BEFORE
THE OHIO POWER SITING BOARD

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| In the Matter of the Application of Republic Wind, LLC for a Certificate to Site Wind Powered Electric Generating Facilities in Seneca and Sandusky Counties, Ohio | ) ) ) ) | Case No. 17-2295-EL-BGN |

**SUPPLEMENTAL DIRECT TESTIMONY OF MARK SHIELDCASTLE ON BEHALF OF THE LOCAL RESIDENT INTERVENORS**

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

A.1. Mark Shieldcastle. I am the Research Director for the Black Swamp Bird Observatory, which is located at 13551 West State Route 2, Oak Harbor, Ohio 43449.

**Q.2. On whose behalf are you offering testimony in this case?**

A.2. I am offering testimony on behalf of Intervenors Joseph & Diane Anderson, Denise Bell, Aaron & Carrie Boes, Richard & Linda Bollenbacher, Rob & Mary Chappell, Thomas & Kathleen Fries, Leslie & Dennis Hackenburg, Jeffrey & DeeAnne Hamilton, Allen & Mary Hassellbach, Duane & Deb Hay, Ethan & Crystal Hoepf, Gary & Dawn Hoepf, Jason & Michelle Hoepf, Taylor Hoepf, David P. Hoover, Jeffrey A. