

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Cheri Meadows,)	
)	
Complainant,)	
)	Case No. EC-2025-0136
v.)	
)	
)	
Grain Belt Express, LLC,)	
)	
Respondent)	

CHERI MEADOWS’ REPLY TO 1-17-25 STAFF REPORT

I, Cheri Meadows hereby file this Reply to the January 17, 2025 Staff Report. In support of my Response, Complainant states the following:

I. Background

1. On October 15, 2024, I filed a formal complaint with the Missouri Public Service Commission (“PSC”) asking that Grain Belt be required to move their Tiger Connector line (“Line”, “the Line”) south of my property approximately 600 feet where it would not be near any residence, nor jeopardize anyone’s property, health, or safety.

2. On January 17, 2025, the Staff of the Missouri Public Service Commission (“Staff”) submitted its Staff Report where it concluded that Grain Belt did not violate any tariff, rule, statute, or Commission order related to my complaint. I am responding to Staff Report with additional information about how by not “avoiding residences” Grain Belt Express, LLC is

potentially inflicting undue harm on me and my pets in my daily use of my property as well as any future residents of this property.

II. EMF Concerns and “Avoiding Residences”

3. On November 15, 2024, Grain Belt Express, LLC submitted a response to my formal complaint regarding my concerns with EMF exposure. In Paragraph VII, Line 39, p. 15 (Docket Sheet EC-2025-0136 – Item No. 7), Grain Belt Express, LLC stated,

“Alternating current magnetic fields associated with AC transmission lines are far below limits for human exposure recommended by the International Commission on Non-Ionizing Radiation Protection (“ICNIRP”) and the International Commission for Electromagnetic Safety. The ICNIRP have identified a variable (AC) magnetic field level of less than 2,000 mG (milligauss) necessary to protect public health. The specific design limits for the AC conductor have a magnetic field of 200 mG at the edge of the planned Project ROW. Therefore, exposures related to the Project are expected to be well below the ICNIRP guidelines for AC fields.”

However, according to ‘Cellular and molecular effects of non-ionizing electromagnetic fields’ (Attached) authors Henry Lai and B. Blake Levitt,

“...Moving toward forming a more comprehensive EMF public health policy, from the discussion above, it is clear that the biological effects of EMF involve an extremely complex matrix of interacting factors across all cell lines/functions. These require careful analysis of comprehensive data, as well as the appropriate level and kind of expertise in standards exposure-setting groups such as ICNIRP and IEEE/FCC in order to interpret such information fully and accurately. When it comes to committee members in positions to make decisions, such membership should always include sufficient knowledge of the physics of EMF and its interactions with whole organic biological systems in order to understand biomic functional processes. It is more critical than ever, given rising EMF levels in all frequency ranges today, that any committee or government entity in a position to influence exposure recommendations be appropriately credentialed in the right disciplines with a proven EMF research track record, and that anyone invited onto such committees understand their own limitations/biases, if any, and refuse to be seated if the subject is outside their purview. There should be a preponderance of committee members with backgrounds in biology, not just physics/engineering as is the case today. There are unfortunate indications that such high standards of appropriate qualification to sit on such committees are not being met today (see [73, 74]), but to do anything less is highly unethical as this subject will continue to be in the hands of people acting outside of their areas of expertise. This issue concerns biological interactions from exogenous EMF exposures at low intensity, not engineering quandaries.”

Also, according to the appeal that EMFscientist.org (Attached) is petitioning to the United Nations, World Health Organization, U.N. Environment Programme (UNEP), and U.N. Member Nations to set standards to avoid adverse EMF health effects, they have stated,

“...In 2009, the ICNIRP released a statement saying that it was reaffirming its 1998 guidelines, as in their opinion, the scientific literature published since that time “has provided no evidence of any adverse effects below the basic restrictions and does not necessitate an immediate revision of its guidance on limiting exposure to high frequency electromagnetic fields^[3]. ICNIRP continues to the present day to make these assertions, in spite of growing scientific evidence to the contrary. It is our opinion that, because the ICNIRP guidelines do not cover long-term exposure and low-intensity effects, they are insufficient to protect public health...”

Obviously, there is some controversy in the scientific community about the dangers of long-term and low-intensity EMF exposure to people, plants, and animals. This evidence should give pause to anyone who is making the decision about the safety of anyone living in the vicinity of The Tiger Connector.

4. The Tiger Connector Line will not be over an unused portion of my land that I seldom use. Instead, this Line will be over a part of my land that I spend hundreds of hours a year walking on with my animals and maintaining. This is the easiest and cleanest route I have on my entire property to walk my many animals. I also spend many hours every year mowing, grading, and removing shrubs, limbs, and weeds that encroach into the drive.

5. Given the attached exhibits regarding the dangers of EMF at much lower levels than what the standards are set by the ICNIRP, I am extremely concerned about my health and that of my animals spending so much time and proximity to the Line. Attached is a pdf of testimonies given by Professor Martin Blank, where he states,

“..There is no question that recent research has shown potentially harmful biological effects at low level EMF exposures for extended periods of time, and there is a need to reconsider EMF safety...”

