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**MISSOURI PUBLIC SERVICE COMMISSION
FILE NO. EA-2019-0021**

**WRITTEN REBUTTAL TESTIMONY
OF
JENNIFER CAMPBELL
ON
BEHALF OF
MISSOURI DEPARTMENT OF CONSERVATION

DECEMBER 21, 2018**

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

REBUTTAL TESTIMONY OF JENNIFER CAMPBELL**Missouri Department of Conservation****CASE NO. EA-2019-0021**1 **I. INTRODUCTION**2 **Q. Please state your name, title, and business address.**3 A. Jennifer Campbell, Policy Coordinator, Missouri Department of Conservation,
4 P.O. Box 180, Jefferson City, MO 651025 **Q: Please describe your current position, education, background, and training.**6 A: I have worked for the Missouri Department of Conservation ("MDC") as a Policy
7 Coordinator since 2011. My role on development projects is to work with project proponents
8 and regulators to suggest ways to accomplish the project while reducing potential impacts to fish,
9 forest, and wildlife. Apart from utility scale wind projects, other types of development projects
10 have included: pipelines; transmission lines; roads; shopping centers; subdivisions; nuclear,
11 hydropower, and coal facilities. Like other forms of development, consideration of fish and
12 wildlife resources during project planning, siting, construction, and operation can produce a
13 renewable energy project that is more environmentally friendly. I am Missouri's representative
14 on the Association of Fish and Wildlife Agencies' Energy and Wildlife Policy Committee. I
15 earned a Master of Science in Environmental Science/Applied Ecology from the School for
16 Public and Environmental Affairs at Indiana University-Bloomington. Prior to that, I earned a
17 Bachelor of Arts in Earth and Planetary Sciences from Washington University in St. Louis.18 **Q. Have you testified previously before the Missouri Public Service Commission?**19 A. Yes. I have provided testimony in Case No. EA-2018-0202 before the Public
20 Service Commission ("Commission"). In that case, Ameren Missouri was seeking approval of

1 Certificate of Convenience and Necessity ("CCN") for a wind farm in Schuyler and Adair
2 Counties.

3 **Q. What is the purpose of your testimony?**

4 A. The purpose of my testimony is to respond to the Application for a Certificate of
5 Convenience and Necessity filed by Ameren Missouri ("Ameren"). Specifically, I intend to
6 describe MDC's interests related to the issuance of the Certificate of Convenience and Necessity
7 for the proposed Brickyard Hills Wind Project ("Project"), the public's attitudes and interest in
8 wildlife in Missouri, and describe MDC's concerns regarding public lands which it owns and/or
9 manages ("Conservation Areas") located close to the Project area.

10 **II. MDC INTERESTS**

11 **Q: Why is MDC intervening in this case?**

12 A: MDC has a constitutional mandate to conserve fish, forest, and wildlife in the
13 state for Missourians to enjoy now and in the future. MDC was formed through an initiative
14 petition approved by voters in 1936 to create a non-political Conservation Commission.
15 Sportsmen protested earlier that decade that fees from hunting permit sales were used for
16 projects other than wildlife preservation/management, plus the statewide wildlife populations
17 were low (deer population not more than 2,000 animals and perhaps 3,500 turkeys scattered
18 across 45 counties). Voters passed another ballot initiative ("Design for Conservation") in 1976
19 to fund increased research into forestry and all species of wildlife, and to expand recreational
20 opportunities for the future.

21 As described in rebuttal testimony of Dr. Janet Haslerig, MDC has invested significant
22 resources to recover species that could be impacted by the Project, particularly federally
23 protected raptors (bald eagle). MDC has an interest in protecting the investment made by

1 Missourians (through the Conservation Sales Tax) in conserving species that are rare or were
2 once rare in our state. MDC also has interest in conserving other species, so they do not decline
3 to the point of becoming federally protected.

4 While the wind developer may consider seeking an Eagle Conservation Plan for
5 federally-protected species with the U.S. Fish and Wildlife Service (“USFWS” or “Service”), the
6 terms of that agreement, if pursued, would not be determined before the Commission issues an
7 Order in this CCN case. Further, there is no guarantee that all species of interest to MDC would
8 be addressed by an Eagle Conservation Plan. Typically, Eagle Conservation Plans are developed
9 by project proponents and reviewed by the USFWS under the authority of the Bald and Golden
10 Eagle Protection Act ("BGEA") (16 U.S.C. 668-668d).

