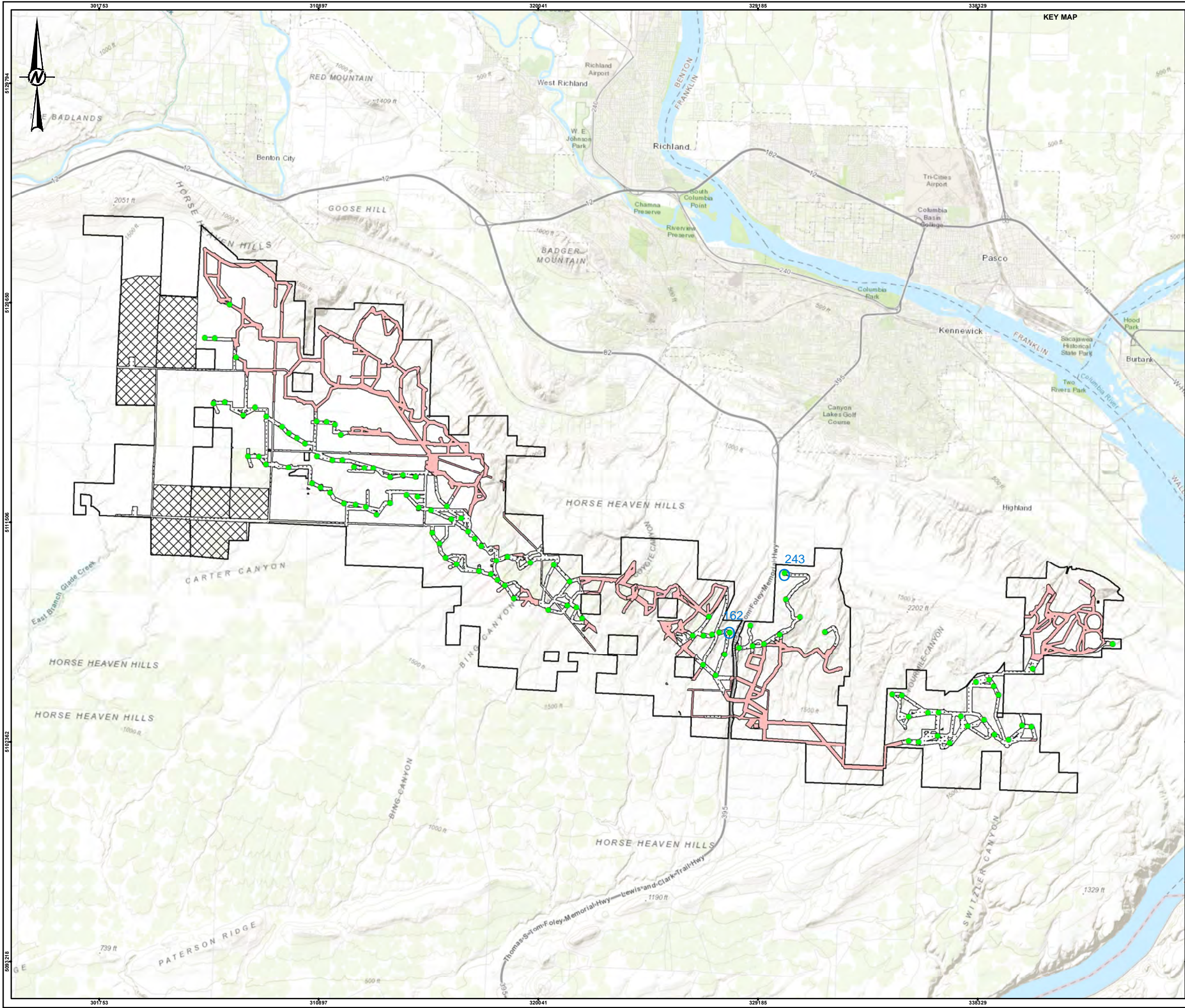
- There have been numerous public comments about the proximity and prominence of the towers to Kennewick, homeowners' property and recreation areas. Turbine #243 stands out as the most Northerly turbine and closest to the Kennewick City limits. The location will likely restrict access to the Johnson Butte Trailhead, and the trail itself.
- Turbine #162 appears to be the closest turbine to Highway 395, appearing to be only ~550' West of the highway. There is an existing power line running between the turbine and the highway approximately 250-300' from the centerline of the tower. Considering the different size turbines and blade lengths proposed, the horizontal clearance would be only ~50-100 feet.
- The issue of aerial firefighting has not been totally resolved. However, an appropriate use of aerial firefighting would be to protect public roadways, and to prevent wildfires from spreading over a natural barrier provided by the highway right of way. Note that a horizontal setback of 550' will only effectively be ~300' because of the turbine blade length protruding into the setback space.

Tri-City CARES respectfully requests that EFSEC staff remove them from Option X01-1 maps provided.









**LEGEND**

- Project Lease Boundary
- Solar Siting Area
- Micrositing Corridor - No Turbines
- Micrositing Corridor - Turbines
- Proposed Turbine - Option 1

**NOTE(S)**

1. ALL INFRASTRUCTURE REMOVED:  
- WITHIN HIGH OR ABOVE WILDLIFE MOVEMENT CORRIDORS

2. PROJECT COMPONENTS (TURBINES, SOLAR ARRAYS, AND BESS) REMOVED:  
- WITHIN MEDIUM OR ABOVE WILDLIFE MOVEMENT CORRIDORS  
- WITHIN THE 2MI FEHAST BUFFER

**REFERENCE(S)**

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 11N  
2. MOVEMENT CORRIDORS: WDFW 2021  
([https://wacconnected.org/cp\\_addendumanalyses/](https://wacconnected.org/cp_addendumanalyses/))

**CLIENT**  
STATE OF WASHINGTON ENERGY FACILITY SITE EVALUATION COUNCIL

**PROJECT**  
HORSE HEAVEN WIND FARM

**TITLE**  
TURBINE LAYOUT OPTION 1  
REMOVAL OF TURBINES - FOR COUNCIL REVIEW CONSIDERATION NO. 1

CONSULTANT	YYYY-MM-DD	2024-01-08
DESIGNED	MK	
PREPARED	SCH	
REVIEWED	JP	
APPROVED	AH/SG/AM	

PROJECT NO.	CONTROL	REV.	FIGURE
31405435.000	01	0	X0.1-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**To:** Comments@efsec.wa.gov  
**From:** johnsonira967@gmail.com  
**Received:** 2024-02-19T18:29:16+00:00  
**Subject:** HHH wind turbines  
**Has attachment?** False

External Email

I want you to know I'm against the wind turbines for several reasons:

- 1) Let's pretend they were being put in your neighborhood.
  - a) None of the energy they produce would go to you.
  - b) They require a tremendous amount of work to install.
  - c) They require routine maintenance.
  - d) They have to be replaced on average 10 years.
  - e) They can catch fire. Now planes can't come in and fight them because of the houses.
  - f) They are noisy.
  - g) They kill all the birds that visit your neighborhood.
  - h) Your property value will go down.
  - i) Now when they are no longer of any value or the company goes bankrupt, who is going to remove them?
- 2) Only people who benefit from them:
  - a) Only the people who's land they will be put on because they will be paid rent.
  - b) The company that puts them in makes big bucks but has no cost. Why?? because they are subsidized.
- 3) The company that wants to install them is already threatening to not put them in if you restrict them. Sounds like a threat to me.
- 4) I guarantee you if you reject this you will catch all kinds of backlash from our governor.

So please use some common sense and if you believe in God pray about this important decision you are about to make.

Sincerely  
Ira Johnson  
509-987-3013

**Attachments:**

☐

**To:** efsec@efsec.wa.gov;Comments@efsec.wa.gov

**From:** dave@tricityscares.org

**Received:** 2024-02-19T03:55:42+00:00

**Subject:** Public Comment-Horse Heaven Hills Project-Turbine Height

**Has attachment?** False

External Email

This is a supplemental information to the letter that Scout Clean Energy sent to EFSEC January 19, 2023. The specific topic is turbine height.

David Sharp

Vice President, Tri-Cities CARES

Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)

Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**Attachments:**

□

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Wildlife Corridors and Transmission Infrastructure  
**Date:** Monday, February 19, 2024 7:30:00 AM  
**Attachments:** [Transmission Line Suggested Reroute.pdf](#)  
[Wildlife Corridor- Mitigation Exclusion Slide Page 8.pdf](#)

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External Email

This is for Sean Greene and Amy Moon's attention:

Deliberation discussions continue regarding project Infrastructure wildlife corridors and ferruginous Hawk nesting and range. This comment is to perhaps provide clarification regarding transmission lines.

- 1, Transmission Lines-Collector lines for wind turbine strings are underground.
2. The Applicant has in the Application, and the EIS includes a 230kv transmission line. The line is approximately 20 miles long and crosses key wildlife corridors, including sensitive areas just West of I-82, and along and spanning the Badger Canyon drainage.
3. The ASC and EIS clearly state that the transmission line is **only** required if Phase 2 is developed as **All Wind**. This is highly unlikely given the solar resources in the West Solar areas and the Applicants stated intention for a Hybrid project. Therefore, the transmission line very likely will not be needed or constructed.
4. However, in the event the line is required, it should be rerouted to avoid the majority of sensitive wildlife issues and reduce impact in other areas. An example is attached for each turbine option.
5. Also attached is a copy of the Wildlife Corridor Map in the Exclusion Mitigation Presentation marked up to show the Transmission Line high impact areas.

Two recommendations for EFSEC to consider:

1. Stipulate that this transmission line be removed from project drawings and not be part of the SCA. If they are unwilling to do so because of a "possibility" of an All Wind facility, EFSEC should require the line be rerouted on the drawings.
2. Coordinate locations should be provided for all project components including locations of wind turbines to be built, Meteorology Towers, and footprint locations for solar areas. Standard practice is then to allow the Applicant to move them up to 50'. If more than that, EFSEC must review the circumstances. Coordinate locations have already been provided to the FAA

Suggestion of Transmission Line\* Reroute to Reduce Impact to Avian Species, Wildlife Corridors, Visual, TCP's, and Improve Firefighting Capability.

\*Transmission Line Only Required if Phase 2b is All Wind

Remove Original Route  
Suggested Reroute  
Removed by Applicant

# Horse Heaven Wind Farm

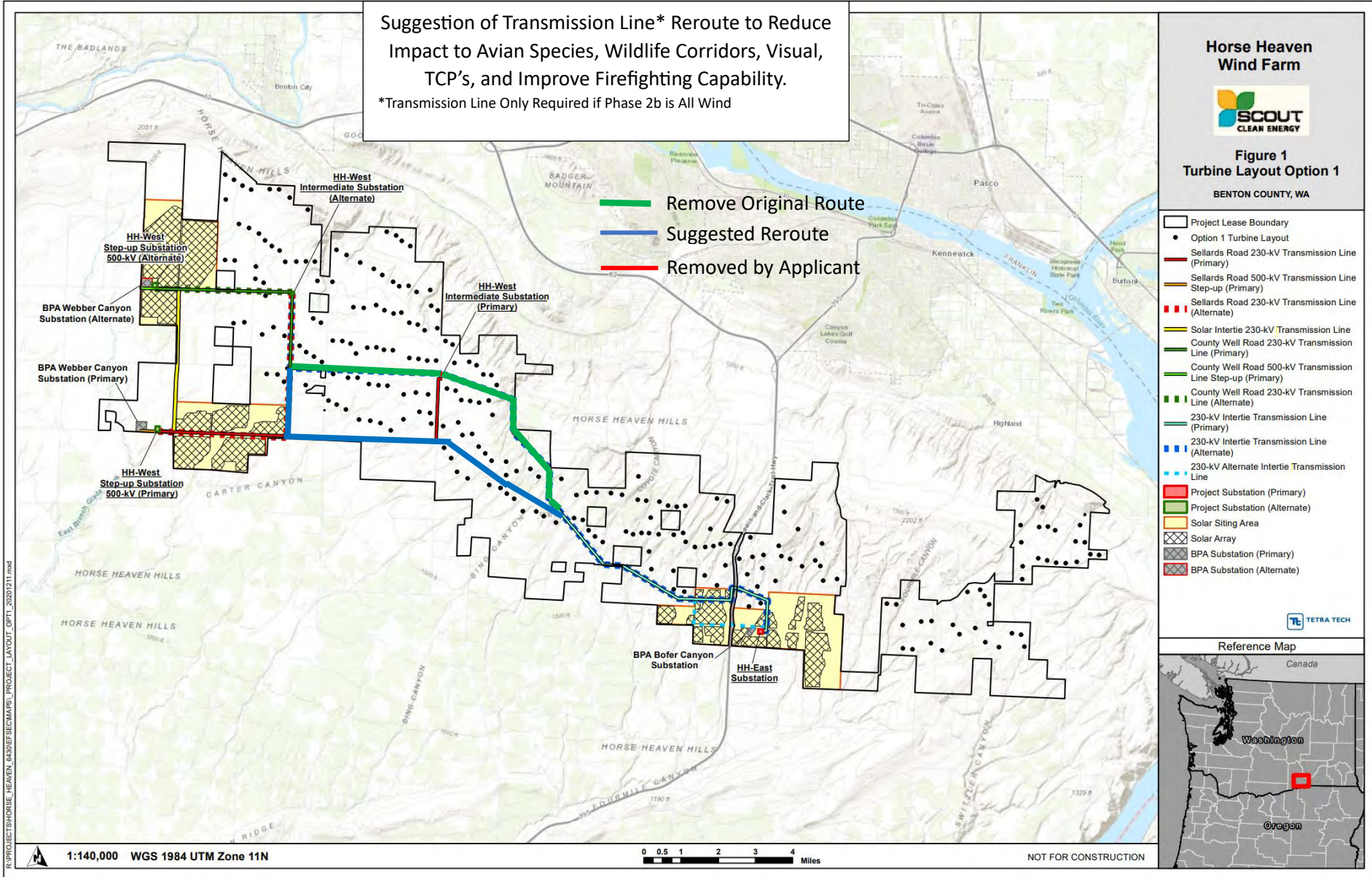


Figure 1  
Turbine Layout Option 1  
BENTON COUNTY, WA

- Project Lease Boundary
- Option 1 Turbine Layout
- Sellards Road 230-kV Transmission Line (Primary)
- Sellards Road 500-kV Transmission Line Step-up (Primary)
- Sellards Road 230-kV Transmission Line (Alternate)
- Solar Intertie 230-kV Transmission Line (Primary)
- County Well Road 230-kV Transmission Line (Primary)
- County Well Road 500-kV Transmission Line Step-up (Primary)
- County Well Road 230-kV Transmission Line (Alternate)
- 230-kV Intertie Transmission Line (Primary)
- 230-kV Intertie Transmission Line (Alternate)
- 230-kV Alternate Intertie Transmission Line
- Project Substation (Primary)
- Project Substation (Alternate)
- Solar Siting Area
- Solar Array
- BPA Substation (Primary)
- BPA Substation (Alternate)






## Reference Map






















**Suggestion of Transmission Line\* Reroute to Reduce Impact to Avian Species, Wildlife Corridors, Visual, TCP's, and Improve Firefighting Capability.**  
**\*Transmission Line Only Required if Phase 2b is All Wind**

 Suggested Reroute  
 Remove Existing Route  
 Removed by Applicant

**Horse Heaven Wind Farm**



**Figure 2**  
**Turbine Layout Option 2**  
BENTON COUNTY, WA

-  Project Lease Boundary
-  Option 2 Turbine Layout
-  Sellards Road 230-kV Transmission Line (Primary)
-  Sellards Road 500-kV Transmission Line Step-up (Primary)
-  Sellards Road 230-kV Transmission Line (Alternate)
-  Solar Intertie 230-kV Transmission Line (Primary)
-  County Well Road 230-kV Transmission Line Step-up (Primary)
-  County Well Road 500-kV Transmission Line (Alternate)
-  230-kV Intertie Transmission Line (Primary)
-  230-kV Intertie Transmission Line (Alternate)
-  230-kV Alternate Intertie Transmission Line
-  Project Substation (Primary)
-  Project Substation (Alternate)
-  Solar Siting Area
-  Solar Array
-  BPA Substation (Primary)
-  BPA Substation (Alternate)



