



GE Renewable Energy
Onshore Wind

Gary Paschal

GE Renewable Energy - Onshore Wind
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Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408-0402

RE: Statement on WIOM and Ice buildup blades

Ice/frost buildup on a wind turbine blade can increase noise in two ways. First, it can cause the air flowing over the blade to transition from a smooth (laminar) flow to a turbulent flow. Secondly, if ice/frost buildup is significant enough, it can cause flow separation. When the flow separates, large turbulent structures interact with the surface of the blade causing additional noise. WIOM is designed to change the pitch angle of the blades (the angle of the blade relative to wind direction) to reduce the risk of flow separation. **GE does not have data to quantify the noise reduction benefit of WIOM on iced blades.**

WIOM was not enabled at the Crowned Ridge Wind Farm but has been enabled as of Feb 2021.

Sincerely,

Gary Paschal
CRM
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