BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

| IN THE MATTER OF IDAHO | Docket: PCN 5 | | |
|---|-----------------------|--|--|
| POWER COMPANY'S | Opening Brief | | |
| PETITION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY | Intervenor: Sam Myers | | |

Date: May 15, 2023

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In this brief I will show how IPC has failed to meet the OPUC Rules 860-025-0030 and 860-025-0035. Within the first rule I specifically deal with safety and emergency conditions, within the second rule I deal with Best Industry Practices.

According to point (2), (b), of the OPUC rule 0030, I propose that IPC has not provided any narrative to make any kind of determination on how they will acknowledge or mitigate for emergency conditions. These emergency conditions and safety factors include but are not limited to the fire risk and the actual fire losses we potentially have with B2H, these losses include the value of a mature growth crops or the value of dryland stubble that burns in a fire or the value of lost soil health that results from fire causing long term damage to soil. All of these losses are worth thousands of dollars and IPC has not developed any contingencies for these losses; in fact, IPC has deliberately refused to consider these losses as real. All of these losses are very real and can have devastating consequences on our livelihood. The following exhibits give support to these real-time risks that will create more local ignition potential than we previously experienced.

FIRE DAMAGAGES TO SOIL

I would like to point out that the long-term damage to soils by fires is very real. In previous testimony, I have presented expert witness documents from two different individuals. I've also included scientific reference materials outlining the specific soil damages occurring describing in detail the specific soil dynamics and properties that are damaged and impacted by fire. I would also like to put in the record that no argument has been made against my assertions having scientific merit or expert witness qualifications. The references against my soil damage concerns have been mostly opinion driven responses not even close to a scientific study involving the

local soil types, climate, and cropping systems. I believe without question I win the argument on the presence and reality of soil damages by fire.

Mischaracterization to fires in Morrow County by Mr. Lautenburger

It is important to recognize that IPC has incorrectly characterized the fire nature of our area. During the cross examination of Mr Lautenberger on April 20th 2023 (quoted below). Mr. Lautenberger incorrectly claims that our area fits a national average of 85% human caused fire ignitions. Mr. Lautenberger also incorrectly claims that the southern forested region of our County encounters the most fire ignitions, this is also drastically incorrect. In the exhibit link; www.co.morrow.or.us Morrow County wildfire summary we see the actual numbers: ...lightning strike (70 percent) and human caused fires (30 percent). Not the other way around.

Wildfire Impacts in Morrow County Regions

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- The southern one-third of the County is forested with the southeast corner of the County within the Umatilla National Forest. The topography of this part of the County is rugged as it is a part of a northwest spur of the Blue Mountains. The precipitation over this higher portion of the County does support conifer forests. These conifer stands, which cover some 205,000 acres, form an almost solid cover over the ridges and slopes of this area. About one thousand acres is juniper or scrub timber. The major species of conifers are ponderosa pine, Douglas-fir and western larch. The fire protection officials in this area characterize the fuel for wildfire potential in this region as very high. There are residential developments in the forested zone, which are the Blake Ranch area and the residential development around Penland Lake and around Cutsforth Park. Although the Blake Ranch area has been incorporated into the Heppner Rural Fire Protection District, the potential for life and property loss is high in the event of a fire due to distance from rural fire protection districts for most of the area. Increasingly, people are using this area for recreational use at the County run Off-Highway-Vehicle Park and more people spend holiday time during weekends and vacation periods here. The residents and visitors to these areas are often inadequately educated or prepared for the inferno that could sweep through the brush and timber, affecting safety and destroying property in minutes.
 - In the middle third of the County, precipitation is too low for tree growth without the support of irrigation. Nevertheless, the fire protection districts respond to fires in this area more than in the forested southern region. The middle region of the County is mostly dry land ranges for the pasture of cattle and dryland wheat. The fire protection districts respond to wildfires in this location as a result of a lightning strike (70 percent) and human-caused (30 percent) fires. The fires generally burn rangeland, Conservation Reserve Program (CRP) fields, and pastures. Heppner, Lexington, and Ione are located within this area.
 - The northern third of the County contains most of the County's economic infrastructure to include the Boardman Coal-fire plant, Finley Buttes Regional Landfill, the Port of Morrow with its associated industries, Bonneville Power Administration power lines, natural gas pipelines, to name a few. The potential for wildfire in this portion of the County is less than the rest of the County for the following reasons. The farms and fields are irrigated, which means that water is available to keep the crops green and to lessen the ability of wildfire to spread and the area is more populated and contains two fire protection districts to respond to fires in the undeveloped shrub-steppe regions of the County. The ability of firefighters to protect this portion of the County is hampered, however, by the limited transportation network, which does not allow for quick coverage of the undeveloped areas of this portion of the County.