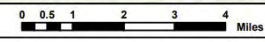
Reference Map



R:\PROJECTS\HORSE\_HEAVEN\_4430\REF\SEC\MAPS\PROJECT\_LAYOUT\_OPTION2\_20201211.mxd



1:140,000 WGS 1984 UTM Zone 11N



NOT FOR CONSTRUCTION

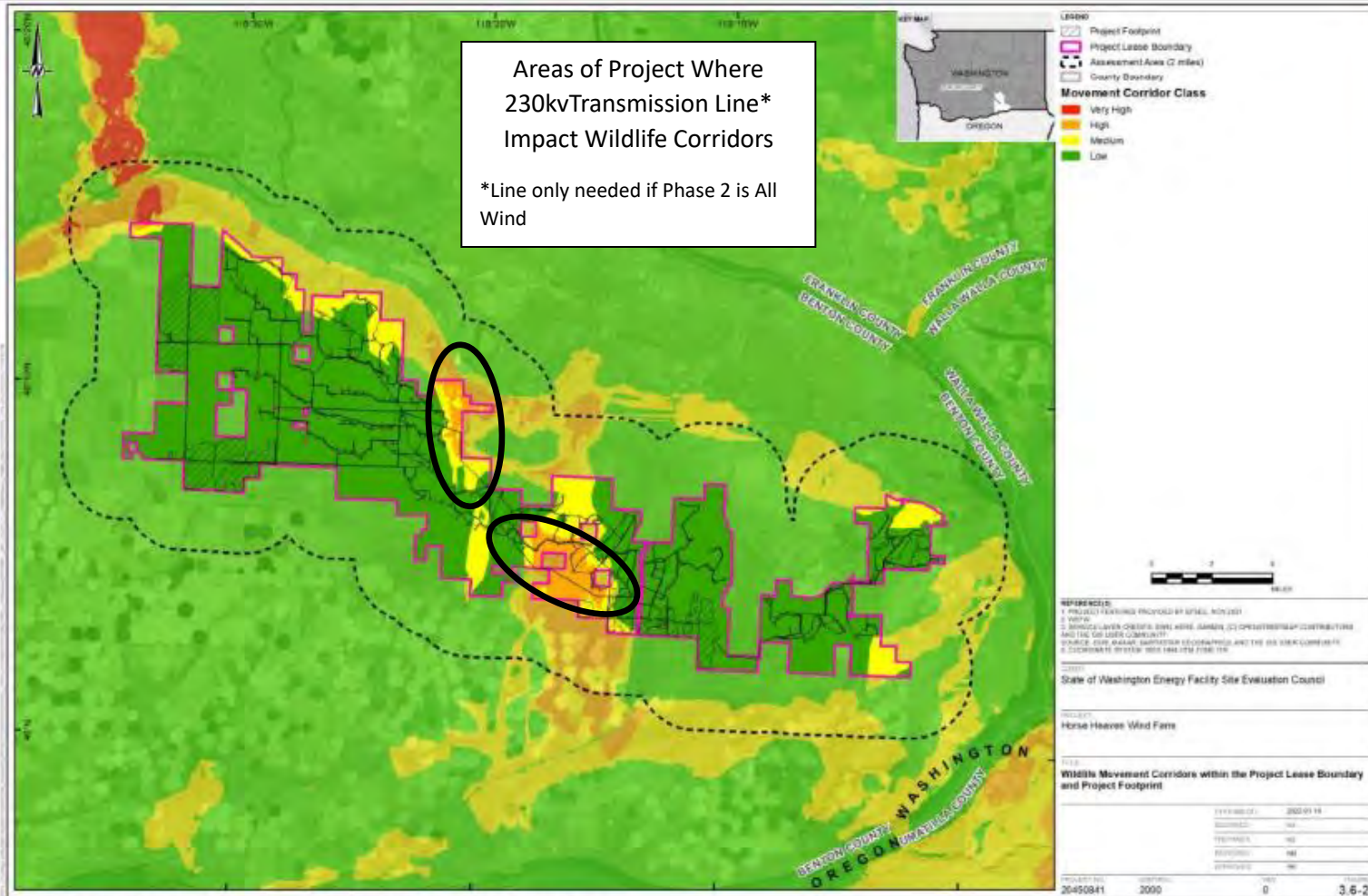


Figure 3.6-2: Wildlife Movement Corridors within the Project Lease Boundary and Project Footprint



To: Comments@efsec.wa.gov  
From: efsec@efsec.wa.gov  
Received: 2024-02-20T15:22:45+00:00  
Subject: FW: Wildlife Corridors and Transmission Infrastructure  
Has attachment? False

From: Pam Minelli <pam@tricitescare.org>  
Sent: Tuesday, February 20, 2024 7:22:27 AM (UTC-08:00) Pacific Time (US & Canada)  
To: Dave Sharp <davesharp.pe@gmail.com>  
Cc: EFSEC (EFSEC) <efsec@efsec.wa.gov>; EFSEC mi Comments <Comments@efsec.wa.gov>  
Subject: Re: Wildlife Corridors and Transmission Infrastructure

External Email

Dave,

Appreciate the time you took to bring this to EFSEC's attention! Getting that ugly transmission line removed would be a victory. Having it relocated further south and away from the hawk nests and wildlife corridors would be an improvement, too.

Thank you!

Pam

On Mon, Feb 19, 2024 at 7:29 AM Dave Sharp <[davesharp.pe@gmail.com](mailto:davesharp.pe@gmail.com)> wrote:

This is for Sean Greene and Amy Moon's attention:

Deliberation discussions continue regarding project Infrastructure wildlife corridors and ferruginous Hawk nesting and range. This comment is to perhaps provide clarification regarding transmission lines.

- 1, Transmission Lines-Collector lines for wind turbine strings are underground.
2. The Applicant has in the Application, and the EIS includes a 230kv transmission line. The line is approximately 20 miles long and crosses key wildlife corridors, including sensitive areas just West of I-82, and along and spanning the Badger Canyon drainage.
3. The ASC and EIS clearly state that the transmission line is only required if Phase 2 is developed as All Wind. This is highly unlikely given the solar resources in the West Solar areas and the Applicants stated intention for a Hybrid project. Therefore, the transmission line very likely will not be needed or constructed.
4. However, in the event the line is required, it should be rerouted to avoid the majority of sensitive wildlife issues and reduce impact in other areas. An example is attached for each turbine option.
5. Also attached is a copy of the Wildlife Corridor Map in the Exclusion Mitigation Presentation marked up to show the Transmission Line high impact areas.

Two recommendations for EFSEC to consider:

1. Stipulate that this transmission line be removed from project drawings and not be part of the SCA. If they are unwilling to do so because of a "possibility" of an All Wind facility, EFSEC should require the line be rerouted on the drawings.
2. Coordinate locations should be provided for all project components including locations of wind turbines to be built, Meteorology Towers, and footprint locations for solar areas. Standard

practice is then to allow the Applicant to move them up to 50'. If more than that, EFSEC must review the circumstances. Coordinate locations have already been provided to the FAA

--

Secretary, TRI-CITIES C.A.R.E.S.

Phone: 509-539-6788

Email: [pam@tricityscare.org](mailto:pam@tricityscare.org)

TRI-CITIES C.A.R.E.S

Community | Action for | Responsible | Environmental | Stewardship

Visit: [www.TriCitiesCARES.org](http://www.TriCitiesCARES.org)

**Attachments:**

□

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#)  
**Subject:** Fwd: Wildlife Corridors and Transmission Infrastructure  
**Date:** Wednesday, February 21, 2024 9:58:59 AM  
**Attachments:** [Transmission Line Suggested Reroute.pdf](#)  
[Wildlife Corridor- Mitigation Exclusion Slide Page 8.pdf](#)  
[Unnecessary Transmission Lines.pdf](#)

---

External Email

This is related to the 19.4 mile 230kv transmission line the is proposed by the Applicant. This is the second email on this subject. I have added a third attachment entitled unnecessary turbines.

----- Forwarded message -----

**From:** Dave Sharp <[davesharp.pe@gmail.com](mailto:davesharp.pe@gmail.com)>  
**Date:** Tue, Feb 20, 2024 at 10:20 PM  
**Subject:** Fwd: Wildlife Corridors and Transmission Infrastructure  
**To:** Drew, Kathleen (EFSEC) <[kathleen.drew@efsec.wa.gov](mailto:kathleen.drew@efsec.wa.gov)>

Kathleen,

You need to be aware that the majority of transmission infrastructure proposed in the final ASC and carried through to the FEIS is unnecessary. The story is more complicated and sinister than that, but I need to ensure you have read this email as you are deliberating very important issues associated with wildlife corridors and interface with Ferruginous Hawk nesting and habitat. I am hopeful you will forward this to the Council. I will forward this to the EFSEC comment line tomorrow morning.

Attached is a transmission map that I have marked up to highlight what is **not** required. The title is Unnecessary Transmission Lines and was not included in the original comment email.

Putting forth an entirely new unneeded transmission corridor through sensitive areas is not just high impact to wildlife but has high visual impact to the community, and further complicates firefighting. Cannot comment regarding TCP.

The Applicant's proposed line is contrary to the Benton County Comprehensive Plan, **Utility Element, Goal 3-Policy 3** "Facilitate maintenance and rehabilitation of existing utility systems and facilities and encourage the use of existing transmission/distribution corridors". **Applicant Analysis**, *"The Project is consistent with UE Goal 3 Policy 3 as the transmission line connecting the Project's substations within the Project Lease Boundary would traverse parcels to optimize the most direct route between substations while minimizing potential environmental and agricultural impacts on surrounding lands. The eastern Project substation has been located adjacent to BPA's proposed Bofer Canyon substation, thereby eliminating the need for new transmission lines at this location. Proposed transmission lines would be located adjacent and parallel to existing public road right-of-way where possible"*.

The above was extracted from Table 3.8-1a from the Final Environmental Impact Statement.



Not only does the transmission line carve out an entirely new corridor; it is not needed for the project.

----- Forwarded message -----

From: **Dave Sharp** <[davesharp.pe@gmail.com](mailto:davesharp.pe@gmail.com)>

Date: Mon, Feb 19, 2024 at 7:28 AM

Subject: Wildlife Corridors and Transmission Infrastructure

To: EFSEC (EFSEC) <[efsec@efsec.wa.gov](mailto:efsec@efsec.wa.gov)>, <[comments@efsec.wa.gov](mailto:comments@efsec.wa.gov)>

This is for Sean Greene and Amy Moon's attention:

Deliberation discussions continue regarding project Infrastructure wildlife corridors and ferruginous Hawk nesting and range. This comment is to perhaps provide clarification regarding transmission lines.

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Two recommendations for EFSEC to consider:

1. Stipulate that this transmission line be removed from project drawings and not be part of the SCA. If they are unwilling to do so because of a "possibility" of an All Wind facility, EFSEC should require the line be rerouted on the drawings.
2. Coordinate locations should be provided for all project components including locations of wind turbines to be built, Meteorology Towers, and footprint locations for solar areas. Standard practice is then to allow the Applicant to move them up to 50'. If more than that, EFSEC must review the circumstances. Coordinate locations have already been provided to the FAA

Suggestion of Transmission Line\* Reroute to Reduce Impact to Avian Species, Wildlife Corridors, Visual, TCP's, and Improve Firefighting Capability.

\*Transmission Line Only Required if Phase 2b is All Wind

Remove Original Route  
Suggested Reroute  
Removed by Applicant

## Horse Heaven Wind Farm



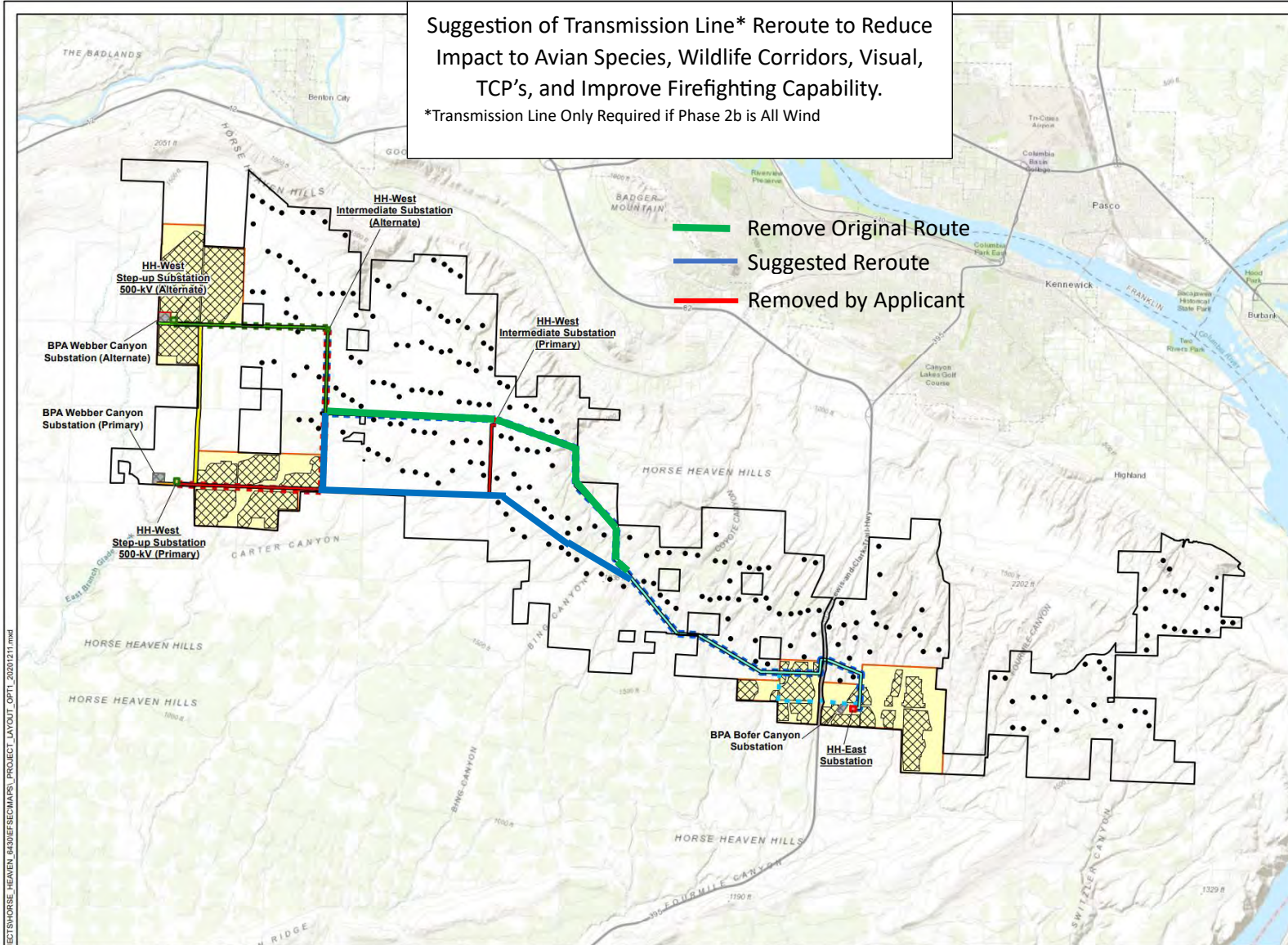
Figure 1  
Turbine Layout Option 1

BENTON COUNTY, WA

- Project Lease Boundary
- Option 1 Turbine Layout
- Sellards Road 230-kV Transmission Line (Primary)
- Sellards Road 500-kV Transmission Line Step-up (Primary)
- Sellards Road 230-kV Transmission Line (Alternate)
- Solar Intertie 230-kV Transmission Line (Primary)
- County Well Road 230-kV Transmission Line (Primary)
- County Well Road 500-kV Transmission Line Step-up (Primary)
- County Well Road 230-kV Transmission Line (Alternate)
- 230-kV Intertie Transmission Line (Primary)
- 230-kV Intertie Transmission Line (Alternate)
- 230-kV Alternate Intertie Transmission Line
- Project Substation (Primary)
- Project Substation (Alternate)
- Solar Siting Area
- Solar Array
- BPA Substation (Primary)
- BPA Substation (Alternate)



### Reference Map



R:\PROJECT\HORSE\_HEAVEN\_6430\EF\SEC\MAPS\PROJECT\_LAYOUT\_OPT1\_20201211.mxd



1:140,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION



**Suggestion of Transmission Line\* Reroute to Reduce Impact to Avian Species, Wildlife Corridors, Visual, TCP's, and Improve Firefighting Capability.**  
**\*Transmission Line Only Required if Phase 2b is All Wind**