And

“...it is clear that the safety level set by ICNIRP is approximately 3 orders of magnitude greater than the thresholds of the fundamental biological processes activated by EMF. ICNIRP interpret EMF safety as prevention of acute large effects, such as electric shock, or large induced currents that can fire nerves. They believe that low level exposures, that they call non-thermal, do not cause biological effects and are without consequence to health. They may no longer be able to ignore the data showing that many fundamental biological processes are activated by low level EMF. The Parliament of the European Union voted in September 2008 to re-examine and readjust safety levels on the basis of measured biological effects. Activation of the stress response is certainly indicative of protective cellular responses to low level EMF.”

6. Martin Blank was one of the organizers of the ‘BioInitiative Working Group’, an international group of scientists who reviewed the science and safety aspects of EMF in a report that was published online and from which the recommendations were cited by the European Parliament as a reason to reexamine EMF safety standards. As noted above in the exhibit I’ve attached, he has decades of experience in teaching, publishing, editing, researching and testifying about EMF. In his attached testimonies, he discusses low-level EMF in regards to breast cancer and other health dangers like leukemia and Alzheimer’s disease associated with EMF.

7. While it is easy to dismiss any dangers to health caused by EMF when you aren’t the one that will be walking, working and living under or around it for the next approximately 40 years, I am not so dismissive. The risk of my animals developing cancer or me developing Alzheimer’s or breast cancer because I want to continue to use my land like I have for the past nearly 25 years is frustrating.

8. After doing extensive research on the dangers of EMF and all of the potential health impacts it could have, I could never in good conscience sell my home with the Tiger Connector Line in the area that it is, to anyone planning to have children or with small children who could be so negatively affected by the simple act of just walking around on the property and spending any amount of time near the Line.

9. The reason there are standards for how far high-powered transmission lines are set away from homes is due to the dangers they pose. As data is gathered that confirms EMF dangers that were previously unknown or unaccepted, it is up to the parties involved in the placement of high-voltage transmission lines to update their safety levels to allow for the new information and acknowledgement of the risks that EMF poses.

10. As I have stated previously, walking down my drive has been a respite from the EMF I and my pets are subjected to daily from my smart phone, laptop, wireless printer, wi-fi, smart tv, and smart meter. Working from home, there is no break from it, except when I take a walk with my animals. Having this Line over my drive will mean that none of us will ever get a very long break from EMF. As I spend many hours per week preparing my pets' raw food, avoiding toxic chemicals on or around them, and doing my best to treat them as safely as possible for any health issues, so I can manage having so many animals, it is extremely upsetting to know that all my careful consideration, time and money spent trying so hard to keep them healthy and cancer-free will possibly be negated by having to walk them under a Line that could possibly harm them.

11. In the attached Exhibit 'Electromagnetic Fields and Canine Cancer_Unraveling the Connection', it states,

“Researchers and veterinary professionals continue to debate whether or not electromagnetic fields (EMFs) can cause cancer. While some research has conclusively linked dogs' exposure to electromagnetic fields (EMFs) to the development of cancer, other studies have yielded conflicting results. Although the results vary, it is generally agreed that further research is necessary to fully assess the long-term risks associated with EMF exposure in dogs and comprehend the underlying mechanisms. This acknowledgment highlights how crucial it is to carry out more research on this intricate matter to protect our furry friends.”

And

“As the prevalence of electromagnetic fields continues to proliferate in modern society,

understanding their potential impact on canine health remains paramount. While conclusive evidence regarding their carcinogenic effects in dogs is still elusive, the correlation between EMF exposure and cancer risk warrants further investigation...”

12. The attached Exhibit ‘Residential exposure to magnetic fields and risk of canine lymphoma – PubMed’ shared this frightening statistic,

“...Moderate, imprecise increases in risk (odds ratios of 1.5-1.9) were found for residence in a home with a sidewalk (plumbing), backyard, or front yard magnetic field of 2.0 mG or greater, but not for indoor measurements at this level. Risk increased among dogs that spent more than 25% of the day outdoors...”

As well as more proof about the dangers to our pets from EMF’s cited in the attached Exhibit

‘How is electro-pollution affecting your pet – Animal Wellness Magazine’ which says,

“The World Health Organization International Agency for Research on Cancer classified radio frequency radiation as a possible carcinogen in 2011, and as a probable carcinogen in 2013.”

III. The Minimizing Effects on Land Use Misstatement

13. In the Report and Order, Grain Belt Express said their “Route Selection Study was intended to identify transmission line routes that minimize effects on land use.” Besides subjecting me and my animals to daily levels of dangerous EMF’s, if I chose to continue using my property in the manner that I have for the last nearly 25 years, I will also lose the barrier of trees, grasses, and underbrush that serves as a natural fence along my drive to help keep my animals in the drive as we walk up and down it. The deer and other wildlife will lose a large area of land they use to bed down, raise young, and hide from deer hunters and predators, while I’ll lose the privacy I have from roadway traffic and the east/west wind barrier I currently enjoy from all the open fields around me.