Cross Examination of Chris Lautenburger 4-20-2023

Q. Irene Gilbert: Great. Okay. Another question for you, as a professional fire person, what percentage of fires, to your knowledge, just a rough estimate, are human caused?

A. Chris Lautenburger: It depends on where you're talking about, but a rough estimate would be for the entire U.S., about 85 percent. Cross Examination of Chris Lautenberger April 20, 2023 page 220

Mr. Lautenburger incorrectly attributes the areas of most frequent Morrow County fire ignitions to the wrong region of the County.

Q. Wendy King: I guess this is just in support that there are fires in -- there is fire history in Morrow County, that apparently Sam Myers has documented, and that would go towards the historical fires rather than proof of fires under a transmission line. So, my question was, does this -- does this support any of the information you take in as far as fire history?

A. Chris Lautenburger: So, I think you're mischaracterizing the fire history here. The majority of fire history in Morrow County is in the southern part of the county in the Blue Mountains. There is very little fire history along the B2H line, and in particular, near Mr. Myers' property. So, I'm not sure specifically which fire history you're referring to, but if you look into the fire history, whether it's the location of ignitions or historical perimeters, what you'll see is that there's very little history of fire along the B2H route. If you were to include the southern part of Morrow County in the Blue Mountains, there's significant fire history

there, but that's not relevant to this current proceeding, because the B2H line is not passing through the Blue Mountains in the southern part of Morrow County. Cross Examination of Chris Lautenberger April 20, 2023 page 241-242

The real data in the Morrow County https://www.co.morrow.or.us/emergency/page/wildfire-0 section titled, Wildfire impacts in Morrow County region clearly states that the middle region of Morrow County encounters MORE ignitions than the forested southern region again, this is Morrow County's own data sourced on their website and it confronts the false narrative that Mr Lautenberger presents in the hearing. The section I listed also confronts Mr lautenberger's testimony because the actual numbers are 70% lightning strike ignitions and 30% human caused. Again Mr. Lautenberger has distorted the facts whether accidentally or intentionally in a way that dramatically changes the overall assessment and perspective we need to have concerning fires in the region. It is profoundly disturbing that Mr Lautenberger has presented the facts in this way. Just for the record, I would like to point out that the B2H line through our farm is about dead center in the middle of Morrow County that would definitely correlate to the middle third of the county as described in the Wildfires Impacts In Morrow County Regions statement provided above, where Morrow County has been divided into North third, Middle third, and South third. Again, it is disrespectful to the OPUC that Mr. Lautenberger has offered irrelevant facts in place of these factual recordings of Morrow County in this proceeding. This data misrepresentation is critical to the fire ignition reality. If lighting is already causing 70 percent of the fires, then without question we have lighting probability which makes the likelihood that the towers themselves will attract and contribute to even more fire ignitions. Lighting potential is high in this area and the fire risks involved here have no mitigation plans to compensate for those losses.

INCREASED FIRE IGNITION PROBABILITY

LAUTENBURGER ADMITS TO MORE FIRE IGNITIONS

In the cross examination on April 20th Mr. Lautenberger admits on page 201 Line 6 that the mere presence of the transmission line towers can bring about an increase in number of ignitions during severe weather lightning storms. This is statistically important in a location with fires already at 70% from lightning strikes to add another fire starter risk during these storms. I cannot describe how frightening this additional fire ignition resource will be to our SAFETY and sustainability as farmers.

Again, fire ignitions will increase from the operation alone of the B2H transmission line and however small, it is something to consider. Mr. Lautenberger responds, "Yes, at any time a potential ignition source is introduced, there is an increase in ignition probability..." This response can be found in Cross Examination of Chris Lautenberger April 20, 2023 on page 202 line 20, following the given question: "...will the potential, or in an increase in fire ignitions happen when B2H is operational?"

FIRE IGNITIONS INCREASES WITH WIND SPEEDS

Fire ignitions will increase with wind speed. As I exhibited in my intervener opening testimony Sam Myers/100 page 1, the article from Joseph Mitchell reveals that transmission line failures increased as wind speeds increased. He has done specific work on 500 KV lines and he determined that as winds increase, so did the potential for fire ignitions and thus the ensuing catastrophic fire event which he is so good at describing. In my earlier filings we have documented the high wind speeds that our area encounters and this is only going to add to the

number of ignitions that we experience in a given year. Amended Opening Testimony of Sam Myers, 2-2-2023 pg 4-5, Intervenor Cross-Answering and Rebuttal Testimony of Sam Myers, 3-20-2023 pg 2, Sam Myers Errata to Testimony of 3-30-2023 Clarification Testimony of Professional Wind Data Exhibits, filed 4-25-2023.