- Suggested Reroute
- Remove Existing Route
- Removed by Applicant

**Horse Heaven Wind Farm**



**Figure 2**  
**Turbine Layout Option 2**  
 BENTON COUNTY, WA

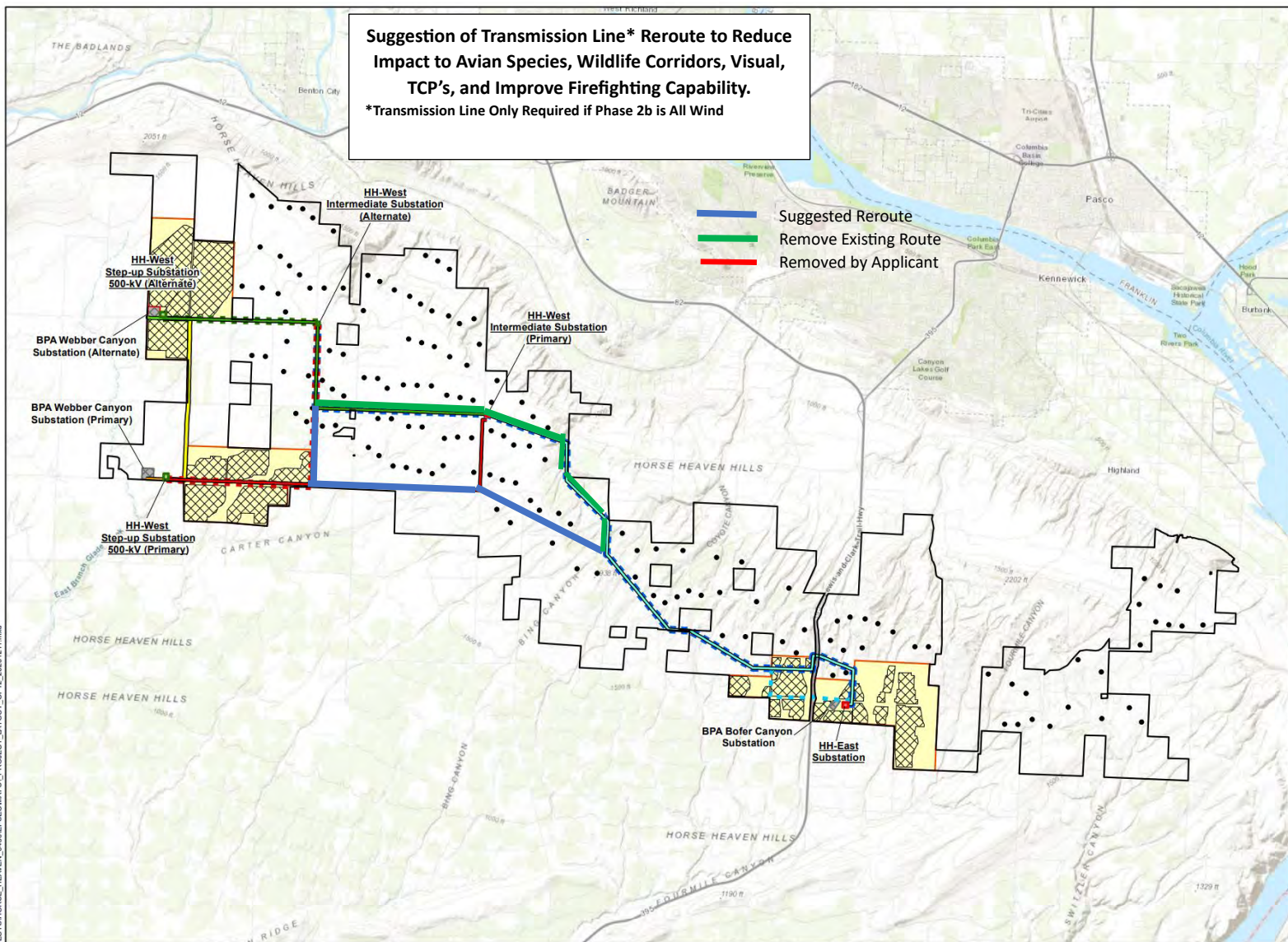
- Project Lease Boundary
- Option 2 Turbine Layout
- Sellards Road 230-kV Transmission Line (Primary)
- Sellards Road 500-kV Transmission Line Step-up (Primary)
- - - Sellards Road 230-kV Transmission Line (Alternate)
- Solar Intertie 230-kV Transmission Line (Primary)
- County Well Road 230-kV Transmission Line Step-up (Primary)
- County Well Road 500-kV Transmission Line Step-up (Primary)
- - - County Well Road 230-kV Transmission Line (Alternate)
- 230-kV Intertie Transmission Line (Primary)
- - - 230-kV Intertie Transmission Line (Alternate)
- - - 230-kV Alternate Intertie Transmission Line
- Project Substation (Primary)
- Project Substation (Alternate)
- Solar Siting Area
- Solar Array
- BPA Substation (Primary)
- BPA Substation (Alternate)



Reference Map



R:\PROJECTS\HORSE\_HEAVEN\_4430\REF\SEC\MAPS\PROJECT\_LAYOUT\_OPTION2\_20201211.mxd







# Horse Heaven Wind Farm



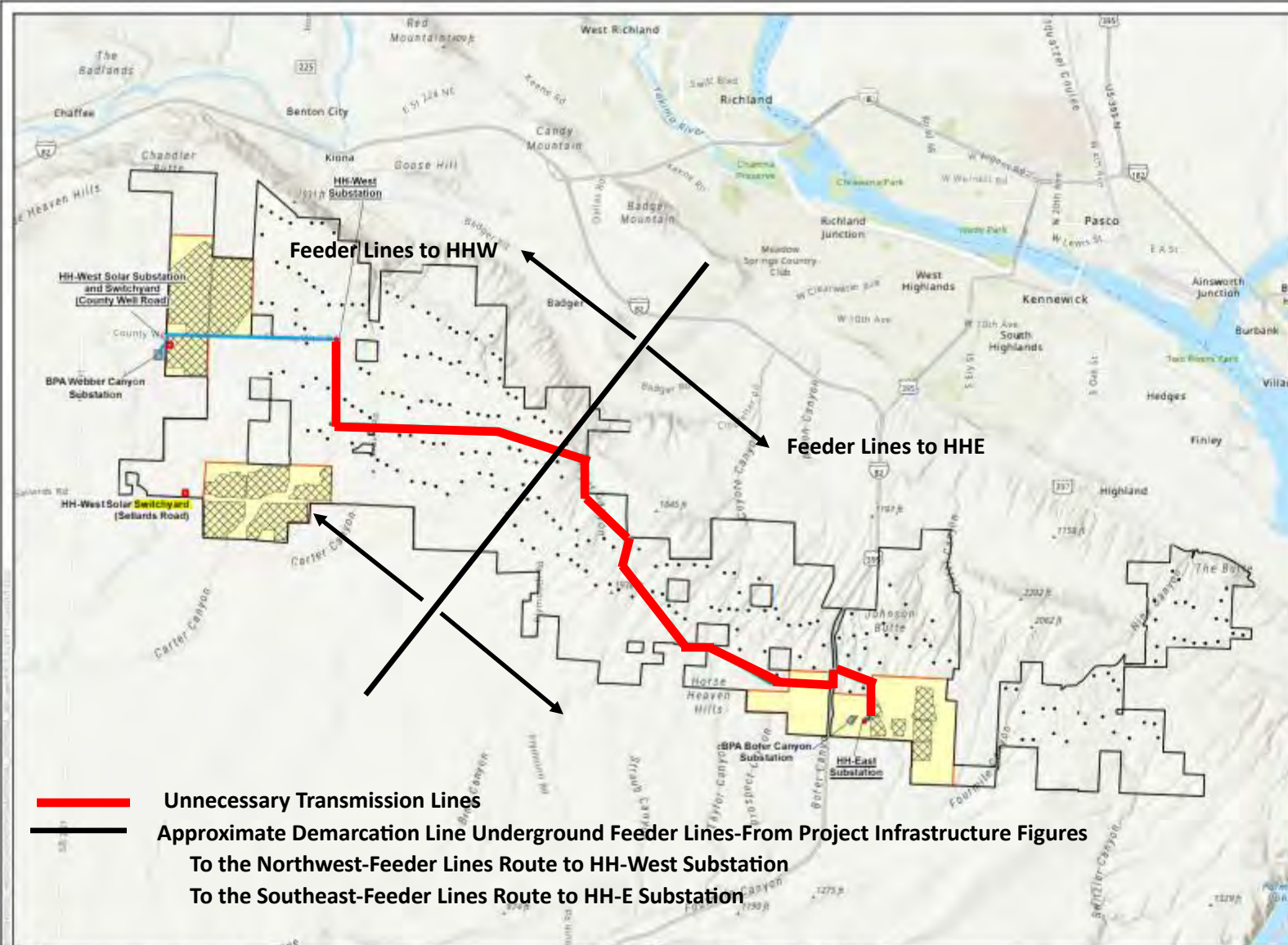
**Figure 2.3-1  
Turbine Layout Option 1**

BENTON COUNTY, WA

- Project Lease Boundary
- Option 1 Turbine Layout
- 230-kV Interline Transmission Line
- County Well Road 500-kV Transmission Line
- Project Substation
- BPA Substation
- Solar Array
- Solar Siting Area



## Reference Map



**Unnecessary Transmission Lines**  
**Approximate Demarcation Line Underground Feeder Lines-From Project Infrastructure Figures**  
**To the Northwest-Feeder Lines Route to HH-West Substation**  
**To the Southeast-Feeder Lines Route to HH-E Substation**

NOT FOR CONSTRUCTION



**To:** Comments@efsec.wa.gov  
**From:** greggwilbanks@gmail.com  
**Received:** 2024-02-22T02:43:46+00:00  
**Subject:** Horse heaven wind  
**Has attachment?** False

External Email

Approve this Horse Heaven Wind Project. Narrow focused special interests are keeping our society mired in old school fossilfuels. We need a mind set shift to get us into a healthier form of energy production. Otherwise, we'll wait too long and by then building wind power will too little, too late. If that's not already the case.

**Attachments:**

□

**From:** [Dave Sharp](#)  
**To:** [EFSEC \(EFSEC\)](#); [EFSEC mi Comments](#); [Krupin, Paul \(WaTech Guest\)](#); [Karen Brun](#); [Pam Minelli](#); [Bumpus, Sonia \(EFSEC\)](#)  
**Subject:** 230kv Transmission Line-Environmental Issues  
**Date:** Thursday, March 14, 2024 5:09:41 PM  
**Attachments:** [Final Public Comment-Transmission Line Reroute with Figures.pdf](#)

---

External Email

Comment from Tri-Cities CARES-Horse Heaven Wind Project.

This is directed to Ami, Amy, and Sean. This supplements an earlier comment regarding the **optional** 230kv transmission lines. Our position remains that the project can be fully functional as proposed without the line. The line is still optional.

We are aware that the Council will be deliberating above ground transmission infrastructure that was preliminarily excluded earlier. TCC takes no position on the Easternmost section of the transmission line in vicinity of I-82, but strongly believe that the section built in, and across Badger, Canyon would be an unneeded environmental blunder and an alternate route should be considered.

A cursory look at project documentation shows that a reroute may be feasible. The line would be shorter and would be almost entirely on previously developed or on previously surveyed land for the alternative transmission line that was removed.

Our formal comment outlines the environmental issues and is attached in PDF format.

David Sharp  
Vice President, Tri-Cities CARES  
Email: [dave@tricityscares.org](mailto:dave@tricityscares.org)  
Webpage: [www.tricityscares.org](http://www.tricityscares.org)

**March 14 29, 2024**

**Public Comment-Horse Heaven Hills Project- Optional 230kv Transmission Route**

**Update to Previous Public Comment February 20, 2024**

**Suggested Reroute to avoid multiple issues**

**Dave Sharp-Tri-Cities CARES**

This is directed to the attention of Amy Moon, Sean Greene, Ami Hafkemeyer. The TCC public previous comment highlighted that the transmission line as presented in the ASC is optional. This comment highlights the environmental impacts of the line, and proposes a reroute.

This reinforces to Staff and Council the significant and multiple environmental issues as a result of the route of this transmission line and suggests either a design reroute, or Not Build alternative. This comment is directed to the portion of the line routed through and across Badger Canyon drainage. We have not studied the route further to the East toward I-82. Leaving this portion of the transmission line to be built as designed would be a terrible environmental blunder.

Included in this comment are several Figures from the various FEIS chapters and Appendices that show the variety of issues. We do not include Ferruginous Hawk issues, but previous exclusion maps that show removal of Turbines 45-49, 92 and 92 imply a Ferruginous hawk nest within 2 miles. The area also provides habitat for the Townsend Ground Squirrel, and there have been sightings of the Loggerhead Shrike in the vicinity of the wetland.

The following is from Appendix L Bird and Bat Conservatory, Avoidance and Mitigation Measures 7.1.4-Collector and Transmission Lines, The Applicant states the *"...up to 19 mile transmission line will be located, where possible, where previous disturbance has occurred"*. As can be seen, the route chosen follows over 3 miles of undisturbed land with numerous environmental impacts. If the Applicant will not reroute the line, then they should not build it. Their own ASC stated the line as optional and no benefit has been stated. And since EFSEC balances benefit with cost, a simple answer would be to not allow the line to be built.

The reroute significantly reduces loss of shrub steppe and other critical habitat, and likely avoids the need for a dedicated road to service the line. It also utilizes existing utilities corridors more efficiently. The Intertie line reroute provides an additional buffer for aerial firefighting. Other benefits include a less lengthy route and more efficient use of DNR property already impacted from a project component (temporary laydown yard).

Figure 2.3-1 Turbine Layout Option 1

Figure 4.6-1 Indirect habitat Loss

Figure 3.4-2 Delineated Wetland

Figure 3.4-6 FEIS Arid Lands Initiative

Figure 3.6-4 Townsend Ground Squirrel HCA

Figure 3 Large Fire Data from DNR

Figure 3.6-2 Wildlife Corridor Movements

Figure 3.2-4 Geologically Hazardous Areas.

Figure 3.6-3 WFWD Occurrence-Loggerhead Shrike

**Overview-Suggested Reroute of Optional 230kv  
Intertie Transmission Line to Reduce Environmental  
Impacts- Badger Canyon Drainage**

**Present Route.**

**Suggested Reroute**

**Horse Heaven  
Wind Farm**



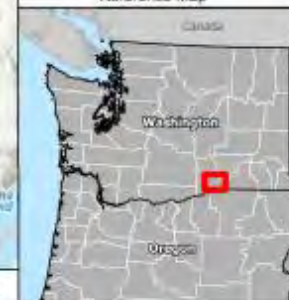
**Figure 2.3-1  
Turbine Layout Option 1**

BENTON COUNTY, WA

- Project Lease Boundary
- Option 1 Turbine Layout
- 230-kV Intertie Transmission Line
- County Well Road 500-kV Transmission Line
- Project Substation
- BPA Substation
- Solar Array
- Solar Siting Area



Reference Map



1:140,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

NOT FOR CONSTRUCTION



Figure 3.2-4 Geologically Hazardous Areas.