11 The Commission is the only entity with regulatory authority over the siting of wind farms
12 in Missouri, even though its authority is limited to wind farms constructed by regulated utilities.
13 The Commission has previously issued orders in cases where other agencies or entities have
14 overlapping or concurrent jurisdiction on an issue. The Commission has previously considered
15 environmental, wildlife and conservation concerns in its analysis of "public interest" in a
16 certificate of convenience and necessity case.

17 Through this case, MDC hopes its expertise in wildlife issues will aid the Commission as
18 the Commission attempts to balance the interests of the Company in renewable energy and the
19 interests of the public and the state in conserving fish, forest, and wildlife for Missourians to
20 enjoy now and in the future.

21 **Q: What is MDC asking in this case?**

22 A: It is MDC’s understanding that the Commission’s role is to balance a number of
23 interests when ruling deciding this case – one interest being the "public interest." To the extent

1 that public funds have been and will continue to be invested in eagle research and conservation
2 and the Conservation Areas near the Project, this Project has the potential to negatively impact
3 those investments. In addition, the public has an interest beyond its monetary investment as
4 described in Section III.

5 MDC is asking the Commission to consider these investments and potential negative
6 impact as part of this case and impose conditions on the Company as recommended here and in
7 the testimony of Dr. Haslerig to address these issues. MDC's investment in bald eagles and
8 associated recommendations are more fully described in the testimony of Dr. Haslerig.

9 **Q: Does MDC oppose wind energy?**

10 A: The Conservation Commission and MDC do not oppose wind energy. MDC is
11 interested in building understanding with respect to wildlife impacts and other issues associated
12 the siting and operation of wind energy projects. While renewable energy projects can be very
13 positive, the Public Service Commission and the public need to understand and weigh all
14 potential consequences associated with these projects. It is MDC's position that consideration of
15 fish and wildlife resources during project planning, siting, construction, and operation can
16 produce a renewable energy project that is even more environmentally beneficial.
17 Unfortunately, because of a lack of monitoring, MDC is still learning about the actual impacts of
18 wind projects on certain wildlife species. Monitoring at wind projects is critical to understanding
19 and protecting wildlife in the future.

20 **Q: Is MDC concerned with the proposed Brickyard Hill Wind Farm Project?**

21 A: The project poses a risk for the federally-protected bald eagle, as is discussed in
22 detail in the testimony of Dr. Haslerig. Additionally, two Conservation Areas are located within
23 a short distance of the Project. These Conservation Areas are managed by MDC to attract

wildlife and provide for public recreation. The risks of negatively impacting the Conservation Areas could be mitigated if the Commission imposed the conditions requested by MDC.

Q. What area uses are known from MDCs' lands proximate to the project?

A. The project is situated between several Conservation Areas. Two of these are within less than three miles: Brickyard Hill Conservation Area and Corning Conservation Area. See Figure 1.

Brickyard Hill Conservation Area is a 2,609-acre property in Atchison County, located approximately 1.3 miles northwest of the proposed Project. Public uses of the area include deer, turkey, rabbit and squirrel hunting; fishing; camping; and bird and wildlife watching. A trail around the 15-acre Charity Lake in the northern central portion of the area offers scenic views and fishing.

Corning Conservation Area is a 1,879-acre property in Holt and Atchison Counties. It is located approximately 2.1 miles east of the proposed Project. Public uses include deer, dove, quail, and rabbit hunting; and bird watching.

Q: Would public uses at MDC Conservation Lands be affected by the Project?

A: At this time, MDC is still determining whether the nearby presence of wind turbines would adversely affect the public's use and enjoyment of the Conservation Areas situated near the proposed Project, or if so, to what degree.

It is not known how much of the project or individual turbines would be visible or audible from MDC Conservation Areas. Visual simulations and viewshed analysis can provide an assessment of the extent and distribution of predicted visibility from relevant landscape features near the proposed Project to inform landowners, the public, and Commission about these aesthetic considerations from a site-specific perspective.