FIRE IGNITIONS INCREASE WITH POTENTIAL WIND ANGLE ISSUES

Fire ignitions will increase through wind attack angles. The ASCE study on fragility analysis I listed in intravener Cross answering and rebuttal testimony March 20, 2023 pg 4, cites the problems when towers are not adequately tested for specific wind attack angles. This very severe problematic issue has not been fully vetted through IPC. This issue has not been fully vetted, it has not been disputed scientifically in any way, we have presented so much data on the specific issue we have locally and yet IPC has done nothing. IPC could have tested and could have prepared for any potential problem. It is greatly disturbing that IPC chooses to ignore this ASCE study and ignores the potential for Tower failure through a specific design wind angle. This contingency could be fully dealt with and vetted but, IPC has done nothing.

FIRE IGNITIONS INCREASE WITH IMPROPER ENGINEERING

I must also point out that Joseph Mitchell's work also proves that under engineered transmission lines and IE transmission lines that are not properly engineered for the local standards, will create more faults and fires. In his exhausting work in Southern California, he found that the towers and the transmission lines were not suitable for the standards they were placed in. I believe the same scenario is setting itself up in Morrow County because IPC has chosen not to use the local wind data available and is under engineering its transmission line and consequently more fire ignitions will ensue because the equipment is not designed to handle the wind loads that exist in our area. <u>Powerlines and Catastrophic Wildland Fire in Southern California</u>, Joseph Mitchell, Dec 2013

FIRE IGNITIONS CAN INCREASE WITH CASCADIA EVENT

Fire ignitions can increase with the transmission line encountering seismic activity. We have no idea when the Cascadia event will happen. It could very well happen on a windy and dry day and transmission lines could be impacted to the point of causing failures, faults and fires. IBC has made a determination not to add any loading for this Cascadia event and does not appear to have any scientific data to verify or validate that choice to not include any wind loadings or any additional loadings whatsoever. We have yet to encounter the seismic levels that we will encounter with this event in Morrow County. This is a very, very dangerous situation that has not been prepared for. Idaho Power refuses to have any contingencies in place where their towers will endure additional seismic activity .

FIRE IGNITIONS CAN INCREASE WITH EXTREME WEATHER

In my Intervener Cross Answering and Rebuttal testimony March 20th 2023 page 7 under extreme weather I refer to the <u>4th National Climate Assessment</u> chapter 4. This abstract outlines the potential for more extreme weather in the nation as a whole which will include high winds, thunderstorms, hurricanes, heat waves, intense snow-ice events and extreme rainfall. They recommend that all of these particular events require significant considerations to successfully withstand their effects. However, Idaho Power does not recognize this National Climate assessment and has added no additional loadings for any of the extreme weather events listed in this climate assessment research. This lack of climate preparation will lead to an increased fire ignition potential either before, during or after these climate events occur. Again, Idaho Power has not responded to the overwhelming evidence of an industry that is seeking more reliability and more resiliency from its transmission distribution grid.

FIRE IGNITIONS CAN INCREASE WITH VIBRATION ISSUES

Fire ignitions can come from wind induced vibrations. This potential is found in my Intervenor Cross answering and Rebuttal Testimony dated March 20, 2023, page 8. The section titled Wind Induced Vibration, points to a research article that deals with wind induced coupling vibration effects on high voltage transmission lines. In this study, they outline the vibration impacts with certain wind attack angles and that the resulting vibrations can produce damaging effects. These conditions have not been vetted for or taken into account. These vibration conditions have not been tested on the given BPA tower. I would like to remind the commission and the judge that the multitude of tests that BPA offers were not done on this particular BPA STD-DT- 000035 Lattice Tower that IPC has chosen, according to Mr. Stippel. We have no idea if there has been any testing for potential vibration at a specific wind attack angle to cause equipment damage faults or ignite fires from subsequent equipment failure. This is another contingency that Idaho Power has chosen to ignore.

The following section outlines the failed attempt at satisfying the statute 0035. Specifically whether IPC fails to meet "Best Industry Practices" requirement.

UNDER ENGINEERED B2H

In the Cross examination hearing April 19, 2023, page 173. Mr. Stipple admits that IPC has not sourced any local wind data to make the Design Wind speed selection but has ONLY used the generic wind charts in the ASCE manual 74.