October 2023

Chapter 3 - Affected Environment

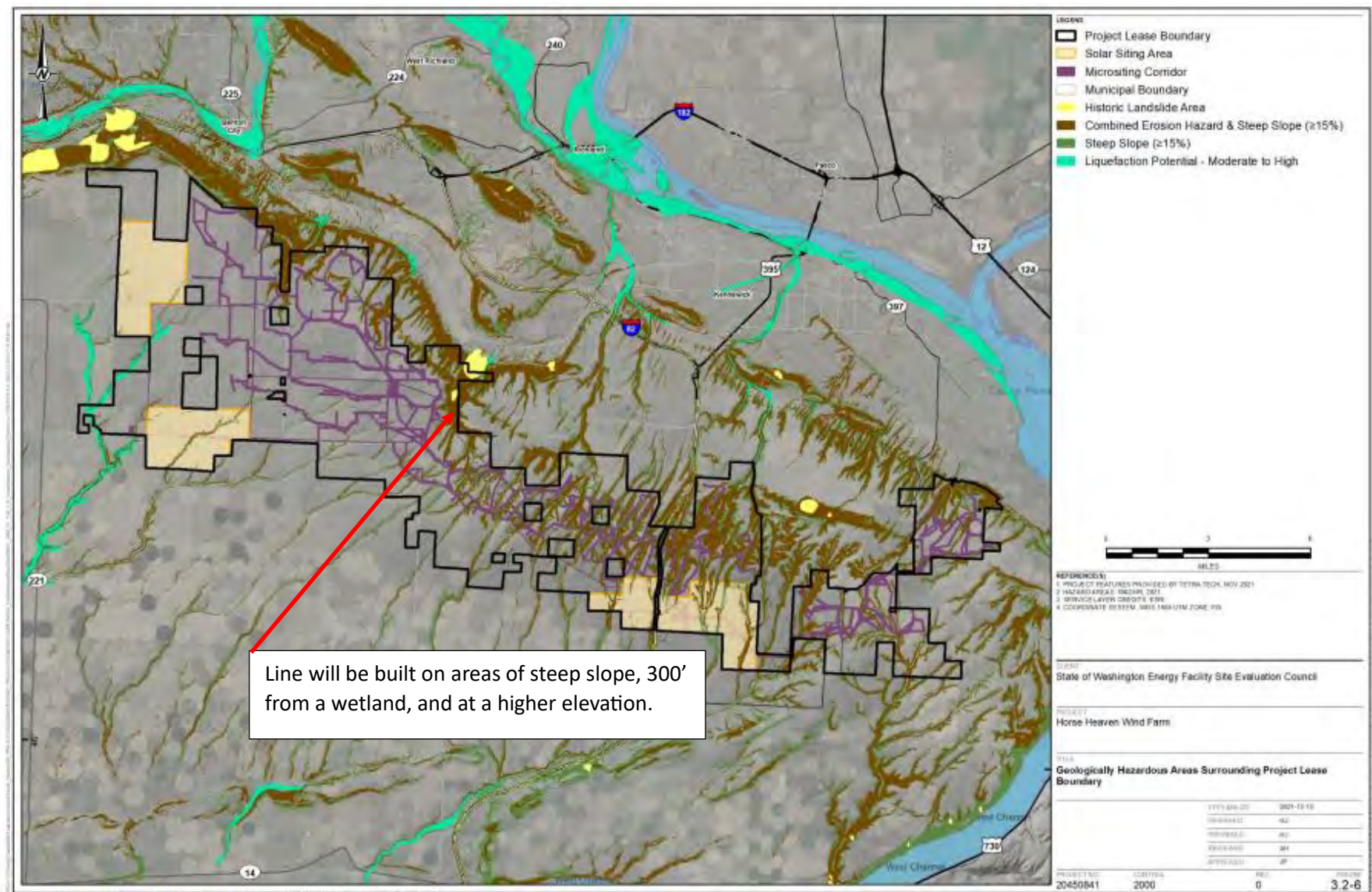


Figure 3.2-6: Geologically Hazardous Areas within the Project Vicinity



Figure 3.6-2 FEIS Wildlife Movement Corridors

October 2023

Chapter 3 - Affected Environment

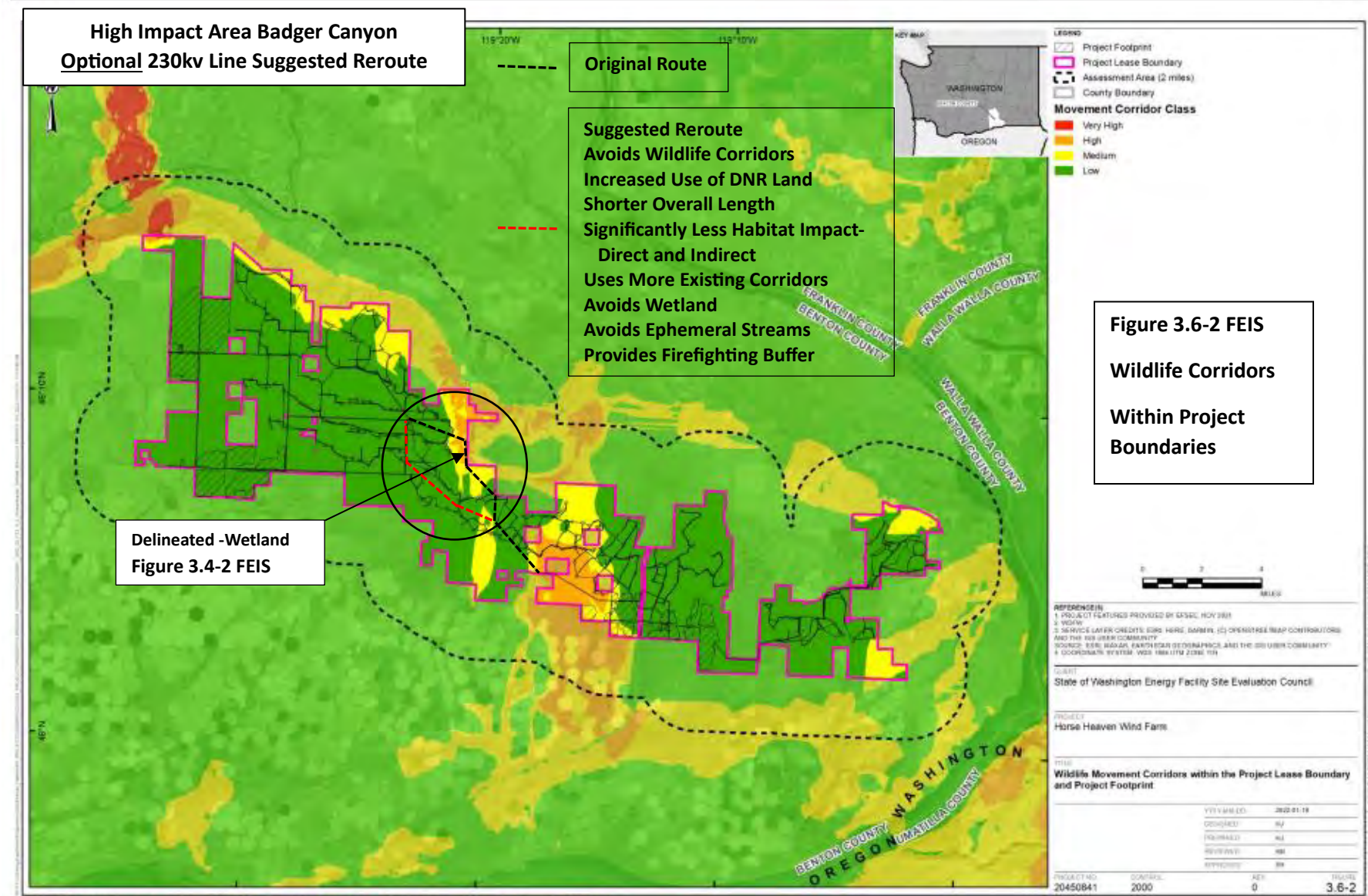


Figure 3.6-2: Wildlife Movement Corridors within the Project Lease Boundary and Project Footprint

Figure 3.4-2 FEIS Delineated Wetland Figure 3.4-2



This satellite view provides the viewer perspective of the sheer size of Badger Canyon. Based on the scale embedded in this Figure, this image represents approximately 13 square miles or over 10% of the lease area.

Note the Intertie corridor includes land cover color of Unclassified grassland-green, Shrub Steppe-Brown, and Agriculture Land-Light Tan and leaves the majority of the land cover as unidentified.

Other Project Maps show two springs in the vicinity of the wetland.



**Figure 4.6-1 Indirect Habitat Loss-Two Items to note: The figure only delineates indirect habitat loss inside project boundary. Should include habitat loss outside of the lease boundary if within zone of influence of 0.5 miles. This understates indirect loss of habitat.**

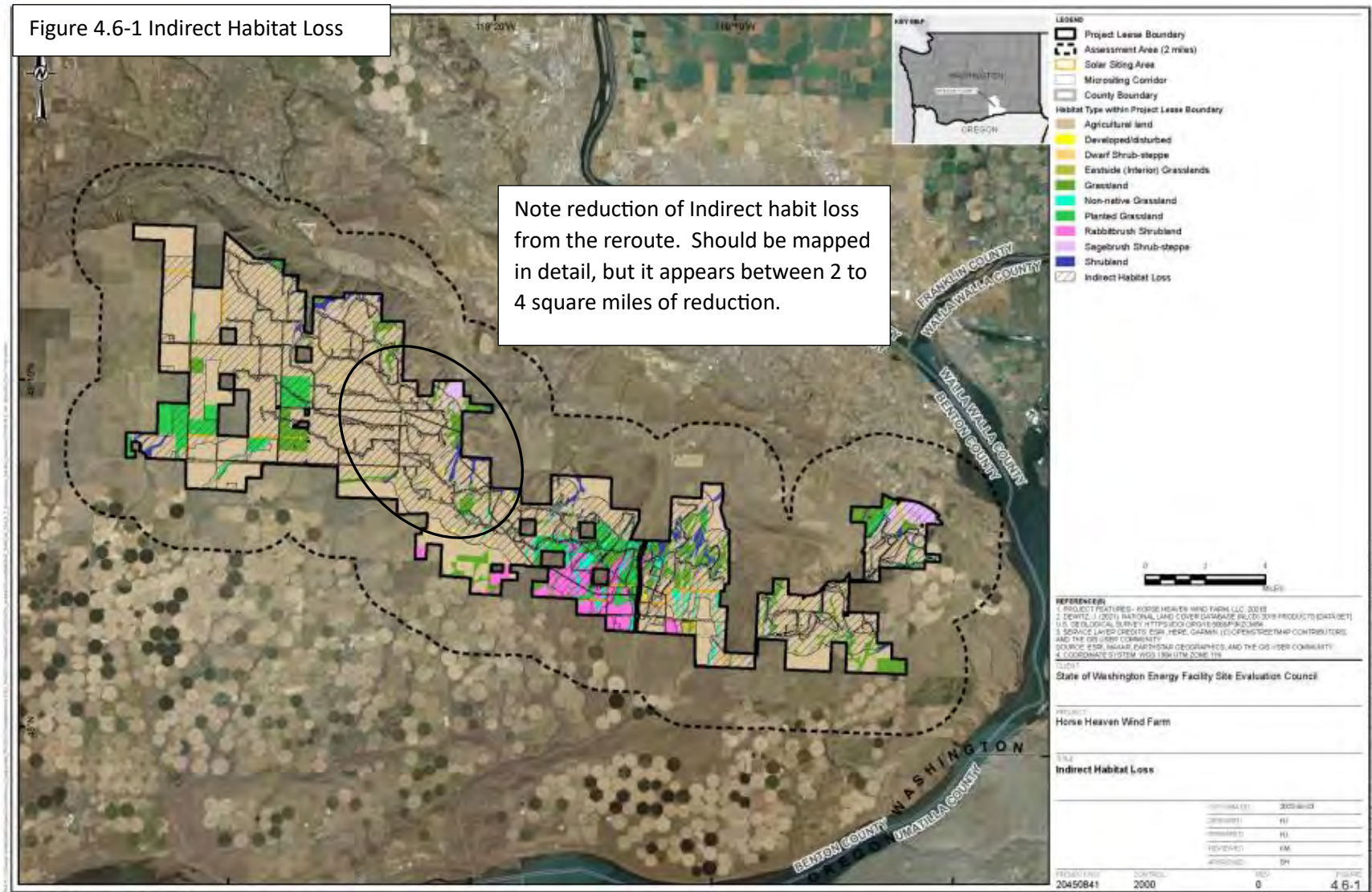


Figure 4.6-1: Indirect Habitat Loss

Horse Heaven Wind Farm  
Final Environmental Impact Statement

Figure 3.4-6 FEIS Arid Lands Initiative

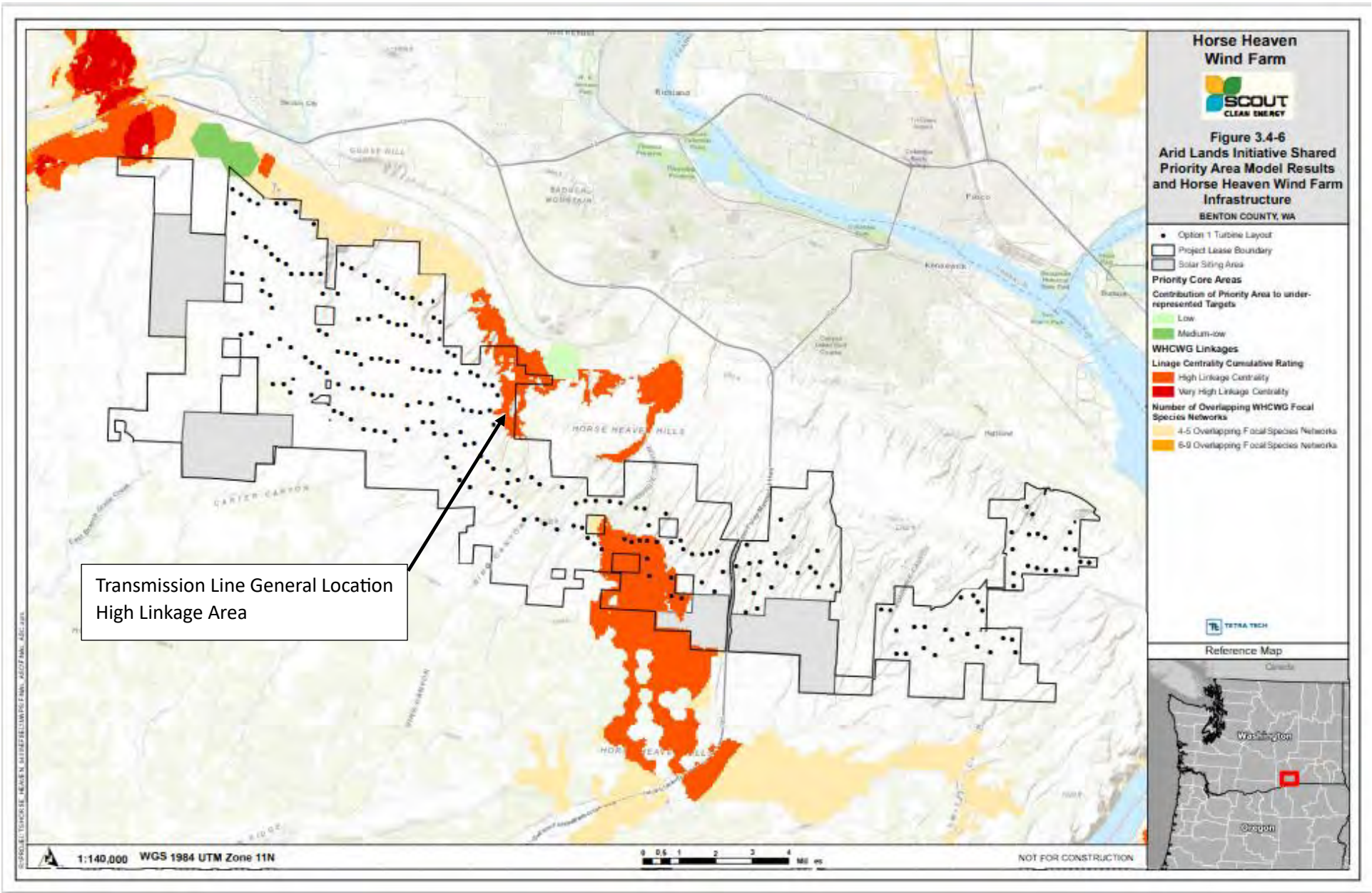




Figure 3.6-4 Townsend Ground Squirrel Habitat Conservation Area- High HCA

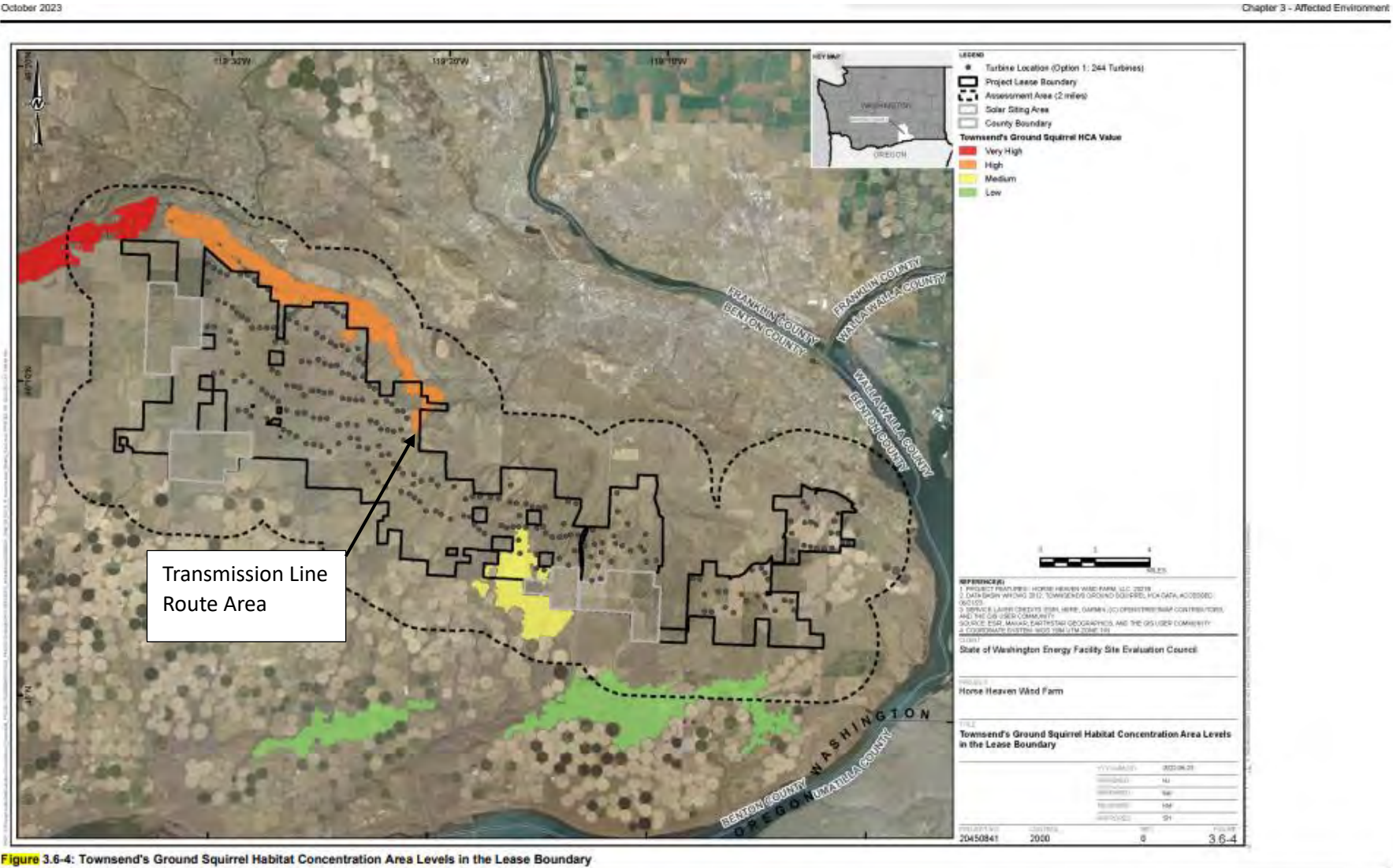


Figure 3.6-4: Townsend's Ground Squirrel Habitat Concentration Area Levels in the Lease Boundary

