

Ameren Missouri's
Response to MPSC Data Request - MPSC
ER-2024-0319

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues
for Electric Service

No.: MPSC 0390

1. Please list, describe and explain in detail all mitigation efforts that Ameren Missouri has and/or is implementing in order to minimize bat and other raptor deaths caused by wind turbines at High Prairie. Provide the dates when all such mitigation efforts were or will be implemented and describe the resulting impact or anticipated impact that each such mitigation effort will have.
2. Provide the costs by FERC account, separately for labor and non-labor, by month for each type of mitigation effort that has been utilized by Ameren Missouri at each of the wind facilities since mitigation efforts began through December 31, 2024. 2. Please provide a copy of all documentation that Ameren Missouri has exchanged with all governmental agencies and other relevant parties since January 1, 2023 that addresses the current voluntary curtailment and all requirements that Ameren Missouri is attempting to meet in order to restore normal or near normal operations of the High Prairie Wind Facility.

RESPONSE

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Title: Director, Environmental Services
Date: 8-31-2024

Please Note: Due to the size/volume of the documents, Ameren Missouri have published their responsive documents to their external Ameren Missouri Legal Regulatory Sharepoint site: <https://ameren.sharepoint.com/sites/XAMMOREGFILESHARE> . If you have not previously accessed this site, please contact Kelly Mathews or Crystal Tassello at: moregparalegals@ameren.com

1. Upon discovery of a species covered under the site Incidental Take Permit (Permit), Ameren Missouri voluntarily curtails the High Prairie Renewable Energy Center (HPREC) and gathers more information to evaluate the situation. After more information is gathered, Ameren Missouri checks and adjusts operations if warranted, based on case-specific information. These voluntary mitigation efforts or environmental due diligence efforts are important to ensure permit compliance now and in the future. Ameren Missouri is committed to providing a sustainable energy future and balancing our wind energy generation in conjunction with the conservation of bats, especially at HPREC.

Required mitigation efforts that Ameren Missouri has implemented at the HPREC include implementation of minimum turbine wind cut-in speeds, as well as purchasing mitigation credits from a mitigation bank. Ameren Missouri purchased (prior to permit issuance) 217 credits from the Chariton Hills Conservation Bank, an USFWS-approved conservation bank to offset the permitted levels of take of the covered species.

Other voluntary mitigation efforts that Ameren Missouri has implemented at the HPREC include the use of pre-construction survey information to site turbines, including siting turbines at least 1-mile away from known eagle nests; use of tubular towers to decrease roosting locations; burying collection lines underground to decrease risk of electrocution; providing required training to employees and contractors in identifying and responding to encounters with sensitive resources, including eagles; a speed limit of 15 mph enforced on access roads; and reducing potential eagle attractants by removing roadkill, contacting landowners about livestock disposal, and storing trash in covered containers to eliminate attractants to sensitive species.

Ameren Missouri has also been evaluating several bat mortality minimization technologies at the HPREC. These include the following:

- Bat Acoustic Deterrent Technology
- Bat Acoustic Smart Curtailment Technology (EchoSense)
- Model Curtailment Technology

All three technologies were procured and implemented in 2022. The deterrent technology was installed on 15 turbines and is still in operation at the site. This technology utilizes speakers mounted on the turbine to emit ultrasound that is unfavorable to bats, thereby deterring them from flying near the system. Significant testing on this technology was performed. The technology yielded positive results but was not significant enough to warrant additional implementation.

The model curtailment technology utilizes algorithm-based solutions to allow turbine operation at times associated with low or no bat presence. In short, Ameren Missouri worked with a consultant to capture site data (acoustic information from bats present on the landscape, meteorological information, etc.) for multiple years (2022 – present). This information is then used to develop a bat-season model that provides information on when bats are most likely to be or not be present at locations near the turbines at HPREC. Although this technology could at some point be used to help control turbine operation, it is presently being used in conjunction with the other technologies to help inform conservative operations at the site.

The EchoSense technology is currently in-use at the site and is yielding the most positive results. This technology utilizes microphones at select turbines to listen for bat echolocation sounds and automatically shuts down turbines in areas where bats are present. Ameren Missouri has been and continues to work with the vender (Natural Power) to improve the technology and test the effectiveness over more and more turbine locations in a systematic and conservative methodology.

2. Costs by FERC Account (See attached) Work Order No.'s J0XFJ , J0VSI

3. Documentation with Agencies (See attached)