CRITICAL DESIGN FLAW

A critical mistake that IPC has made is to incorrectly choose a Design Wind Speed of 85 mph from the ASCE charts with an accompanying 100 year MRI. This value is way too low for our area. Fortunately, we have in the record an email from Zack Kline that supports a professionally derived value using localized wind data, as the following exhibit reveals:



4/24/23

General max wind levels of a 100 year intervals

Sam,

Fortunately, as Jack said, we have the measured met information at the Carpenter Butte site and I was able to use that to estimate the 100 year recurrence maximum wind speed.

The maximum wind speed at that location with a 100 year recurrence for a 3 second average at 33 feet above ground level is 98.8 mph (44.2 m/s).

That estimate was calculated using the Gumbel distribution of estimating wind speed recurrence.

-Zack Kline Wind Engineer RAM Associates

Sam Myers' Errata to Testimony (Clarification Testimony of Professional Wind Data Exhibits) 3/30/2023, filed 4-25-2023. For the record, the B2H Design Wind Speed SHOULD be 98.8 mph with the corresponding 100 year MRI. Not the significantly lower 85mph!

From the work of Jack Klein with Ram Associates we get a much clearer picture and a more accurate assessment of the local wind speeds. A general understanding of the Gumbel distribution principle helps us understand the value of this data point. Wind Engineers use the wind meter Towers to create data points for determining both the wind turbine wind loads and for design structure purposes along with a determination whether commercial wind is financially feasible. The Gumbel distribution principles are used Nationwide for these purposes; it must be noted that millions of dollars are at stake in determining whether an area has commercial wind or not. This particular engineering wind analysis provides the guidance needed to proceed with building a wind turbine complex. The maximum wind speed determination is a scientifically determined factor from a proven method to provide some structural guidance for both wind turbines or transmission line Towers. The MRI of 100 years in this case is not necessarily an elevated reliability time frame but, at least we now have much better data for an actual 100-year MRI. This localized data is much more accurate than what the IPC has chosen which is based only on the ASCE charts. Simply put we have locally higher intensity winds than what the ASCE charts suggest. If IPC truly was concerned about meeting safety standards they would have gladly used the Ram Associates data and re-engineered the b2h line using the 100-year MRI of 98.8 mph. This would become the new design wind speed point to begin loading and coordinating all additional structural loadings to get a combined loaded Max weed speed number.

IPC DOES NOT CALCULATE A DESIGN FAILURE RATE

In the cross examination hearing of Mr. Stipple on April 19, 2023, pg 169, Mr Stipple could not answer the question relating to whether IPC developed a "Design Failure Rate" in the design of B2H. The following excerpt from the ASCE Manual 74 4th edition pg. 4 describes this important design consideration: risk of failure vs. the increased cost of enhanced reliability. IPC has not presented this, nor do they have this data consideration. Therefore we have an incomplete or under engineered project proposal. This data would provide a much clearer picture of the reliability considerations IPC chose. Simply said: it would have given the PUC, the public, and landowners a better perspective of the costs involved to provide additional reliability. My fear is that IPC has specifically chosen least cost options when designing B2H over reliability. IPC fails to provide this balance of reliability and probability/extent of failure data in its engineering data. This is further evidence that IPC is not employing "Best Industry Practices."

1.2 UNIQUE ASPECTS OF TRANSMISSION LINE DESIGN

1.2.1 Tolerance of Failure

A unique aspect of structural design of electrical transmission line facilities is that failure at some level is acceptable. The acceptable level of risk of failure often depends on the importance of the transmission line considered. Transmission grids typically have some level of service redundancy, which can accommodate failure of a particular transmission line without any disruption of service. In some cases, a component of a transmission line can fail and may only damage a small portion of a line, which can be promptly repaired and service restored with minimal impact to the electrical grid. This is unique in comparison to other engineered structures (e.g., buildings, bridges, dams), where a failure could directly result in high probability of loss of life or substantial property damage. Engineering judgment should be used to balance reliability of design, minimize the probability and extent of failure, and provide economical design for the service life of the transmission line.