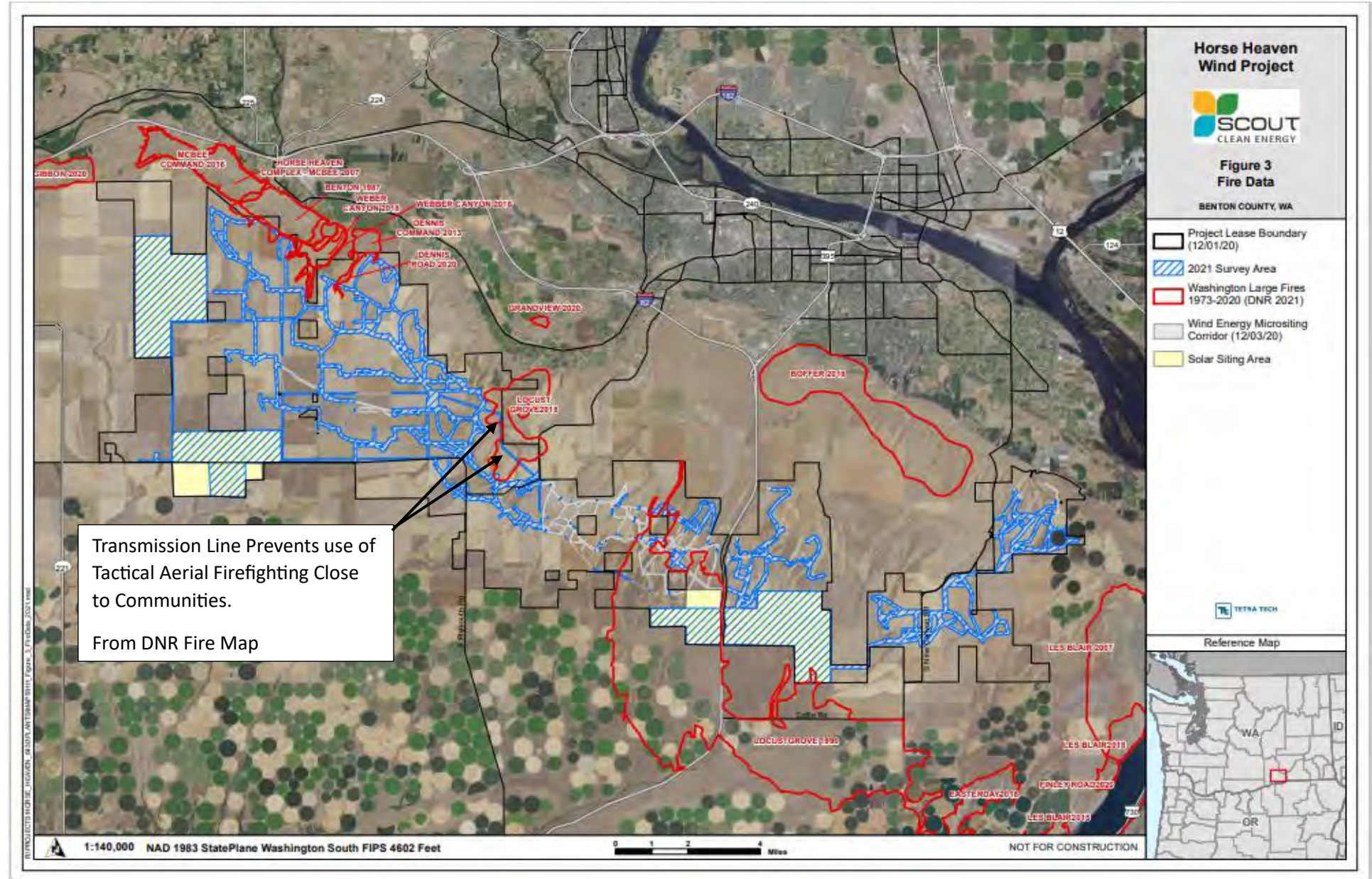


Figure 3.6-3: WDFW Wildlife Occurrence Locations within the 2-Mile Assessment Area

Horse Heaven Wind Farm  
Final Environmental Impact Statement



Large Fires ASC Supplemental Botany and Habitat Report- Figure 3 Fire Map





Date: March 14, 2024

Public Comment

Comments and rebuttal to Letter from Scout (Applicant) Clean Energy Dated January 19, 2024.

Horse Heaven Hills Project

From: Tri-Cities CARES- Dave Sharp, Karen Brun, Paul Krupin, Pam Minelli

The intent of Applicant's letter dated 1/19/2024 can only be to pressure, or otherwise influence EFSEC to change direction in the deliberation process. Much of their letter focuses on turbine exclusion and the 2-mile exclusion zone around historical nests. The problem with that position is that the Ferruginous Hawk impact is only one of many that this project brings. The exclusion recommendation presented by EFSEC staff judged the turbine as high impact, based not on a single issue, but on several, turbine by turbine.

EFSEC is charged with the responsibility of balancing the benefits of the project with the impacts to the environment. The Applicant has had over 3 years to present their case. It is past the time for the Applicant to let EFSEC perform their jobs without putting their finger on the scale. TCC will rebut the Applicant letter by numbered topic/issue.

**1. General Site Capacity and the Application for Site Certification-Page 1 of Letter.**

**TCC Comment-**The HHH site will not support the applied for nameplate generation, proposed micro-siting corridors, and infrastructure specified without significant impact to the environment. Applicant's approach appears to be to obscure and minimize the impacts of the project. This was especially apparent with the visual aspects of the project. The ASC stated that BLM visual assessment methodology was used, but we saw no attempt to engage local stakeholders in finding appropriate Key Observation Points. There was no testimonial record of a stakeholder assessment team or rating sheets: a requirement of the BLM methodology. Our review of the data request/response record suggests that Applicant may have hand-picked the KOP locations and "suggested" to EFSEC the use of others. To this day, there are still deficiencies in the visual record, and residents that do not know what the impact will be. TCC had to expend scarce funds to independently develop our own visual representations to show unsuspecting residents what was being planned.

The project site chosen is bordered by Military Training Flight Route restrictions to the South and West, and bumps against a metropolitan area with a population over 300,000 to the North. The NE corner hugs the Nine Canyon Wind Project, and the SE corner is restricted by wildlife impact. In between are other sensitive areas associated with wildlife and wildlife corridors, State endangered and threatened species, a wetland, loss of habitat, visual impacts, likely loss of use of a public multi-use recreation area, to say nothing of the issues around traditional cultural property, and loss of ability to effectively fight wildfires common in this area.



2. “Likely forcing procurement of a taller wind turbine model.” Page 3 of the letter.

**TCC Comment:** Tri-cities Cares has already commented on the Applicant’s assertion that turbines taller than those presented in the ASC likely may be required for reasons of turbine unavailability, and citing a “notification” they received that the under 500’ turbines may not be available. **Do not accept that premise, which we would opine as a “red herring”.** The sub-500 ft turbine is the workhorse of the GE fleet. We find the statement that the Applicant made as misleading and fear mongering. Substituting turbines with specifications over the envelope criteria in the ASC will be a significant and challengeable event. Indeed, one of the smaller turbines in Option 1 already poses significant issues to listed avian species.

3. **Project Hybrid Design**-Mr. Rucker stated in the letter that *“The Horse Heaven Clean Energy Center Project is a multi-technology, hybrid facility **designed from the outset** (emphasis TCC) as an integrated renewable project.”*

**TCC Comment-**We beg to differ with Mr. Rucker’s characterization of the project designed as a hybrid facility from the outset. The Applicant was in the area for approximately 4 years before there was any public indication that the project would be hybrid technology. The Applicant’s application with Bonneville Power did not show any hybrid interconnection requests until December 2020, less than 2 months before the Application submittal.

4. **Project Generation Capacity**-Mr. Rucker also states; *“In total, the Council’s proposed changes would gut the Project’s renewable energy generation capacity, reducing it from 1,150 MW to around a mere 236 MW of wind generation and at most 500MWac solar generation from the western solar array”.*

**TCC Comment-**The HHH project would not be able to **generate** 1150mw. The BPA transmission systems limits maximum generation to 850mw. Even the Final ASC Transmission Section contains the caveat of “up to 350mw” from the East Substation and “up to 500mw” from the West Substation.

In our review of this project, we failed to understand why an Applicant would propose such a large overbuild, with no stated benefit, that would proportionately add costs, but only incrementally increase benefits, if any. There are a number of potential reasons:

- From the FEIS ES 2.2 Alternatives to the Proposed Action: *“Several alternatives were considered for analysis but were eliminated from detailed evaluation in the EIS because they **would not generate the designed nameplate generating capacity required by the Applicant.**”* (Emphasis TCC) This puts Applicant in a position to dictate the mitigation. We could find no other instance in the EFSEC record that a major project did not offer Alternative build option(s).
- Speculative overbuild to preserve capability to add more nameplate at a later date if the BPA transmission infrastructure could then accept higher generation.
- Use the project in a way not discussed in the ASC, or the FEIS.

Reference Mr. Rucker's comment regarding EFSEC "gutting" the project. Our analysis shows the project could install 950mw nameplate: still exceeding the BPA limitation. Our estimate is based upon Council deliberation in the January EFSEC meeting

For perspective, the largest wind project in the State is Lower Snake River at 342.7mw, and the largest solar project is Lund Hill Solar at 150mw. Stated another way: the project would still be nearly 3 times the nameplate generation of the current largest renewable energy project in the State. In our opinion, that is hardly gutting the project.

This community was introduced to CEO Michael Rucker in a March 20, 2020 guest opinion piece in the local newspaper. We think it appropriate to review his words.

- 5. Transparency**-In the opening paragraph Mr. Rucker's message was clear: *"That's why transparency with the local community about our wind energy projects is important to everyone here at our company and most especially to me"*. In the next paragraph Mr. Rucker stated the project: *"..... could bring up to 600 megawatts (MW) of wind energy to the region and the state of Washington."*

**TCC Comment**-Mr. Rucker mentioned transparency to the local community. At the time of the Opinion piece, the project was "up to 600mw". By the end of August 2020, the project grew from 600mw of wind to 850mw wind and solar with batteries (first mention of a hybrid concept).

Late in 2020, with no notice to the community officials, the Applicant changed the permitting venue from Benton County to EFSEC. February 2021, they made the first Application for Site Certification (ASC) to EFSEC. The ASC grew the project another 300mw to 1150mw. This blindsided the county and affected residents, including many with no idea of the scope growth the project.

- 6. Mr. Rucker praised a Washington renewable project** *"---development such as the Skookumchuck Wind Project currently in construction in Lewis County near Centralia"*.

**TCC Comment:** There are major differences between the Skookumchuck (SP) and the HHH project;

- The SP is a 136mw facility with 38 turbines. As part of the permitting process with Lewis and Thurston counties, their Applicant voluntarily reduced the project from 100 turbines, a reduction of 62%, to reduce environmental impact to wildlife. When the EFSEC Council deliberates reducing the HHH project by a much smaller percentage the Applicant responds in a non-professional manner that should not be tolerated or accepted.
- SP is sited on remote timber land. The nearest incorporated City appears to be Tenino with a population of 1,950 located 15 miles distant. Compare that to the Tri-Cities situation within 300,000 population within 10 miles.
- Skookumchuck renewable energy is going to Northwest utility customers. The HHH Project Applicant has made no commitment for direct renewable energy benefits to Washington customers.

7. Another quote from Mr. Rucker's opinion piece: *"In fact, the Audubon Society strongly supports properly sited wind energy facilities that reduce the threat to birds posed by a warming climate."*

**TCC Comment-** The Applicant has vigorously opposed mitigation associated with wildlife. We remind EFSEC of the Head of Washington Audubon's DEIS public comment #578 and the public comment video August 23, 2023 as part of the Adjudication. The comments are consistent and very clear. The HHH project is not sited in a manner that Audubon can support. Their comment strongly opposed siting of many of the turbines for the project and reaffirmed the 2-mile buffer for the Ferruginous Hawk nests, and for wildlife corridor preservation. One of the first public comments came from a WDFW specialist that effectively communicated the same. Later public comment from avian experts on the Ferruginous hawk reaffirmed the two-mile buffer.

8. Mr. Rucker also stated in the public opinion piece: *"Scout Clean Energy takes potential impacts to the local ecology very seriously. We share the public's concerns about bird and bat mortality, **which is why we site our projects carefully to minimize impacts**" (emphasis TCC)"*

**TCC Comment-** A comparison to Mr. Rucker's current letter speaks volumes. Many of the turbines have 3 to 5 high impact categories, whether it be wildlife, wildlife corridors, habitat, loss of recreation opportunity, traditional cultural property, visual impacts, etc. The project is sited so poorly that multiple high impact unavoidable impacts were identified.

#### **9. Reference Applicant Letter Section III.-Wildlife Corridors. Wildlife Corridors-**

The Applicant states in Section III, page 7-8: *"The council's reliance on that map is particularly egregious given that on-the-ground field review has been conducted in the area. Applicant and its biologist experts conducted extensive multi-year site-specific surveys as documented in the application materials. Those data verified that the mapped linkage areas in question are majority disturbed developed and agricultural lands that no longer present viable linkages or habitat qualities as suggested in the 2013 map."*

The context of the comment in the Applicant letter is to allow construction of an optional 230kv transmission line through wildlife corridors.

**TCC Comment-**The proposed "optional" 230kv transmission brings multiple environmental impacts to environmentally sensitive areas.

There is ample information in the FEIS to characterize the environmental impacts. There is no way to disguise the huge swath in the center of the project that has a combination of wildlife corridors, proximity to endangered avian species and habitat. EFSEC Staff is showing portions of the line removed from the high impact maps is being used for deliberation purposes. TCC believes that a reroute out of from Badger Canyon is a reasonable mitigation action that could be accomplished.

If the line is truly an option, then the Applicant should not be opposed to a rerouted design change. A separate comment will be provided.

**Conclusion**-TCC's position is that the project is too large and unsuitable for the site and carries unacceptable environmental impact. We asserted that the benefits would be moderate at best, and renewable energy would most likely not go to Washington electricity customers. After over 3 years of studying the Project, we reaffirm those positions.

In their letter to EFSEC, the Applicant disparages the Council deliberation and EFSEC process for most of the letter, and then in the last page "respectfully" requests that the Council effectively abandon the deliberations and use Staff provided direction.

The EFSEC process is dependent upon close cooperation, and Full Disclosure by the Applicant to help make the process both efficient and transparent. The multiple changes made, including successively ballooning the size of the project, making a late venue change on short notice, and multiple revisions to the ASC documents has made this a difficult project for all parties. In the letter's Conclusion the Applicant complains about the EFSEC process not providing a "stream-lined" process. The Applicant needs to look in the mirror to find the party responsible!

In 2018 a "Strategic and Policy Review" for the EFSEC process was written by Chair Drew, and endorsed by the Governor. Legislation was later promulgated to streamline the EFSEC process. As on-point the strategic review, and as well intentioned the legislation, it takes two party cooperation, transparency, realistic expectations, and a willingness to compromise to achieve a mutually desirable outcome. In the case of the HHH project, that appears not to have happened.

