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South Dakota

**PUBLIC UTILITIES
COMMISSION**

500 East Capitol Avenue
Pierre, South Dakota 57501-5070
www.puc.sd.gov

(605) 773-3201

Consumer Hotline
1-800-332-1782

Email
puc@state.sd.us

March 29, 2021

Patricia Van Gerpen
Executive Director
SD Public Utilities Commission
500 E. Capitol Ave.
Pierre, SD 57501

RE: Docket EL19-003, Crowned Ridge Wind's Motion for Approval of Mitigation Plan

Ms. Van Gerpen,

On March 18, 2021, Crowned Ridge Wind, LLC (Crowned Ridge) filed a Motion for Approval of Mitigation Plan. The Mitigation Plan includes 1) obtaining waivers of the sound limits found in Condition 26 of the permit from the affected landowners, 2) implementing Winter Ice Operations Mode (WIOM), and 3) conducting follow-up sound testing in the Fall of 2021. Staff reviewed Crowned Ridge's proposed Mitigation Plan and supports the plan.

In its Motion for Approval of Mitigation Plan, Crowned Ridge determined that frost accumulation on the wind turbine blades due to a prolonged cold mist caused the sound levels to be higher than expected. Crowned Ridge further stated that a combination of 1) frost accumulation on the wind turbine blades, 2) the decreasing pitch angle of the turbine blades from 10 degrees to near zero, and 3) a possible stalling action of the wind turbines resulted in the observed sound levels. Staff's expert witness, Mr. David Hessler, agreed that frost accumulation or icing on the wind turbines blades is a plausible explanation for the higher than expected sound levels.

Crowned Ridge plans to utilize Winter Ice Operations Mode (WIOM) in order to prevent reoccurrence of the higher sound levels during future periods of similar weather conditions. Attachment A to this letter includes questions Staff asked Crowned Ridge regarding WIOM and what turbines were impacted by the event. In response to Staff's question 2, Crowned Ridge noted the WIOM was not in place in fall of 2020 since the WIOM software is a relatively new performance feature and had to go through NextEra Energy Resources, LLC's software acceptance testing prior to rolling it out across its fleet. Crowned Ridge further noted that the software acceptance testing was completed at the end of October 2020 and Crowned Ridge received the WIOM software in February of 2021. In order to verify WIOM corrected the problem, Crowned Ridge plans to conduct additional sound testing in the Fall of 2021 during similar weather patterns as those that occurred during the limited sound threshold exceedances.

It is Staff's understanding that mechanical and/or operational issues may arise from time to time which could cause a wind farm to exceed its permitted sound levels. As long as the wind farm owner corrects those issues in a timely manner to reduce the sound levels back below the permitted levels, Staff believes that the project is properly designed and in compliance with the permit. In this case, since Staff's witness Mr. Hessler determined the project to be in compliance and Crowned Ridge further implemented a solution to correct the limited sound

threshold exceedances, Staff is supportive of the Mitigation Plan. Finally, Staff notes that Crowned Ridge went above and beyond in its Mitigation Plan by obtaining waivers of the sound levels set forth in condition 26 from the impacted landowners since the Company plans to use WIOM and perform additional testing to verify the problem is fixed.

Sincerely,

A handwritten signature in black ink, appearing to read "Darren Kearney", with a long, sweeping flourish extending to the right.

Darren Kearney
Utility Analyst
SD PUC Staff