There are exceptions where failures resulting in a disruption of service are to be avoided. Some transmission lines serve critical facilities (e.g., hospitals, emergency services, power plants, cold-start facilities), which may be in congested, heavily populated areas, or may not have redundancy in

IPC CHOOSES MINIMUM STANDARD MRI, NOT STRINGENT

IPC asserts an opinion of reliability on page 14 of its PUC Application, also IPC claims to have used "Stringent Standards" in its design standards but failed to use an MRI associated with "elevated Reliability." Mr. Stipple admits in the Hearing that the following ASCE manual 74 page 12, the Chart clearly indicates a MRI that is associated with increased reliability;

| | Ta | able 1-1. Exceeda | nce Probability for Var | ious MRIs. | | 2.4 |
|---|----------------|---|---|---|------------|---|
| Typical conditions | MRI (years) | Probability the MRI load is exceeded in any one year (%) | Probability the MRI load is exceeded at least once in 50 years (%) | Probability the MR load is exceeded at | maps sho | f wind and ic wn in ASCE DP 74 Ice |
| Temporary or emergency restoration, service checks ^a | 10 | 10 | 99 | 99+ | e | - |
| Temporary or emergency restoration, service checks ^a | 25 | 4 | 87 | 98 | e | - |
| Historically used MRI ^c | 50 | 2 | 64 | 87 | Appendix L | Appendix L |
| Recommended MRI | 100 | 1 | (39) | (63) | Chapter 2 | Chapter 2 |
| Enhanced reliability | 200 | 0.50 | 22 | 39 | _ * | - |
| Enhanced reliability | 300 | 0.30 | 15 | 28 | Appendix L | Appendix L |
| Enhanced reliability | 400 | 0.25 | 12 | 22 | _ | — |
| Enhanced reliability | 500 | 0.20 |) 10 | 18 | _ | d |
| Enhanced reliability | 700 | 0.14 | 7 | 13 | b | _ |

Previous editions of this manual provided wind speeds associated with a 50-year MRI for a majority of the continental United States, with MRIs of the hurricane-prone regions in the range of 50 to 90 years. See Section 1.5.1 and Chapter 2 for further explanation. ⁴ASCE 7-16, Chapter 10.

'ASCE 7-16, Appendix C Commentary.

The Chart clearly indicates the increasing the MRI from 100 to the 200 or 300 year levels is where increased or "Enhanced Reliability" values are found. Not at the 100 year MRI. This again is an under engineered data point that cannot be overlooked. IPC claims to be using the "stringent" standard. Idaho Power/200, Barretto/2. In fact, this chart shows IPC's selection is only at a MINIMUM level of reliability. MR. Stipple has rebutted my concerns in the Idaho Power/1500 Stipple 14, line 3, Mr. Stipple asserts my concerns are unjustified because it has met minimums. My response is still the same. You can not claim that stringent standards are used when in fact only minimums are selected.

LATEST UPDATES NOT USED

In the cross examination hearing on April 19, 2023, pg 182. Mr. Stipple does not seem to understand that the ASCE wind charts have not necessarily changed but it is the additional MRI choices that have been introduced as the update to the latest meteorological wind information. As shown below, from page 21 of the ASCE manual 74, 4th edition, the updates are the additional MRI choices. The updated wind information ASCE has discovered revealed the need for improved structural loadings in some areas. Without question Morrow county is one of those areas as evidenced by the placement of wind generation facilities. IPC is not following the updated design suggestions described in the Manual 74 by using a more enhanced MRI. Again failing at meeting "Best Industry Practices".

Based on an updated analysis of historical wind data in the United States, wind speed maps corresponding to several MRIs have been developed and are presented in ASCE 7-16 (e.g., Pintar et al. 2015). The wind speed maps

NOT ALL TESTS PERFORMED

In the cross examination hearing on April 19, 2023, pg 174, Mr. Stipple admits that the selected BPA lattice tower has not undergone all the tests that could be performed on the specific model. This can have serious consequences. Without performing all the tests BPA has to offer we do not know of the hidden weakness that some tower models have. In the sourced study, Tower Failure

Studies, from my filing; Intervenor and cross-examination and rebuttal testimony dated March 20, 2023 on page7; we find the example of such an event: a tower fails under much lower wind loading than originally specified. After further investigation by BPA, it was revealed that the tower was incorrectly given a max. wind load speed much higher than it could actually withstand. Without the complete and thorough testing of the selected BPA lattice towers, we could end up with an engineering disaster. The B2H project proposal is incomplete, making it an under engineered project. This is yet another example of IPC not using "Best Industry Practices".

UNSURE ABOUT TOWER ENHANCEMENTS

In the cross examination hearing on April 19, 2023, pg 171, Mr. Stipple also does not know how many BPA enhancements have been done to the selected lattice tower. It is important to have this enhancement issue fully vetted. If improvements have been made on other models, but not the selected BPA tower then problems could produce devastating consequences. Again, we have an incomplete knowledge of whether significant improvements were applied to the given model. This lack of knowledge reveals an incomplete project and lacks the use of "Best Industry Practices".