Tri-Cities CARES asks that EFSEC Council continue deliberations that would balance the benefits of the project with impacts to the environment. That would include mitigation of above ground infrastructure, in particular the route of the optional 230kv Intertie Transmission line crossing critical wildlife corridors, and maintain the EFSEC position of a 2-mile distance buffer to Ferruginous Hawk nests.

Sincerely,

Tri-City CARES, Karen Brun, Paul Krupin, Pam Minelli, and Dave Sharp



**From:** [CEASE2020](#)  
**To:** [EFSEC mi Comments](#); [EFSEC \(EFSEC\)](#); [EFSEC \(EFSEC\)](#); [Bumpus, Sonia \(EFSEC\)](#); [Drew, Kathleen \(EFSEC\)](#); [Snarski, Joanne \(EFSEC\)](#); [Hafkemeyer, Ami \(EFSEC\)](#); [Owens, Joan \(EFSEC\)](#); [Grantham, Andrea \(EFSEC\)](#); [Moon, Amy \(EFSEC\)](#); [Randolph, Sara \(EFSEC\)](#); [Shiley, Alex \(EFSEC\)](#); [Greene, Sean \(EFSEC\)](#); [patricia.betts@efsec.wa.gov](mailto:patricia.betts@efsec.wa.gov); [osta.davis@efsec.wa.gov](mailto:osta.davis@efsec.wa.gov)  
**Cc:** [GOVOutBound](#); [Office of Governor Inslee](#)  
**Subject:** C.E.A.S.E. CITIZENS EDUCATED ABOUT SOLAR ENERGY HHH PROJECT COMMENTS FOR THE RECORD  
**Date:** Wednesday, March 27, 2024 8:44:35 AM  
**Attachments:** [02152024\\_hawk-2\\_140058.webp](#)

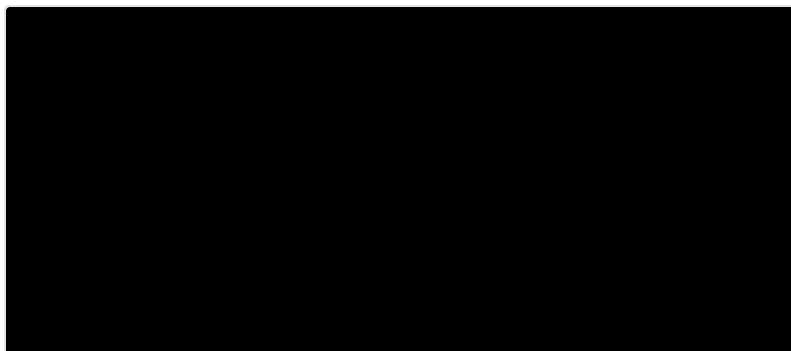
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External Email

EFSEC Chair Drew, these are my comments as the founding member of C.E.A.S.E. Citizens Educated About Solar Clean Energy opposing the Horse Heaven Hills wind and solar project. Please place them on the record. This project will do more harm than good and is a detriment to Benton County. It is a danger to the safety, health and welfare of all the Benton County citizens. The known fire risk in and of itself should stop this project. In the summer of 2023 adjoining Klickitat County experienced the Newell Road fire which consumed 62,000 acres. The aerial firefighting efforts were greatly reduced by the wind turbines obstructing their flight path of the planes not allowing them to drop the fire retardant. This obstruction allowed the fire to burn out of control for weeks. The fire burned up 10s of 1000s of acres of farmland and many structures. It was devastating and this will happen at the HHH project. The lack of a firefighting water source in this remote area contributed to this uncontrolled fire. The HHH project is in a remote area without a water source and will experience the same problem. Do not certify this project. EFSEC think of the citizens you are placing in harms way. Would you place your loved ones in harms way? C.E.A.S.E. supports the 2-mile buffer from the endangered Ferruginous Hawk nesting sites. These hawks must be protected into the future and must not become collateral damage for the profits of the greedy foreign corporation like Scout Clean Energy. Brookfield owner of Scout Clean Energy is a South American foreign corporation and does not care about these hawks. Scout Clean Energy based out of Colorado can build their wind turbine sites in the Colorado Rocky Mountains near their homes, but they won't and don't want them near their homes. Keep the 2-mile Ferruginous hawk buffer in place. Keep all the sub-stations, transformers, inverters, transmission lines, and other energized equipment out of wildlife corridors. Do not allow 8-foot-high chain-link fencing and barbed wired which will impede wildlife migration. Do not accept mitigation money which will never offset the damage done by this destructive HHH project. Protect all the wildlife as they are an important part of the eco-system now and into the future. Additional wildlife and avian studies must be done by independent qualified experts in these fields. Do not allow Tetra Tech to perform and submit any studies as they have a history of falsifying studies. Hunter Point navy base is one example. Native American culture and resources must be protected, and further studies are needed to ensure this protection occurs. Where will the water source for dust control, the manufacture of concrete and to clean solar panels come from. Are there wells present in the proposed area. Has the Washington Department of Ecology issued well permits for drilling and consuming water. Will the 5000 gallon per day limit be adhered to by

Scout Clean Energy. How will the usage be monitored. Will penalties be applied when the limit is violated. If this project is allowed how will decommissioning happen. How will the toxic solar panels, inverters, lithium-ion batteries, transformers, wind turbines, toxic wind turbine blades, and associated harmful fluids be disposed of. Who will be responsible and pay for the cleanup. Scout Clean Energy, I doubt it as they will be long gone with profits in their pockets. When a fire occurs at BESS, in a wind turbine, sub-station, inverter or in the solar site will Scout Clean Energy fight the fire with their onsite personnel. No. With no water source available how will fire suppression be accomplished. If local firefighters must respond will Scout Clean Energy train the first responders, supply all the needed firefighting equipment and pay for services rendered. Will Scout Clean Energy pay for the loss of life of a first responder. Or will that death just be collateral damage. This project will be devastating to the citizens of Benton County directly and indirectly to all citizens of Washington state. The only thing green about this project is the green going Brookfield/Scout Clean Energy's pocket. They are all about money. Chair Drew and EFSEC employees do not allow this project to be built. EFSEC you are jeopardizing everyone's future and that includes you and your families. Stop supporting useless so-called clean energy corporations from foreign countries such as Brookfield/Scout Clean Energy. Wind and solar are not clean and green at all. They are unreliable, non-dispatchable, expensive and can never supply the baseload electricity needed to support America and keep America a great nation. Wind and solar will never replace the existing energy sources. We cannot live without fossil fuels. CO2 is the building block of life and not the dreaded danger climate activists claim it to be. We cannot exist without it and need more. EFSEC wake up and realize the disastrous future you helping to create and do not allow this project to be built. Greg Wagner C.E.A.S.E. Citizens Educated About Solar Energy

[Brookfield to invest up to \\$2 billion in Scout Clean Energy and Standard Solar](#)



**Brookfield to invest up to \$2 billion in Scout Clean Energy and Standard...**

Brookfield to invest up to \$2 billion in Scout Clean Energy and Standard Solar. Read full press release here.

Horse Heaven Wind Project

FEIS Response to Council for the Environment Comment #1117655

Appendix M, Bird and Bat Conservation Strategy,

Appendix 4.6-1 Wind Turbine Wildlife Collision Risk

Dave Sharp

Tri Cities CARES

EFSEC is flying blind with respect to Avian Mortality for this project. The ONLY number that has been presented is the Applicant stating the fatality rate will be about the rate of Nine Canyon at 2.6 birds/mw/year. We have found no basis for that opinion.

In the FEIS the applicant did not provide the avian fatality estimates information requested by the Council for the Environment in comment 1117655.

The Applicant will not voluntarily offer to perform collision risk calculations. That direction must come from FSEC.

TCC believes the avian fatality rate likely will be higher than the Nine Canyon Project. Collision calculations are required to provide the answers. The calculations should be performed for all turbine models for certain species of concern for the following reasons:

1. At this late point in the process EFSEC is in the dark with respect to avian fatalities other than an opinion by the Applicant.
2. The Exposure Index<sup>1</sup> described in Appendix M does not predict collisions or provide a rate. It is not intended for that use. However, the large number of observations including 14 species of concern along with irregularities<sup>2</sup> in the survey process require collision calculations be performed for species listed below.
3. All of the four models of turbines reflect latest trends in wind turbine design that impose the largest rotor possible for the height; the most pronounced and prominent will be a squatty looking design with minimal ground clearance. These models will be more impactful to avian species for two reasons:
  - a. A larger rotor diameter increases the turbine hazard zone by a square function, logarithmically increasing collision risk, (Example: increasing rotor diameter of the rotor by 10% will increase the hazard zone of 21%) and,
  - b. As a result of the increased rotor diameter, there is a lower cut-in wind speed resulting in higher operating hours and higher proportional risk. Operating hours are a key component of the calculation.

The Applicant has successfully cloaked the performance of the wind project based upon business confidentiality and maintaining competitive advantage. However, without operating hours collision risk calculation to avian species will not be complete.

Skookumchuck used operating hours in their collision for that project.

**Avian Use Surveys and Collisions**-The AUS's should be the basis to establish whether more specific avian collision models should be performed, and if, so used to further exclude turbines that are statistically more impactful to species of concern. The survey performed showed significant and diverse avian population. Based upon that, TCC believes collision modeling should be performed.

It is unfortunate that the Applicant continues to take the position that they, and they alone can determine mitigation by turbine exclusion. EFSEC has final say as the Lead Agency.

Appendix 4.6-1 conflates and misuses the exposure index with collision risk models and further makes statement about relative avian fatality rates that are not supported. The Appendix report provided a literature search that concludes that larger turbines will have less fatalities/mw/year. We could not find that their literature search was conclusive. This may have been an attempt to respond to the CFE comment in the DEIS discussed above.

This is likely the most impactful site ever permitted in Washington. There are 14 species of concern, and the focus has only been one of those: the ferruginous Hawk. It would be astounding if EFSE does not require a more comprehensive look at avian fatalities.

**Tri-Cities CARES believes that as a minimum, collision calculations should be performed for the following species of concern: American White Pelican, Ferruginous Hawk, Sandhill Crane, Bald Eagle, Golden Eagle, and migratory birds in general. Rationale follows:**

- Eagle are covered by the Bald and Golden Eagles Endangered Species Act. Current guidelines are to follow USFWS methodology for collision models.
- American White Pelican had the highest Exposure Index (EI) of all Species of concern for the smaller turbines and second high for large turbines. More importantly, the vast majority of AWP observations are concentrated in the East portion of the project. A major AWP breeding ground is Badger Island in the Columbia River 2 miles distant from the project lease boundary.
- Sandhill Cranes, a second State endangered Species, had the most observations of any special concern species. The EI was highest of the species of concern for the taller turbines and second for the smaller turbines. Removal of over half of the SHC observations as being over rotor swept height is also not persuasive. The surveys for Horse Heaven West were completed before the Applicant decided to include a taller turbine.
- Ferruginous Hawks have been discussed in detail.
- Snow Geese, Canadian Geese, and birds subject to the Migratory Bird Treaty Act (Sandhill Cranes discussed above). These had by far the highest mean use Index and EI of all species, and at both turbine option heights. There is current uncertainty around rulemaking associated with the Migratory Bird Treaty Act regarding penalties. The sheer number of observations of migratory birds could result in an inordinate number of avia fatalities.

It should be noted that the Skookumchuck had only 3 species of concern, and collision modeling was performed for all of them.



## **Disclaimer in Final ASC**

*<sup>1</sup>Calculation of the exposure index does not consider the geometry of the facility (i.e., the “layout” or how Turbines are organized on the landscape). The interaction described in the hypothetical scenario would be dependent on species-specific avoidance behavior, inter or intra species-specific behaviors, foraging behavior, weather, among many other factors (Barrios and Rodrigues 2004, USFWS 2013, among others). Spacing between Turbines along a string is approximately 0.25 mile from the tower base and the perpendicular distance between strings are much greater (approximately 0.5 to 1 mile), which would allow corrective flight and avoidance behavior. As discussed in the BBCS (Appendix M), the exposure calculation is not a rate nor a likelihood; instead, it is a unitless index that does not account for other possible collision risk factors. In-flight avoidance behavior and habituation are key aspects in a collision risk scenario that are that not included in the exposure risk index calculation. Bird avoidance rates are typically high (>98 percent; Luzenski et al. 2016, Bowgen and Cook 2018) and habituation to structures occur over time which reduces the potential for bird collisions (Watson et al. 2018).*

## **Survey Irregularities<sup>2</sup> - Meant to Mean Not Normal**

Appendix M not attributed to an expert on the subject

Surveys were performed for 3 separate project and then aggregated

Major project changes were happening during the survey periods.

Taller turbines options were added after two of the three survey area had been completed. It is unclear how observations were assigned to the larger turbines to obtain Exposure Index.

**To:** Comments@efsec.wa.gov  
**From:** efsec@efsec.wa.gov  
**Received:** 2024-03-19T16:22:25+00:00  
**Subject:** FW: Urgent Request Regarding Renewable Energy Projects  
**Has attachment?** False

---

**From:** Keith Watts <tango\_zulu@hotmail.com>  
**Sent:** Tuesday, March 19, 2024 6:45 AM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** Urgent Request Regarding Renewable Energy Projects

External Email

Dear Chair Drew and EFSEC members,

I am writing to express my deep concern about the pace of new renewable energy projects in our state. As we face the impending negative impacts of climate change, it is crucial that we accelerate our transition to cleaner energy sources. Unfortunately, the Energy Facility Site Evaluation Council (EFSEC) seems to be moving at an alarmingly slow pace.

The recent decision to downsize the Horse Heaven project was, in my opinion, a significant mistake. It is not just hawks that will suffer; our entire ecosystem and future generations stand to lose if we fail to invest in robust renewable energy infrastructure. As Norm Dicks aptly pointed out in his Seattle Times editorial, EFSEC's choices could jeopardize project viability and set a dangerous precedent for other clean energy initiatives. Chair Drew, I implore you to reconsider this decision. Our children's future depends on bold action to combat climate change. Please restore the Horse Heaven project to its original size and prioritize the development of renewable energy sources.

Thank you for your attention to this critical matter.

Sincerely,

Keith H. Watts

5635 178<sup>th</sup> Ave SE

Bellevue, WA 98006

**Attachments:**

☐

**Subject:** Geological Hazards-Badger Canyon Drainage Area-FEIS Chapter 3, Section 3.2.1.3 Landslides.

This comment is to call to the attention of EFSEC Staff and the Council of **“the inherent risk of adding large rotating equipment with low frequency vibration and deep foundations built in an area with known geological hazards”**; historic landslides (slow-moving ground movement) or liquefaction (fast moving), and the Horse Heaven has added yet another potential issue of concern. We believe the project presents unacceptable geological risk to residents at the base of the Horse Heaven Uplift.

**It is almost exactly 10 years from the date of the Oso, Washington mudslide disaster. Forty-three people were killed and 49 homes and other structures destroyed. The landslide has been described as one of, if not the most, deadly landslide in American history.** TCC will point out that the OSO site did not have a forcing factor such as **highlighted** above that would increase the risk for residents adjacent to the HHH project.

The area on the North rim of the Horse Heaven Hills have had several areas of landslides as shown in **FEIS Figure 3.2.6 Geologically Hazardous Areas Surrounding Project Lease Boundary**. Attached to this is a screenshot of that Figure with one area highlighted. In this area within the project, we believe there is an enhanced risk of ground movement. The FEIS Chapter 3 Geology points out: *“Benton County experienced only one major landslide between 1984 and 2014. The Prosser landslide occurred in 1986 and 1987 during the construction of Interstate 82 when interstate construction remobilized several very large, prehistoric landslide complexes (DNR 2015)”*. [Emphasis TCC]. We are shocked that, knowing this, the Developer elected to built as near as possible to steep slopes or on cornices, knolls, and ridges that are above population. This is a step beyond being irresponsible. There is population living all along the bottom of the Horse Heaven Uplift, and we believe that more than just one community could be at risk.

The figure shows a historic landslide area within a half mile of a developed community of about 100 homes. Attached to this comment is GIS Map from the Benton County Map Department. The map enlarges potentially affected area. Note the Image shows several lots not built or under construction. Since the image date, those lots have been built out. One portion of the Figure also shows an area subject to liquefaction in close proximity (yards) from residences.

We have also attached a copy of the map depicting **Turbine Option 1, Areas of High Impact**. We have added a 3-mile radius range ring to provide scale. The Council has already indicated that many of the turbines marked as high impact and potentially will be removed. Many of those potentially removed turbines appear to be within a mile of the hazard.

We have also attached a satellite view a current of a county GIS map that shows the community and residences within ½ mile from the landslide areas. The community is called Country Meadow Estates. This is the closest community and adjacent to the project lease boundary. There is one other potential problem area.

We believe that a geologic hazard should be considered a significant impact for this area and add to the other high impacts identified. We cannot comment to what would be an appropriate build setback would be but recommend that the Council use utmost caution. The consequences are profound.