1 Viewsheds and viewsapes have intrinsic, and in some cases real property, value. A
2 viewer's eyes are naturally drawn to the skyline or horizon, which may hold value if it conveys a
3 sense of wilderness or occurs in distinctive landforms. Depending on the scale of the turbines
4 with respect to other landforms, there is potential for a wind project to detract from recreational
5 user experience because of viewshed, noise, or other issues.

6 MDC is concerned about the potential for degradation of the rural landscape character,
7 which is valued by many users of Conservation Areas. MDC is also concerned that turbine
8 noise, vibrations, strobe effects of blinking lights, and shadow flicker will affect user experience
9 of Conservation Areas.

10 A statistically robust traffic count study before and after construction of the proposed
11 Project could be conducted to understand changes in public visitation at MDC Conservation
12 Areas. MDC has requested other wind project developers conduct similar studies to measure the
13 impact of a wind project on Conservation Area use.

14 **Q. Would MDC recommend a setback or buffer between the proposed Project**
15 **and Conservation Areas? Explain.**

16 A. Each project is unique in its siting with respect to sensitive wildlife resources and
17 public recreational lands. Because of the concerns described above related to viewshed and user
18 experience, MDC recommends a setback of at least three miles from any turbine to the boundary
19 of any Conservation Area. We believe this distance is an appropriate buffer distance to reduce
20 wildlife mortality risks near Conservation Areas as well as reduce the potential for degradation
21 of Conservation Areas public uses.

22 In addition, as this is the first project of a regulated utility in such close proximity to
23 Conservation Areas, MDC recommends the Company be required to conduct a viewshed study.

1 **III. PUBLIC INTERESTS IN CONSERVATION OF WILDLIFE**

2 **Q. What is known about public attitudes towards wildlife in Missouri?**

3 **A.** A survey conducted in 2013 for MDC, by the University of Missouri, included
4 results that most Missourians report interest in Missouri’s fish, forests, and wildlife (95 percent).
5 Additionally, Missourians were active in a variety of outdoor recreation pursuits in the 12
6 months before the survey: 74 percent watching birds or wildlife; 60 percent hiking in the
7 outdoors; 56 percent feeding birds or other wildlife near their homes; 52 percent photographing
8 wildlife, wildflowers, or other natural things; 45 percent fishing; and 24 percent hunting.
9 Furthermore, 55 percent of Missourians reported using used Conservation Areas within the last
10 12 months. Over three-quarters of Missourians agree that “The Missouri Department of
11 Conservation is a name I can trust” (76 percent).¹

12 Missourians support conservation activities and agree that MDC should assist landowners
13 and communities with conservation and management efforts. Most Missourians agree that “It is
14 important for outdoor places to be protected even if you don’t plan to visit the area” (89 percent);
15 and “The Missouri Department of Conservation should designate “natural areas” to protect
16 Missouri’s best examples of forests, prairies, marshes and glades” (82 percent). Over three-
17 quarters agree that “The Missouri Department of Conservation should help private landowners
18 who want to restore native communities of plants and animals (77 percent); “The Missouri
19 Department of Conservation should conserve and restore rare and endangered plants (77 percent);
20 “The Missouri Department of Conservation should assist communities that want to include trees

¹ Rikoon, S. et al., University of Missouri-Columbia (January 2014), “Your Ideas Count!: Report of Results of the 2013 Conservation Opinion Survey for the Missouri Department of Conservation.”

and green spaces in housing, business, and shopping developments” (77 percent); and “The Missouri Department of Conservation should make an effort to restore animals that once lived or currently are very rare in Missouri” (76 percent).” Almost three-quarters agree that “Land should be acquired in Missouri for fish, forest, and wildlife conservation” (71 percent).²

Q. Please describe the survey methods for the 2013 Conservation Opinion Survey.

A. The 2013 Conservation Opinion Survey was conducted for MDC by the University of Missouri. Survey questionnaires were mailed to a random sample of Missouri households with 16,173 forms successfully delivered and 4,743 useable responses. The survey had an overall response rate of 29.3 percent. A stratified sampling methodology was used to ensure representation across all counties and the city of St. Louis, including metropolitan, micropolitan, and rural areas as defined by the U.S. Census Bureau. The survey used a standard mailing methodology with five mailings. Survey respondents could respond by mail or through an online form with unique identification. Results were weighted by age, sex, and geographic region to appropriately represent the Missouri population. A complete description of the methodology is available in the report of results.³

Q. Generally, can you describe the economics associated with the public’s interest in the migratory birds and raptors (including bald eagles)?

