Stantec Consulting Services Inc.
733 Marquette Avenue Suite 1000, Minneapolis MN 55402-2314

September 15, 2022

Julianne Epplin
1901 Chouteau Avenue, MC 602
St. Louis, MO 63166-6149

Reference: High Prairie Summer Post-Construction Monitoring Memo 2022

Dear Ms. Epplin,

Following is a seasonal summary containing the preliminary data and results of the summer 2022 post-construction monitoring at the High Prairie Renewable Energy Center (Project or High Prairie), owned and operated by Ameren Missouri (Ameren). The Project consists of 175 turbines with an approximate 400-megawatt (MW) operating capacity in Schuyler and Adair Counties, Missouri. As required by the Habitat Conservation Plan (HCP), this summary is due to the U.S. Fish and Wildlife Service (USFWS) and Missouri Department of Conservation (MDC) by September 15, 2022.

On May 14, 2021, the USFWS issued an Incidental Take Permit (ITP) for the federally-endangered Indiana bat (*Myotis sodalis*), federally-threatened northern long-eared bat (*Myotis septentrionalis*), and the little brown bat (*Myotis lucifugus*)[1]. During the summer monitoring period (May 15, 2022 through August 15, 2022), Ameren voluntarily implemented avoidance measures and the wind turbines ceased operation on a daily basis from 45 minutes before sunset until 45 minutes after sunrise until August 10, 2022, when a single turbine started limited nighttime operations. In consultation with the USFWS and MDC, it was agreed that post-construction monitoring for bats need not occur during total curtailment periods (i.e., nighttime shutdown). Accordingly post-construction monitoring was only conducted at the single operational turbine from August 10th through August 15th during the summer monitoring period. In addition, in order to provide relevant information for determining the appropriate search interval for post-construction monitoring once operations resume following implementation of deterrent and detection technologies, a carcass persistence trial was performed during July 2022, the methods and results of which are summarized herein.

Methods and Results

A full plot out to 197 ft (60 m) was established at the single operational turbine. This plot was systematically searched daily from August 10th through August 12th, and then again on August 15th, for an average search interval of 1.7 days. No bat or bird carcasses were found at this turbine.

Carcass removal trials estimate the persistence time of bat carcasses on-site before scavengers remove them. Carcass persistence trials began on July 11 and July 19, 2022, and included 47 mouse carcasses. Carcasses were checked regularly for up to 21 days. No carcasses remained after 21 days.

GenEst models indicated that carcass persistence was best modeled using a Weibull distribution, and that the location and scale parameters both varied by season and plot. Carcass persistence averaged 3.2 days (90% CI: 2.5 to 4.2) on full plots and 1.3 days (90% CI: 0.8 to 2.2) on roads and pads.

[1]The MDC has identified the Indiana bat and northern long-eared bat as state-endangered and state-threatened, respectively, with both species considered as Species of Conservation Concern (SOCC) in Missouri.

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Conclusion

Limited standardized post-construction monitoring occurred during the summer monitoring period, as the turbines were largely not operational at night during this time (i.e., fully curtailed from 45 minutes before sunset to 45 minutes after sunrise). No bat carcasses were found during the four full plot searches that occurred (one each on August 10th, 11th, 12th and 15th). Preliminary results from carcass persistence trials show a longer carcass persistence time for full plots than used for 2022 planning purposes (2.9 days on full plots) and the monitoring for operational turbines at this time includes only full plots, and therefore no changes to the 2022 post-construction monitoring plan are proposed at this time.

The next seasonal summary covering August 15 – October 31, 2022, will be submitted by November 30, 2022. An annual report summarizing the 2022 post-construction monitoring will be provided by December 15, 2022, as required by the HCP. The annual report will include data summaries, Evidence of Absence parameters and analysis for the Covered Species, bat fatality estimates, Evidence of Absence estimates for the Covered Species, and a discussion of the full season monitoring results and its implications.

Regards,

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