## **FIGURES FOLLOW IN THIS DOCUMENT**

The project will inject a physical forcing element to a currently stable, but historically hazardous, geological environment. If an adverse event occurs, there must be a trail of liability. A party is building a project that, although not expected, can adversely affect others, and in a profound physical way. This project will most likely be sold several times over its life. If the project is sold to a third party the potential liability needs to be disclosed and remain attached to the Purchaser. We want the record to show that the Developer chose to develop next to this area.

**First, we request that EFSEC Council fully weigh the consequences that the build could cause. The FEIS discusses “Significant Unavoidable Impacts”. The impact of this particular issue is avoidable; build further away, and out of the Badger Canyon drainage. The turbines already proposed for exclusion should not be reinstated, perhaps more should be excluded, and further infrastructure installed on geological hazardous slopes should not be allowed. The optional 230kv transmission line falls within this category.**

**The following is an actual event that transpired over a period of time 30 years ago.** In 1976, in the coal mining community of Gillette, Wyoming, housing was short for workers. A 53-home rural community called Rawhide Village was built by a developer. This was not a trailer park. These were permanent stick-built homes. The project was built within about a mile of an existing coal mine property. Several years after construction, problems began. As the mine advanced the coal seam dewatered. That dewatering liberated methane from the coal: not just from the coal being mined, but from the seam under the homes a good distance away. Methane accumulated in basement areas to significant concentrations. Long story short, the area became unlivable from risk of explosion and health impacts. Houses were abandoned, moved, foreclosed, or given back to the banks. People lost everything because they unknowingly built in an area that had an unrecognized hazard. They received no help except expenses for limited hotel expenses. The only party that was liable was the developer who declared bankruptcy early on in the process.

This was an unintended consequence. No one knew the phenomena would take place. I lived in that community at the time. Several of our employees lost their homes. See attached link: [Methane memories | Local News | gillettenewsrecord.com](#) The article is a 30 year lookback with history of what happened.

There are parallels between the HH Project and this example. The difference, however, is that the potential hazards are known. The FEIS tells us so. In the above example, no one foresaw the problem that unfolded. The Applicant knows, and is willing to proceed anyway.

Someone, some company, or some entity must be responsible and accountable if an incident comes to pass. What happens if slow ground movement starts after the project begins operation. Is it natural, or is it as a result of the project? Who would be responsible? Who has liability? Who pays? Insurance typically does not pay for events that are not “sudden”. If the answer is the Homeowner, there should be a range ring exclusion zone that cannot be disputed, at least the 3-mile ring depicted. We are not implying this would be a disaster type of situation such as Oso, but slow-moving ground movement would be more likely.

Historic Landslide Area- FEIS Figure 3.2-6 Highlighted Landslide Zone

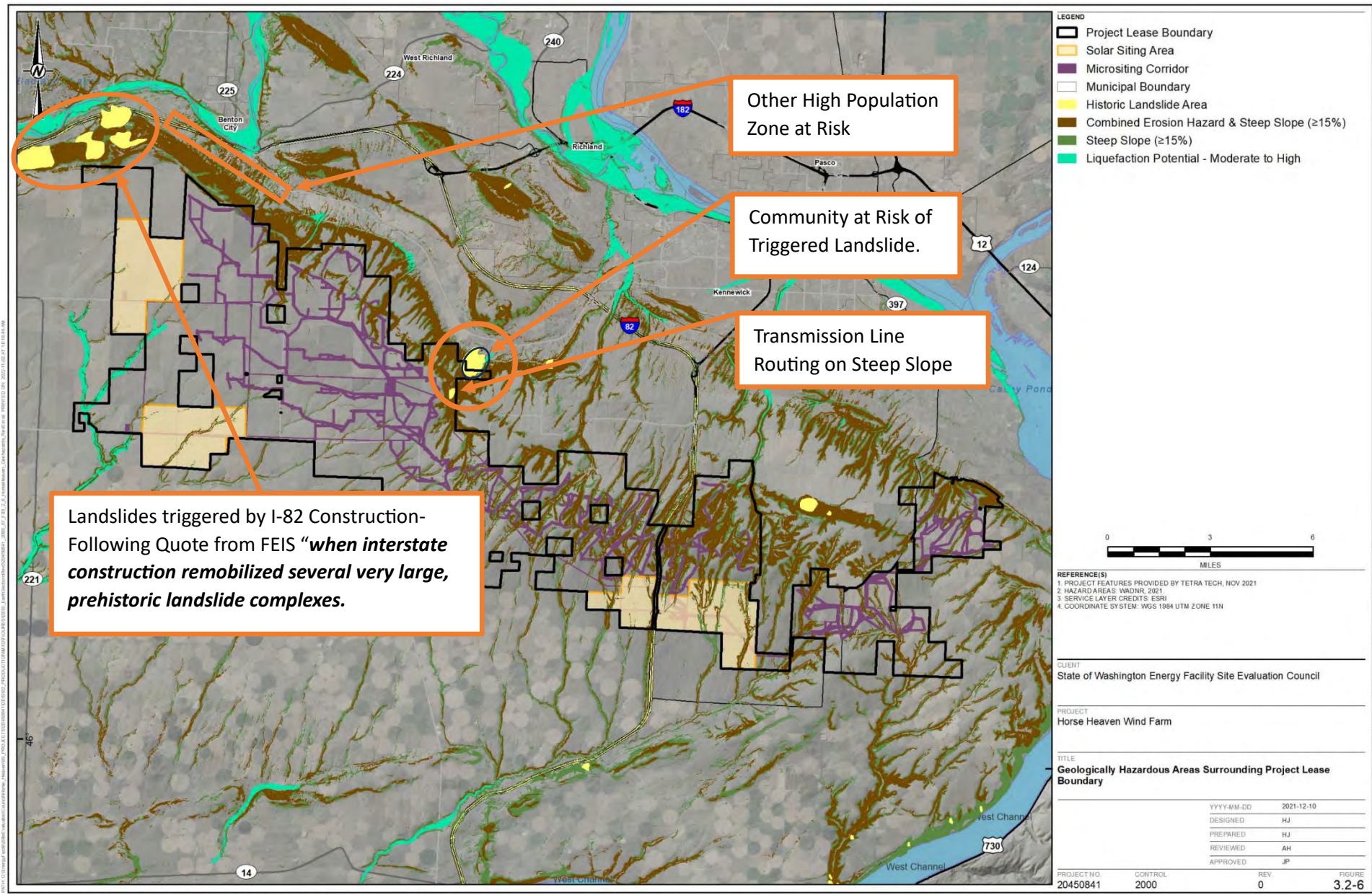


Figure 3.2-6: Geologically Hazardous Areas within the Project Vicinity



Turbine Layout Option 1-Areas of High Impact Residential Area Highlighted-3-Mile Range Ring Added

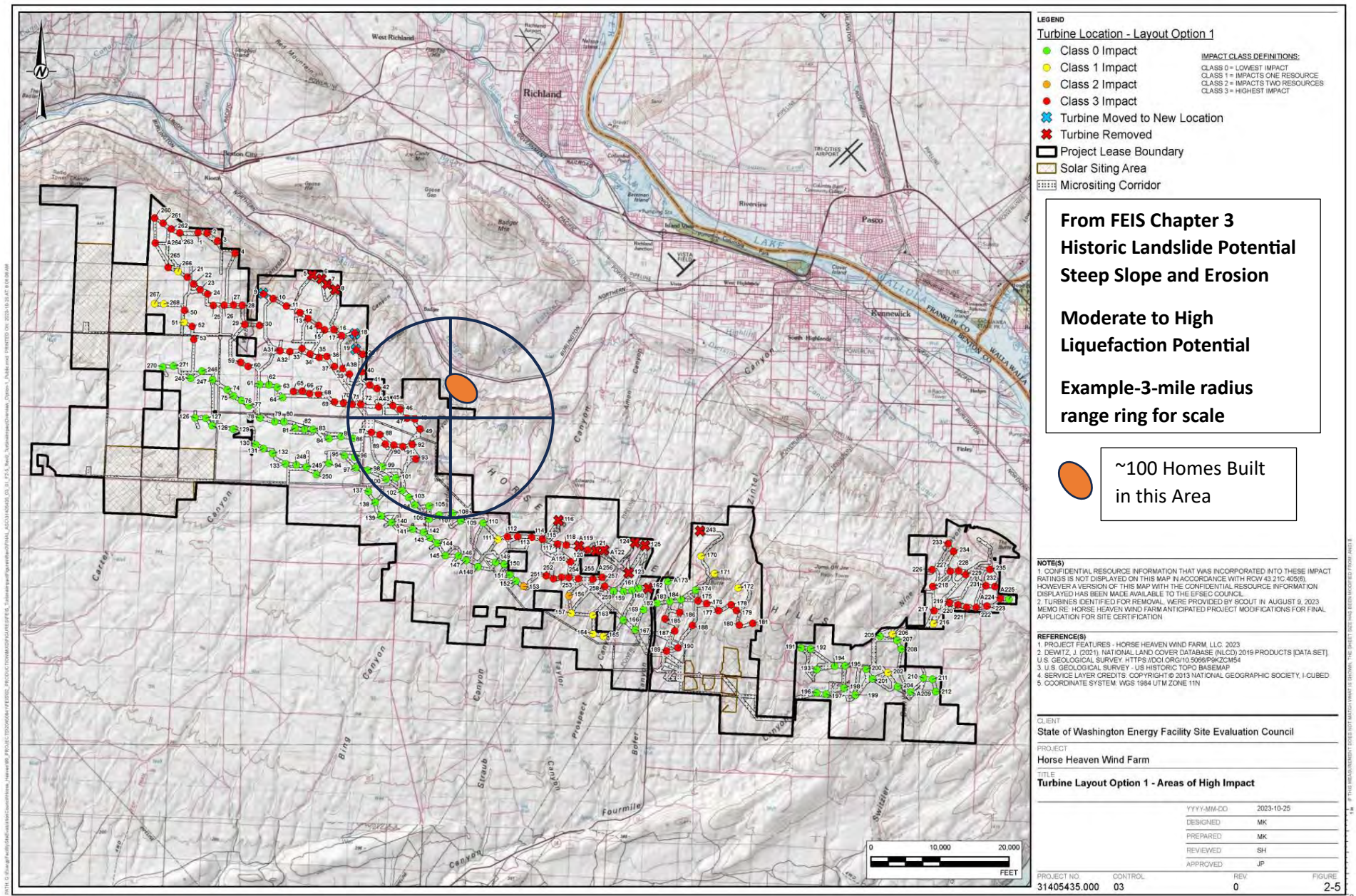
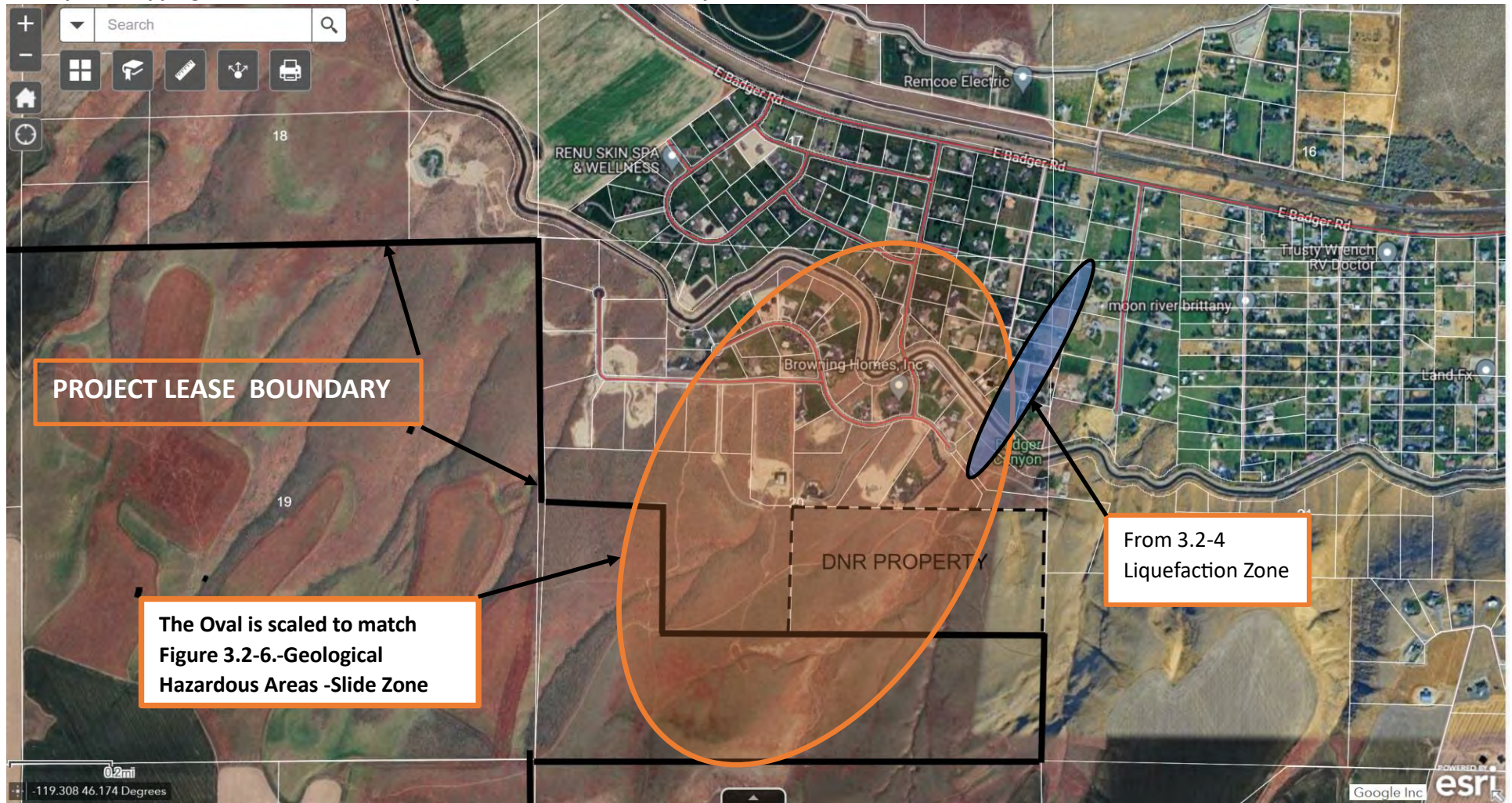


Figure 2-5: Turbine Layout Option 1 - Areas of High Impact



## County GIS Mapping-Satellite View, Country Meadows Estates Community





**From:** [EFSEC \(EFSEC\)](#)  
**To:** [EFSEC mi Comments](#)  
**Subject:** FW: COMMENTS ON THE PROPOSED HORSE HEAVEN HILLS WINDMILL PROJECT  
**Date:** Wednesday, March 27, 2024 10:46:05 AM  
**Attachments:** [WINDMILLS AND FIRES A MAJOR CONCERN MARCH 2024.docx](#)  
[WINDMILLS AND FIRES A MAJOR CONCERN MARCH 2024.docx](#)

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**From:** Anthony Umek <akueconsult@gmail.com>  
**Sent:** Tuesday, March 26, 2024 9:28 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** COMMENTS ON THE PROPOSED HORSE HEAVEN HILLS WINDMILL PROJECT

### External Email

I am a Tri City resident who enjoys our lifestyle, and I also support developing energy sources that reduce our carbon footprint. But I have 2 major concerns with the proposed HH Windmill Project. Neither of these have been adequately addressed from my perspective, and they should be. Project planning must adequately assess the costs, benefits, risks and the safety of operations and maintenance of proposed projects. This must include attention to detail and a robust failure modes and effects analysis (FMEA) that addresses risks and their unintended consequences. Recent issues with Boeing aircraft have reminded us that inadequate attention to detail and inadequate FMEA can result in serious consequences.

**My two major issues are:**

1. **Capacity Factor:** wind turbines have at best ~ 30% capacity factor (worldwide data supports this fact), because they are dependent on the uncertainty of weather. Solar panels have a similar issue. To maintain a civil society and our way of life and to move away from fossil fuels we need energy sources with high "capacity factors". Having adequate, high-capacity electrical generation is critical to a range of key services including hospitals, airports, Fire Depts, Emergency Centers; as well as 24x7 charging of Electric vehicles. Only hydro and nuclear power can provide adequate, non-fossil fueled high-capacity factors. Energy Northwest's Nuclear station capacity factor has consistently exceeded 95%. Hydro is currently limited because of the requirement to "load follow" wind and solar. This results in undue cycling of components that can cause wear and tear. Unfettered hydro is needed.
2. **Turbine fires and impacts on firefighters and equipment. Although not a problem with hydro and small modular reactors, there are real fire related risks associated with wind turbines, especially those with very large blades.** Please see the attached Word File for supporting information.