A. Hundreds of migratory birds and raptors are of interest to wildlife watchers in our state. There are 1.7 million Missourians and visitors who participate in wildlife viewing on an

² *Id.*

³ *Id.*

annual basis.⁴ There is a \$1.7 billion economic impact of wildlife viewing in Missouri, supporting 18,000 jobs, and generating \$153.7 million in state and local taxes.⁵ Some migratory bird species are of interest to waterfowl hunters. More than 576,000 Missourians and visitors participate in hunting (including waterfowl and other types) annually.⁶ These hunting activities enrich the economy and quality of life. Hunting has a \$1.7 billion impact on the Missouri economy, supporting more than 23,000 jobs and generating \$164 million in state and local sales taxes.⁷

Q. Why should Missourian's attitudes about wildlife inform the Commission in this case?

A. Missourians value the wildlife around their homes and where they hunt and recreate. They value the boost to local economy from wildlife recreation, as well as quality of life benefits. The citizens of Missouri expect MDC to make efforts to recover species that are rare in the state, and protect species they hunt, and protect species they enjoy watching at the birdfeeder and elsewhere. Missourians have invested millions of dollars of their Conservation Sales Tax in the recovery of threatened species (including but not limited to eagles) and that investment of public funds would be appropriate to consider in this case.

The Commission has previously considered environmental, wildlife and conservation concerns in its analysis of "public interest" in a certificate of convenience and necessity case. In

⁴ U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

⁵ ENVIRON International Corporation. 2014. The 2011 Economic Impacts of Fishing, Hunting, and Wildlife Viewing in Missouri. Environ International Corporation, Clackamas OR. 67 pp.

⁶*Id.*

⁷*Id.*

1 fact, the Commission made a specific finding regarding the Indiana bat. See Report and Order,
2 In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief
3 or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to
4 Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt
5 Electric Transmission Line from Palmyra, Missouri, to the Iowa Border and Associated
6 Substation Near Kirksville, Missouri (April 27, 2016), 26-27. The Commission also approved
7 recently approved the "Third Stipulation and Agreement" in EA-2018-0202, which addressed
8 wildlife and conservation concerns in that case.

9 **Q. Can you summarize your recommendations?**

10 A. MDC, in addition to the recommendations in Dr. Haslerig's testimony,
11 recommends that the Commission:

12 1. Require Ameren to conduct a traffic count survey at Brickyard Hill
13 Conservation Area and Corning Conservation Area.

14
15 2. Require Ameren to conduct a viewshed study at Brickyard Hill
16 Conservation Area and Corning Conservation Area.

17
18 3. Prohibit the Company from constructing or operating a wind turbine
19 within three miles of any Conservation Areas.

20
21 **Q. Does this conclude your rebuttal testimony?**

22 A. Yes.

Figure 1: Proposed Brickyard Hills wind farm (maroon) shown with respect to MDC Conservation Areas (green). ***

In the Matter of the Application of Union Electric)
Company d/b/a Ameren Missouri for Permission and) File No. EA-2019-0021
Approval and a Certificate of Convenience)
and Necessity Authorizing it to Construct a Wind)
Generation Facility)

[illegible]

1. My name is Jennifer K. Campbell. I work in Jefferson City, Missouri, and am employed at the Missouri Department of Conservation as a Policy Coordinator.

2. Attached to this affidavit and made a part hereof for all purposes is my Written Rebuttal Testimony (testimony) on behalf of Missouri Department of Conservation. The testimony is 12 pages and has 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.

Jennifer K Campbell
JENNIFER K. CAMPBELL

Sworn to and subscribed before me this 21 day of December, 2018.

Laura M. Stikam

Notary Public

My commission expires: November 24, 2021