UNKNOWN COEFFICIENTS

In the cross examination hearing on April 19, 2023, pg 176, Mr. Stipple could not verify the Wind attack /angle Coefficient used in designing the selected BPA lattice tower. Again, we see a lack of knowledge and corresponding opinion based response as to why he does not know this information. Without question, we have data that reveals wind attack angles can lead to tower failures. IPC does not provide sufficient information that would provide assurances that "Best

Industry Practices" have been followed. In fact, we could have weaknesses that have not been discovered, also this contributes to an under engineered project.

In my document "Intervenor cross-answering and rebuttal testimony," I provide significant sources proving that problems with IPC tower design do exist. Transmission tower failures do happen. They can be impacted by using low design standards. Towers can fail from the wind pressures from various wind attack angles. Towers can also fail from wind caused vibrations. This is why it is so important to utilize all of BPA's testing resources to ensure an enhanced level of reliability is built into B2H.

NO METEOROLOGICAL INFORMATION USED

In the cross examination hearing on April 19, 2023, pg 176, and 177, Mr.Stipple admits that IPC has not performed any analysis or sought any professional advice from any meteorological sources to determine that elevated winds exist in Morrow county. Additionally, they have not sought any sources to confirm or deny the possibility of localized topography enhanced winds. Again, this is very irresponsible to ignore the data I have produced. Our wind data clearly suggests that enhanced winds do in fact exist in Morrow county and should be fully vetted. The lack of due diligence on this wind issue is not characteristic of "Best Industry Practices". IPC is ignoring local wind facts and only designing with information from very basic ASCE charts.

UNSURE ABOUT CONDUCTOR FAILURE

In the cross examination hearing on April 19, 2023, pg 172, Mr. Stipple had much difficulty answering the question regarding when conductor failure would occur on B2H. This inability to fully answer the question and provide clarity and understanding on this critical standard is also

not consistent with "Best Industry Practices". Mr. Stipple does not provide true accountability to the Public, PUC, or the impacted land owners. I find the answer to my question is not suitable considering the magnitude of loss that can occur if these conductors fail. Furthermore, the PUC should demand full accountability of IPC. At this point Mr. Stipple does not provide enough detailed knowledge about the BPA tower. Mr. Stipple makes claims that seem to abdicate the responsibility to BPA on this issue. This is not acceptable. IPC should be required to provide all the engineering data to both intervenors and the PUC without hesitation or confusion. The details of my question deserve to be completely answered.

EVIDENCE OF ELEVATED OR INTENSE WIND IN MORROW COUNTY

1. January 7-8, 1990 - Wind Event. A storm blew through Northeast Oregon with winds approaching 80 mph that toppled thousands of trees and blew the roofs off of structures. Business, schools, and roads were closed due to the wind. The wind storm began the evening of Jan. 7, toppling trees and downing power lines across the region. At the height of the storm the entire Umatilla Electric Cooperative's customer service area, from Meacham to Boardman, was without power in some areas for two or three days as crews from local and outside agencies struggled to repair power lines, poles, and transformers. Even two-way radios weren't working for part of the day, hampering cleanup efforts. Eighteen roads were closed in the area due to downed trees and blown detritus, including highway 204 near tollgate where winds estimated at 100 mph blew down the equivalent of 10 Million board feet of lumber during the storm. Crews with chainsaws began cleaning the "timber carnage" of an estimated 750 to 1,000 evergreens from the highway on Jan 8th. One crew worked east from Umatilla County while another forged west from Elgin. 2. July 9, 1995 - Hail Storm, Severe Thunderstorm of July 9, 1995 in North Central Oregon. National Weather Service description as follows: "A supercell thunderstorm that developed near Redmond traveled nearly 200 miles before dissipating. It produced baseball sized hail in cities from Condon to Hermiston. Nearly every vehicle in Hermiston was damaged by hail. The local watermelon crop, on the verge of harvest, was a complete loss. The storm spawned flash floods, damaging winds, and even a brief tornado. The National Weather Service's new Doppler radar tracked the storm and allowed forecasters to provide ample warning. There were no fatalities, but damages to crops, structures, and property were in the tens of millions of dollars." This event did cross the B2H pathway.

3. March 2, 1999 - High Wind Event. During the spring of 1999 we had a wind event that blew off the roof of a building on our farm. The contractor that was repairing this building commented that the winds reached 100mph+ based on the damage.