Thank you for the opportunity to comment.

Tony Umek  
2972 Clark Court  
West Richland, WA 99353  
509-438-6700

**SOURCE: FIRETRACE INTERNATIONAL WEBSITE – MARCH 2024**

Research conducted by [Caithness Windfarm Information Forum \(CWIF\)](#) found that over the last five years, the average number of wind turbine fires was 25.4. Other researchers feel the number of cases of turbine fires is significantly underestimated based on the fact that there is no required reporting for turbine fires. Also, in the case of official reports, the reports can be incomplete, biased, or contain non-publicly available data. In a previous report, the Telegraph and Renewables UK both have estimated that [91 percent of wind turbine fires go unreported](#). With the average cost of a wind turbine fire at \$4.5M, the annual financial impact could be anywhere from \$114.3M to \$1.35B.

**Caithness Windfarm Information Forum (CWIF)**, an anti-windfarm campaign group, recorded **1,328 accidents involving wind turbines** between 1995 and 2012. Out of these, **200 incidents** were related to fire. [Remarkably, there were no recorded fatalities and only four recorded injuries from wind turbine fires during this period<sup>1</sup>.](#)

On average, this translates to approximately **11.7 fires per year**, or nearly one fire every month. However, considering that there were **225,000 wind turbines installed globally in 2012**, the overall incidence rate is relatively low. [On average, you could expect one fire per year for every 19,230 turbines operating worldwide<sup>1</sup>.](#)

Based on research conducted by CWIF, since 2000 there have been 385 documented wind turbine fires. A number of these fires where not only a total loss of the turbine but had [devastating consequences](#). In June 2012, the View Fire, which burned 367 acres in Riverside County, California, was caused by a wind turbine fire. Nearby residences were evacuated, and over 100 firefighters fought the wildfire to get it contained. A little over a year later, a tragedy that the wind industry had not yet experienced occurred. In October 2013, two young mechanics became trapped on top of a burning wind turbine and died as a result at the Piet de Wit Wind Farm. Because of the height of turbines, a specialized team of firefighters was called to battle the fire and recover the victims.

More recently, in the US, two wildfires were sparked from wind turbine fires. In July 2019, melted debris falling from a turbine fire caught the surrounding grass and brush on fire to cause the Juniper Fire wildfire, which put 39 structures in danger. It took almost 200 fire crew members to contain the 250-acre fire over three days. A turbine fire on August 26, 2019, is blamed for the Rhodes Ranch 3 Fire outside of Abilene, Texas. Record-setting temperatures and rough terrain increased the challenges for firefighters. Fire crews on the ground watched over the containment lines while aircrews spread fire retardant and water on hot spots. Luckily, in both cases, there were no reports of injury or structural damage. Wind turbine fires are not something you want to face in your business because it can harm your assets, your staff, and the surrounding environment.

**SOURCE: By Courtney Flatt (Northwest News Network); Feb. 5, 2024 2:45 p.m.**

The height of the turbines would likely prevent some aerial firefighting, including the use of drones and helicopters, Washington State Department of Natural Resources leaders told the council.

While the turbines could reach up to 657 feet, most aerial firefighting happens below 500 feet, according to Russ Lane, manager of the DNR Wildland Fire Management Division. Aerial firefighting could be unsafe in the middle of the proposed project.



*“The density and spacing of the towers would essentially create a no-fly zone over the entire project area. We would apply an additional ‘safety buffer’ of one-to-two tower-heights around the project to ensure safe separation for aircraft operations,” Lane wrote. If a water or flame bucket got tangled in a turbine blade, the results could be “catastrophic,” he said.*

During the meeting, Amy Moon, EFSEC siting and compliance lead, reported Lane’s thoughts to the council. Fighting fires from the air by dropping water or flame retardant could do more damage to wind projects than the fire, she said.

“These drops come down with the force of gravity and many thousands of pounds of water or retardant that could easily snap off blades and could do other damage to towers,” Moon said.

In addition, Lonnie Click, Benton County Fire District No. 1 Chief, told the council the fire district’s responses would be “nearly exact” to DNR’s responses.

Young raised the concern that fire plans for fighting from the ground should be really well thought out – making up for a lack of ability to fight fires from the air. It’s a problem for all wind projects, he said.

**To:**

efsec@efsec.wa.gov;Comments@efsec.wa.gov;kathleen.drew@efsec.wa.gov;sonia.bumpus@efsec.wa.gov;joanne.sn

**From:** cease2020@aol.com

**Received:** 2024-03-28T03:30:29+00:00

**Subject:** C.E.A.S.E. CITIZENS EDUCATED ABOUT SOLAR ENERGY

**Has attachment?** False

External Email

EFSEC, place my comments on the record opposing Scout Clean Energy HHH project proposed in Benton County. I oppose this project because it threatens the endangered and protected Ferruginous Hawk. The wind turbines will kill these hawks and reduce their population possibly making them extinct. Wind turbines are killers of bird, bats and other airborne creatures these populations are dwindling across the world. This indiscriminate killing must stop. Wind turbines will prevent aerial firefighting effort which will allow a fire to spread rapidly across the land endangering wildlife and citizens. Wind turbines prevented effective aerial firefighting efforts during the 63,000 acres Newell Road fire in Klickitat County in the summer of 2023. To allow this project will be negligence on EFSEC's part and endanger many east side citizens. Land based firefighting effort will be ineffective because there are no sources of water, and this will enable the fire to spread. Fencing surrounding the solar sites will negatively impact the wildlife migration and habitat. The disturbance to the land by grading, towers, substations, building, roads and other related equipment will destroy existing wildlife habitat. Scout Clean Energy is owned by a foreign corporation from South America. The do not care how they destroy Benton County and America. We do not want them controlling our electricity. We do not want them in our state. EFSEC say NO to this project. Tell Inslee this is not good for the citizens of Benton County, Washington and America. Time for this madness to STOP. It's up to you to what's best for Benton County, Washington and America. Deb Wagner C.E.A.S.E. CITIZENS EDUCATED ABOUT SOLAR ENERGY

**Attachments:**

□

**To:** Comments@efsec.wa.gov  
**From:** efsec@efsec.wa.gov  
**Received:** 2024-03-28T23:31:41+00:00  
**Subject:** FW: HHH Wind Farm  
**Has attachment?** False

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**From:** DJ Crager <djcrager@outlook.com>  
**Sent:** Thursday, March 28, 2024 1:29 PM  
**To:** EFSEC (EFSEC) <efsec@efsec.wa.gov>  
**Subject:** HHH Wind Farm

External Email

Please do not locate the monstrous Horse Heaven Hills windfarm project near the Tri-Cities Washington. The negative impacts certainly outweigh any perceived wins that would result from developing a windfarm in the Horse Heaven Hills that stretches for miles and miles. No other windfarm in Washington State is located so close to an urban population (Tri-Cities has over 300,000 people). Only a few long-term jobs will be created for those who think that is reason enough.

Wind turbines would generate minimal energy in comparison with our hydropower resources in this area. Here, hydropower should be supported and dam breaching prevented as it is an important and efficient green energy resource. And just in general, Washington State is a poor wind resource (per Western Resource Adequacy Program, Washington has the lowest wind resource rating in the Pacific Northwest).

We are so very concerned too about the risks to our wildlife from the turbine blades. Birds especially will be at risk. How will they know to go around the whirling blades? So many will be killed. Lastly, this great wall of gigantic turbines along the hills will prevent any expansion of our community to the south. Who would build amongst this wind farm? It seems that the high-maintenance wind turbines are a low-tech energy solution. Sadly, we may be stuck with these metallic monuments of an antiquated technology because it would cost too much to take them down when better solutions come along. This wind farm will forever change this area for the worse. Please reconsider locating the windfarm here.

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** katie.hertfelder@everyactioncustom.com

**Received:** 2024-04-11T22:40:05+00:00

**Subject:** Thank you for your commitment to balancing renewable energy development with preservation

**Has attachment?** False

External Email Dear EFSEC Comments, As an avid birder and member of Audubon in Washington, I am writing to express my strong support for the recent EFSEC recommendation and draft Site Certification Agreement for the Horse Heaven Wind Project. Specifically, I support the Council's recommendations to augment the mitigation measures identified in the Final Environmental Impact Statement as follows: 1. Restrict the siting of wind turbines within 2 miles of documented Ferruginous Hawk nests and siting of primary project components with 0.5 miles of documented nest sites. 2. Restrict the construction of project components in priority linkage zones for wildlife connectivity, 3. Avoid siting solar arrays in rabbitbrush shrubland habitat or other WDFW-designated Priority Habitats, and 4. Conduct surveys for Burrowing Owls and develop a Burrowing Owl Management Plan if active burrows are found. Protecting birds and their habitats from habitat loss and climate change is a cause that is deeply personal to me, and I am grateful for EFSEC's responsiveness to the concerns of the conservation community, especially regarding the state endangered Ferruginous Hawk and wildlife connectivity. I am encouraged by EFSEC's commitment to balancing renewable energy development with the preservation of these vital habitats and species. Renewable energy is crucial for reaching our state's ambitious climate goals, but we must proceed in a way that is compatible with our species and habitat recovery goals. Thank you for your dedication to preserving the beauty and wonder of Washington's precious landscapes. Sincerely, Kt Hertfelder 411 Scottfield Ter Ballwin, MO 63011-4323 katie.hertfelder@yahoo.com

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** cheri.olney@everyactioncustom.com

**Received:** 2024-04-13T22:58:20+00:00

**Subject:** Thank you for your commitment to balancing renewable energy development with preservation

**Has attachment?** False

External Email Dear EFSEC Comments, As an avid birder and member of Audubon in Washington, I am writing to express my strong support for the recent EFSEC recommendation and draft Site Certification Agreement for the Horse Heaven Wind Project. Specifically, I support the Council's recommendations to augment the mitigation measures identified in the Final Environmental Impact Statement as follows: 1. Restrict the siting of wind turbines within 2 miles of documented Ferruginous Hawk nests and siting of primary project components with 0.5 miles of documented nest sites. 2. Restrict the construction of project components in priority linkage zones for wildlife connectivity, 3. Avoid siting solar arrays in rabbitbrush shrubland habitat or other WDFW-designated Priority Habitats, and 4. Conduct surveys for Burrowing Owls and develop a Burrowing Owl Management Plan if active burrows are found. Protecting birds and their habitats from habitat loss and climate change is a cause that is deeply personal to me, and I am grateful for EFSEC's responsiveness to the concerns of the conservation community, especially regarding the state endangered Ferruginous Hawk and wildlife connectivity. I am encouraged by EFSEC's commitment to balancing renewable energy development with the preservation of these vital habitats and species. Renewable energy is crucial for reaching our state's ambitious climate goals, but we must proceed in a way that is compatible with our species and habitat recovery goals. Thank you for your dedication to preserving the beauty and wonder of Washington's precious landscapes. Sincerely, Cheri Olney 1268 Dines Point Rd Greenbank, WA 98253-9735 cheri.olney@whidbey.com

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** grayad@everyactioncustom.com

**Received:** 2024-04-14T01:21:53+00:00

**Subject:** Thank you for your commitment to balancing renewable energy development with preservation

**Has attachment?** False

External Email Dear EFSEC Comments, As an avid birder and member of Audubon in Washington, I am writing to express my strong support for the recent EFSEC recommendation and draft Site Certification Agreement for the Horse Heaven Wind Project. Specifically, I support the Council's recommendations to augment the mitigation measures identified in the Final Environmental Impact Statement as follows: 1. Restrict the siting of wind turbines within 2 miles of documented Ferruginous Hawk nests and siting of primary project components with 0.5 miles of documented nest sites. 2. Restrict the construction of project components in priority linkage zones for wildlife connectivity, 3. Avoid siting solar arrays in rabbitbrush shrubland habitat or other WDFW-designated Priority Habitats, and 4. Conduct surveys for Burrowing Owls and develop a Burrowing Owl Management Plan if active burrows are found. Protecting birds and their habitats from habitat loss and climate change is a cause that is deeply personal to me, and I am grateful for EFSEC's responsiveness to the concerns of the conservation community, especially regarding the state endangered Ferruginous Hawk and wildlife connectivity. I am encouraged by EFSEC's commitment to balancing renewable energy development with the preservation of these vital habitats and species. Renewable energy is crucial for reaching our state's ambitious climate goals, but we must proceed in a way that is compatible with our species and habitat recovery goals. Thank you for your dedication to preserving the beauty and wonder of Washington's precious landscapes. Sincerely, Alice D Gray PO Box 2206 Port Orchard, WA 98366-0797 grayad@icloud.com

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** dennisbahr@everyactioncustom.com

**Received:** 2024-04-14T14:38:13+00:00

**Subject:** Thank you for your commitment to balancing renewable energy development with preservation

**Has attachment?** False

External Email Dear EFSEC Comments, As an avid birder and member of Audubon in Washington, I am writing to express my strong support for the recent EFSEC recommendation and draft Site Certification Agreement for the Horse Heaven Wind Project. Specifically, I support the Council's recommendations to augment the mitigation measures identified in the Final Environmental Impact Statement as follows: 1. Restrict the siting of wind turbines within 2 miles of documented Ferruginous Hawk nests and siting of primary project components with 0.5 miles of documented nest sites. 2. Restrict the construction of project components in priority linkage zones for wildlife connectivity, 3. Avoid siting solar arrays in rabbitbrush shrubland habitat or other WDFW-designated Priority Habitats, and 4. Conduct surveys for Burrowing Owls and develop a Burrowing Owl Management Plan if active burrows are found. Protecting birds and their habitats from habitat loss and climate change is a cause that is deeply personal to me, and I am grateful for EFSEC's responsiveness to the concerns of the conservation community, especially regarding the state endangered Ferruginous Hawk and wildlife connectivity. I am encouraged by EFSEC's commitment to balancing renewable energy development with the preservation of these vital habitats and species. Renewable energy is crucial for reaching our state's ambitious climate goals, but we must proceed in a way that is compatible with our species and habitat recovery goals. Thank you for your dedication to preserving the beauty and wonder of Washington's precious landscapes. Sincerely, Dennis Bahr 7425 152nd St SE Snohomish, WA 98296-8436 dennisbahr@yahoo.com

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** jbann64@gmail.com

**Received:** 2024-04-15T04:58:56+00:00

**Subject:** Horse Heaven Hills EFSEC Recommendation

**Has attachment?** False

External Email

Hello,

My name is Jeff Banning and my quality of life will be directly impacted by the Horse Heaven Hills Wind Farm. My home is on the north rim of Badger Canyon and the initially proposed turbine locations would have drastically changed the landscape I see every day. I am firmly opposed to these kinds of low energy density projects anywhere near population areas. But, practically speaking, I understand that a significant portion of WA citizens and state government seem to feel a great need to install wind turbines and solar panels. I feel that the EFSEC proposal to remove the turbines with a visual impact to residents of the southern Tri-Cities is a reasonable compromise.

Thank you,

Jeff Banning

86715 E Haven View PRSE

Kennewick,WA 99338

509 551-6147

**Attachments:**

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**To:** Comments@efsec.wa.gov

**From:** kelleyleyman77@everyactioncustom.com

**Received:** 2024-04-15T19:33:38+00:00

**Subject:** Thank you for your commitment to balancing renewable energy development with preservation

**Has attachment?** False

External Email Dear EFSEC Comments, As an avid birder and member of Audubon in Washington, I am writing to express my strong support for the recent EFSEC recommendation and draft Site Certification Agreement for the Horse Heaven Wind Project. Specifically, I support the Council's recommendations to augment the mitigation measures identified in the Final Environmental Impact Statement as follows: 1. Restrict the siting of wind turbines within 2 miles of documented Ferruginous Hawk nests and siting of primary project components with 0.5 miles of documented nest sites. 2. Restrict the construction of project components in priority linkage zones for wildlife connectivity, 3. Avoid siting solar arrays in rabbitbrush shrubland habitat or other WDFW-designated Priority Habitats, and 4. Conduct surveys for Burrowing Owls and develop a Burrowing Owl Management Plan if active burrows are found. Protecting birds and their habitats from habitat loss and climate change is a cause that is deeply personal to me, and I am grateful for EFSEC's responsiveness to the concerns of the conservation community, especially regarding the state endangered Ferruginous Hawk and wildlife connectivity. I am encouraged by EFSEC's commitment to balancing renewable energy development with the preservation of these vital habitats and species. Renewable energy is crucial for reaching our state's ambitious climate goals, but we must proceed in a way that is compatible with our species and habitat recovery goals. Thank you for your dedication to preserving the beauty and wonder of Washington's precious landscapes. Sincerely, Kelley Slack 1811 34th St Bellingham, WA 98229-3246 kelleyleyman77@gmail.com

**Attachments:**

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