14. In addition, the only area of my property that could ever feasibly be developed for another residence while still maintaining plenty of privacy at my own home, sits in the path of

the Line, making my ability to ever sell or develop it as a rental property, if want or need occurred, obsolete.

15. My property value will undoubtedly be negatively affected by having a large high-voltage transmission line cutting such a dramatic swath across it that one will have to walk or drive under every time they enter or exit the property or to get the mail.

16. Every time the electricity goes out or flashes, I will immediately think back to those 13 instances I quickly found online and submitted the links to of transmission lines falling, and worry if it's just a local issue or if something happened to the Tiger Connector Line running over my existing electrical line that I won't be able to see 1) from my house 2) in the dark without getting close to it with a flashlight, or 3) without calling my local electric cooperative to report the outage and find out from them that the repair for the outage will take hours or longer to repair while they wait for Grain Belt Express, LLC to get their Line fixed.

17. The area near and under the Line contains milkweeds and other flowering plants that attract bees and butterflies, especially the monarch butterfly, that on December 10, 2024, the U.S. Fish and Wildlife Service proposed receive protection as a threatened species. According to the email from the U.S. Fish and Wildlife Service that I submitted on December 31, 2024 (Exhibit 'Email from US Fish and Wildlife Service Re Endangered Species.pdf', Item No. 18) "...From the photos your property likely has several listed bat species that may be using your property..." As you may know, Missouri has several endangered and protected species of bats that could be affected by the loss of habitat on my property.

18. I fail to see how any of the above could be considered "minimal". On the contrary, there's not much more, if anything, that Grain Belt Express, LLC could do to ruin my

property and the use, peace of mind, safety, and enjoyment I have of it if they are allowed to keep their Line routed across my property.

IV. The Relevancy of Ability to Use Cell Phone

19. On December 23, 2024, I submitted screenshots of my cell phone signal from inside my home where I make and receive the majority of my phone calls and send and receive text messages. (See Exhibit ‘My Cell Signal Strength.pdf’, Item No. 13). As you can see, I only have one to two bars most of the time. The limited cell signal strength is true for other robust phone carriers like Verizon as well, since inside my home is below ground level and my house sits down in a valley.

20. On December 29, 2024, I submitted two screenshots (see Exhibit ‘Cell Phone Signal Affected by Trans Lines.pdf’, Item No. 15) where it was indicated that weak cell phone signals could be affected by 345 kV or high-voltage power lines. I found that concerning since my cell phone is the only phone option I have. On January 13, 2025, I submitted a second, revised Data Request No. 011 to Grain Belt Express, LLC to get any information they had regarding if my cell phone service would be affected by their Line, and to provide the documentation, since not having cell phone service would be very dangerous given my remote location, and not having a cell phone is not an option for me with my lifestyle.

21. On January 24, 2025, Grain Belt Express, LLC objected to my request as “not relevant”. I strongly disagree with that objection, given their claim of avoiding residences should include me being able to use my home as it was intended, which includes me being able to make and receive cell phone calls as I always have and currently do. If Grain Belt Express, LLC hasn’t done their due diligence and can’t prove that their line being so close to my home won’t affect my already weak cell phone signal, they should not have chosen to route the line so

close to my earth-contact home. While being outside so much and walking so many acres of my property, it is sometimes necessary to have a working cell phone to contact a neighbor about a loose cow, or report a strange vehicle/person on my or my neighbors' property.

V. Reiteration of Why Grain Belt Express, LLC Should Be Required to Move Their Line

22. As stated above, there are many issues with the Tiger Connector Line going across my property. In total, it will create an excessive burden to me and my property that cannot be overlooked. While routing the line further away from my residence might put it a bit closer to someone else, if the risks and negatives were weighed, I am certain that few other residences along the Tiger Connector are being as negatively impacted as my property and I are. While I understand that zero impact is not feasible, crossing my only viable entry/exit to my property while going over my existing electrical line, endangering me and my pets via EMF exposure, destroying my property use and negatively impacting future enjoyment of it while possibly taking away my ability to use a common everyday device like a cell phone, is very poor route planning when just a few hundred feet southwest of the current route through my property is 80 acres of uninhabited pasture. In total, south of me is 454 mostly open, non-residential acres (see Formal Complaint attached picture 'GBE Current Tiger Connector Line Path.pdf', Item No 1, 3rd attachment) in which the Line could be routed to actually "minimize effects on land use" and "avoid residences". As it currently and unfairly stands, I, a small residential landowner, who spends countless outside enjoying my land and all the hard work I put into it, will suffer numerous large and impactful negatives with no benefits of any kind from the Tiger Connector Line.

Respectfully Submitted,

/s/ Cheri Meadows

Cheri Meadows