4. Dec 19th, 2012 - High Wind Event. Weather Tower recorded a speed of 79.2 mph (2 Sec Average).

5. Sept 15th, 2013 - Hail & Wind Event. Hail and wind caused power poles to fall over between Heppner, OR and Hermiston, OR. More data available upon request

6. Sept 29th, 2013 - High Wind Event. Weather Tower recorded a speed of 67.8 mph(2 Sec Average).

7. Dec 11, 2014 - High Wind Event. Weather Tower recorded a speed of 88.9 mph (2 Sec Average).

This weather data showcases local climate conditions. These weather events reveal a stunning wind load that would be placed upon the B2H line. These weather events could potentially cause line or tower failure due to the under engineered transmission line. The most critical dynamic with this data set is the relatively narrow date range from 1990 to 2014. The events: #1 and #4 could be characterized as downbursts while the other events are generally a result of intense localized thermal activity that frequently accompany a thunderstorm or a squall line.

Regional Weather Variances

Looking at our recorded wind speed event dates and comparing those dates to winds recorded to Pendleton, Oregon's weather station (30 miles ENE from our location) you can see a stark difference between the two locations. For our most intense wind events you can see that the Pendleton weather station did not experience the same intensity of wind speeds as experienced on our farm. On these occasions we are experiencing about <u>double</u> the wind speeds as recorded at the weather station. This confirms our first hand experience in dramatic fashion. IPC has not recognized this climatic phenomenon. The continued neglect of this data can produce deadly consequences to those in our community. Tower failure and catastrophic fires must be avoided at all costs.

Collected from: https://www.wunderground.com/weather/us/or/pendleton

Carpenter Butte wind speeds:

Dec. 19, 2012 our tower recorded a wind speed of 79.2 mph. On the same day, Pendelton, OR recorded a max wind speed of 33 mph.

Sept. 29, 2013 our tower recorded a wind speed of 67.8 mph. On the same day, Pendleton, OR recorded a max wind speed of 40 mph.

MORE LOCAL WIND INTENSITY PROOF

On The evening of December 26th 2022, our local weather metering device recorded an impressive jump in wind speed. At around 9:30 p.m. the graph reveals the wind speeds at around 15 to 20 mph, some 35 minutes later wind gusts topped out at 77 miles per hour. This dramatic increase in wind speed is what our area frequently encounters, which is why I am not impressed with the forecast modeling that Idaho Power seeks to employ to determine whether high winds may be happening within the region. The only way to adequately prepare for these kinds of wind speed increases is to have actual live wind speed data relayed to IPC headquarters on a continual basis that will alarm when such speeds elevate to 70 or 80 miles an hour. Below is the graph recording of the events of December 26th 2022:

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| High Wind Speed | Temp | | | Clear all | |

ALTERNATIVE ROUTES

At this point I must exhort the OPUC to direct IPC in considering alternative routes. It seems that IPC does not want to honor the directives that have been placed upon them; to as much as possible avoid placing B2H over Exclusive Farm Use zones. From the cross examination hearings on April 19th with Mr. Colburn page 107-108, we realize that IPC has no intention of honoring the directive by re-analyzing or reviewing the Alternative routes in order to avoid

exclusive Farm use zones. It seems as though IPC has chosen a route and are disregarding all the State statutes, even though it's quite possible to uphold the statutes at this time. They have provided very little information on study of the alternative route that was last proposed. My suggestion is that the OPUC must provide the incentive for IPC to honor the directive by withholding the certificate which we have concluded is possible to reroute the line using a Wheat Ridge Corridor south of Gleason Butte. IPC has not been completely forthright in making their decision to excuse our alternative route and at times muddied the water with irrelevant references to alternative routes. Again I must admonish the OPUC to force IPC to re-study these routes in order to honor the directives that were given by the State, to keep B2H off of Exclusive Farm Use lands..

CONCLUSION

I do not believe that the B2H project should receive the certificate it is seeking. We do not have any mitigation plans in place to provide mitigation for losses encountered if fires burn: unharvested grain, timber, cattle or the losses from soil health in such fires. These losses are unmitigated real-time consequences that could very well devastate our livelihoods, we should not be put under these kinds of risks for a utility company's gain. These events have no contingency plans at this time. Currently, Oregon fires have become such a public concern such as: lost incomes, property and livelihoods. The OPUC must force IPC to develop contingencies to deal effectively and clearly with those losses I describe, it is a matter of life and death. It is unfathomable that OPUC would leave these unmitigated consequences to play out randomly, and would only cause more nightmares for landowners and the General Public. Landowners are left to simply endure these situations without any guidance from the government. The OPUC is the only agency set apart to be the Consumer Advocate protecting us from utility companies. The OPUC must flex its governing muscle and force IPC to provide necessary contingency plans for

these emergency conditions I have described.

