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Witness:	Dr. Kathryn Womack
Sponsoring Party:	Missouri Department of Conservation
File No.:	EA-2018-0202
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO.EA-2018-0202

WRITTEN SURREBUTTAL TESTIMONY

OF

DR. KATHRYN WOMACK

ON

BEHALF OF

MISSOURI DEPARTMENT OF CONSERVTION

SEPTEMBER 28, 2018

*****DENOTES HIGHLY CONFIDENTIAL INFORMATION*****

SURREBUTTAL TESTIMONY OF DR. KATHRYN WOMACK
MISSOURI DEPARTMENT OF CONSERVATION
CASE NO. EA-2018-0202

1 **Q. Please state your name, title and business address.**

2 A. Kathryn Womack, Ph.D., Resource Scientist, Missouri Department of Conservation's
3 Agricultural Systems Field Station, 3500 S. Baltimore Street, Kirksville, MO 63501.

4 **Q. Have you previously submitted testimony in this proceeding before the Missouri**
5 **Public Service Commission?**

6 A. Yes. I submitted Rebuttal Testimony on August 20, 2018. My professional background
7 and qualifications are contained in that prior testimony.

8 **Q. What is the purpose of your Surrebuttal Testimony?**

9 A. My Surrebuttal Testimony is provided in response to portions of the rebuttal testimony of
10 the Office of the Public Counsel ("OPC") and the Division of Energy ("DE").

11 **Q. Do you concur with the statements regarding the natural resources (mainly bats)**
12 **made by OPC Witness Dr. Geoff Marke?**

13 A. Yes, I agree that Dr. Marke's assessment is accurate. I am familiar with the literature Dr.
14 Marke referenced and support his conclusions. I particularly agree with the fact that bats will be
15 killed by this project, it is just a matter of how many and when will these fatalities occur. Robust
16 post-construction monitoring is critical at this site due to the high numbers of Indiana bats using
17 the project area. There is no dispute the project area contains maternity roost trees and maternity
18 colonies. The level of effort recommended, particularly with respect to mitigation (see the

1 recommendations in my Rebuttal testimony), would not be recommended by the Missouri
2 Department of Conservation ("MDC") if the project was in another region of the state.

3 **Q. Dr. Marke commented that requiring environmental mitigation precautions on this**
4 **project would not impact future wind development in Missouri – do you agree?**

5 A. This project is in one of the worst locations in Missouri for wind development from an
6 endangered species perspective. Each project should be and is evaluated separately. Any project
7 in the same vicinity would likely require similar mitigation and monitoring. However, my pre-
8 construction, operational mitigation, and post-construction monitoring recommendations in my
9 Rebuttal testimony are project and site specific.

10 **Q. Would you add anything to Dr. Marke’s concern regarding bat species on the**
11 **project area?**

12 A. Yes, Dr. Marke did not include any of the bat species that are state species of
13 conservation concern (“SOCCs”) that we have evidence occur within the project area. For this
14 project site these include: tri-colored bat, silver-haired bat, little brown bat, and, pending the
15 Conservation Commission approval, the hoary bat. MDC is constitutionally charged with the
16 control, management, restoration, conservation and regulation of the bird, fish, game forestry and
17 all wildlife resources of the state. These resources include SOCCs. MDC has an interest in
18 managing SOCC species such that they do not result in additional listings under the federal
19 Endangered Species Act.

20 **Q. Dr. Marke encouraged operational considerations to avoid taking of bats before**
21 **violations of the Endangered Species Act occur. Do you agree with Dr. Marke and what**
22 **would you recommend?**

1 A. Yes, Dr. Marke offers two options – operating at a cut-in speed of 6.9 m/s with post-
2 construction monitoring or getting an incidental take permit (“ITP”) from USFWS prior to
3 operation. Additionally, I would also recommend siting turbine locations as far away from
4 known Indiana bat and northern long-eared bat maternity roosts and capture locations within the
5 project area (greater than 1000 feet). There are several bat deterrents and real-time monitoring
6 systems that are either being beta tested and/or developed. This project is appropriate to test one
7 or multiple of these bat mitigation strategies as this site has multiple bat conservation concerns –
8 maternity activity (May 15- August 15) as well as a migration risk (spring and fall).