I would like to point out to the OPUC, in their own web page describing their mission, their

vision, and their values listed below in its entirety.

https://www.oregon.gov/puc/about-us/pages/default.aspx

Oregon Public Utility Commission

About Us

Celebrating more than 150 years of history, the work of the Oregon Public Utility Commission (PUC) impacts every household throughout the state. The PUC is responsible for rate regulation of Oregon's investor-owned electric utilities (Portland General Electric, Pacific Power, and Idaho Power), natural gas utilities (Avista, Cascade Natural, and NW Natural), telephone service providers (landline only), as well as select water companies. The PUC also enforces electric and natural gas safety standards and handles utility-related dispute resolution on behalf of Oregon residents. In the event of an emergency, the PUC is part of the Oregon Emergency Response System to coordinate and manage state resources.

The PUC is funded by assessment of the regulated public utilities. View the 2021-2023 Legislatively Adopted Budget and the proposed 2023-2025 Governor's Budget. View the PUC's 2023-2025 Strategic Plan to view agency goals and objectives. To learn about the PUC's efforts to advance sustainability performance in state government, view the PUC's Sustainability Plan. View our Key Performance Measure Report for additional information.

Our Mission

Our mission is to ensure Oregonians have access to safe, reliable and fairly priced utility services that advance state policy and promote the public interest. We use an inclusive process to evaluate differing viewpoints and visions of the public interest and arrive at balanced, well-reasoned, independent decisions supported by fact and law.

Our Vision

Our vision is to improve the lives of Oregonians through effective utility regulation and leadership in the utility sector. We serve Oregon by:

- holding utilities to high standards of performance and value
- guiding a transformation in utility services consistent with Oregon's social, environmental, and economic goals,
- adapting regulatory processes to improve inclusion, learning, collaboration, and problem-solving

Our success depends on recruiting and retaining talented and engaged employees to provide independent analysis in support of agency decision-making. We strive to offer meaningful work, mentoring and training, and a positive workplace culture.

Our Values

Accountability: Our responsibility to serve utility customers drives us to be diligent in our work, and efficient and effective in managing financial and human resources.

Integrity: As individuals, we are honest, trustworthy, and respectful. As an organization, we use open, fair processes and independent analysis to reach informed and just decisions.

Inclusion: We strive to advance equitable access, engage diverse perspectives, promote collaboration, and recognize our impact on all communities.

Adaptability: We develop expertise and adapt our skills, our organization, and our regulatory processes and tools in order to meet rapid change in our regulated industries.

I'd like to point out in the values section of the PUC the characterization that they describe as

having "adaptability" The PUC seems to describe that they have an ability to adapt themselves

and their skills and their organization to flex or bend to rapid changes in the industry that they regulate. I would assert at this point in time that the PUC should exercise a huge amount of adaptability in the form of regulating IPC in a way that forces them to make changes in several areas of their project proposal. These regulations would have to be established then agreed to by IPC before they could acquire a certificate from the PUC. I would assert the PUC should demand that Idaho Power; reengineer their lines for more enhanced reliability. The PUC should require IPC to set up bonds or some mitigation policies to account for fire losses of all kinds having to do with B2H. The PUC should require IPC to streamline fire damage financial compensation procedures so landowners wouldn't have to go to court to prove fault and receive compensation for damages. I believe the PUC should be adaptable, enforcing IPC to not only explore the alternative routes thoroughly and make the necessary changes to honor the state statutes requiring them to have as limited amounts of impacts to EFU zones as possible.

I would like to point out that it has been extremely difficult to maintain the filing pace that the court has established for this matter. It appears that the court was extremely favorable towards the expedited requests that Idaho Power has made in this proceeding. The expedited time nature of this proceeding has caused considerable anguish for those of us intervenors who have full-time jobs and many other matters to deal with. My hope is that as an intervener; this document will get the full weight of its evidence and testimony in this proceeding.

I hereby declare under penalty of perjury under the laws of the State of Oregon that I prepared the above Opening Brief for the PCN5 docket, and that to the best of my knowledge and belief, declare the statements, testimony and exhibits to be true and that they were made for use by the Commission as evidence in this proceeding.

Dated this fifteenth (15th) day of May, 2023.

/s/ Sam Myers

Sam Myers

CERTIFICATE OF MAILING

On May 15, 2023, I certify that I filed the above Opening Brief and Declaration with the Administrative Law Judge via the OPUC Filing Center, for the Docket # PCN-5.