9 Through Ameren’s response to MDC’s Data Request #17, shapefiles of Indiana bat roost
10 tree locations and turbine locations show that there are *** _____ *** within
11 the Project Area, with a total of *** _____ *** identified within and just outside the
12 Project Area. Data from roost trees was from *** _____ *** data. This data does
13 not include capture locations for Indiana bats. However, from the provided data, there are
14 *** _____ *** turbines located within *** _____ *** See Figure 1.

Figure 1. Wind Turbines within ***

1 **Q. Dr. Marke recommends public reporting of bat mortalities, do you agree and why?**

2 A. Yes, this reporting is necessary to determine the actual fatality rates for federally listed
3 bat species (Indiana bats and northern long-eared bats) and Missouri's bat SOCCs. In talking
4 with the U.S. Fish and Wildlife Service, it is my understanding this would be the first wind
5 project permitted under the Endangered Species Act in the United States with multiple known
6 Indiana bat maternity colonies inside the Project Area. Additionally, the data will help us

1 understand the status of the species. Public disclosure of the data will help the Commission, the
2 Company and the public balance the desire for green energy and the constitutional mandate to
3 restore and conserve the state's wildlife resources as more wind projects are developed. I further
4 agree that transparency is important to Missouri taxpayers who fund the research, management,
5 and recovery of the species that could be impacted by this project.

6 **Q. Do you agree with DE Witness Mr. Hyman's recommendation that Ameren (or it's**
7 **developer) coordinate with MDC in the early stages of project development for future**
8 **energy projects?**

9 A. Yes, coordination and the request of a Natural Heritage Database Report for the proposed
10 project area would allow for MDC to better inform Ameren or Ameren's developer of any
11 potential wildlife risks in the proposed project area. Proper siting of wind projects can greatly
12 reduce wildlife impacts.

13 **Q. Do you think that coordination with MDC alone is enough for this project?**

14 A. No. Because of the importance of the region for Indiana bat maternity colonies within
15 and surrounding the Project Area, coordination alone is not enough. There is also a need for
16 robust monitoring, recommended by MDC, to better understand the impact to the species. Robust
17 monitoring should include not only post-construction mortality monitoring, but also bat
18 movements and roost locations used within the Project Area, such as through radio tracking. As
19 fully discussed in my Rebuttal testimony, my recommendations include pre-construction
20 monitoring as well as recommendations to minimize, mitigate, and monitor the bat resources
21 during construction, post-construction, and throughout the life of the facility. The
22 recommendations pertain not only to federally listed species but also to all Missouri bat SOCCs.

- 1 These monitoring results should be reported to MDC in the ordinary course - through the
- 2 Wildlife Collector's Permitting process.

3 **Q. Does this conclude your testimony?**

4 **A. Yes.**

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

• In the Matter of the Application of Union Electric
Company d/b/a Ameren Missouri for Permission and
Approval and a Certificate of Convenience and Necessity
(Authorizing it to Construct a Wind Generation Facility)

Case No. EA-2018-0202

AFFIDAVIT OF DR. KATHRYN WOMACK

STATE OF MISSOURI)

COUNTY OF COLE)

Dr. Kathryn Womack being first duly sworn on her oath, states:

1. My name is Dr. Kathryn Womack. I work in Kirksville, Missouri, and am employed at the Missouri Department of Conservation as a Resource Scientist.
2. Attached to this affidavit and made apart hereof for all purposes is my Written Surrebuttal Testimony (testimony) on behalf of Missouri Department of Conservation. The testimony consists of 7 pages, which have been prepared in the appropriate format to be introduced into evidence in the case above.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions promulgated therein are true and correct.



Dr. Kathryn Womack

Sworn to and subscribed before me this 28th day of September, 2018.



Notary Public

My Commission Expires: 11-13-19

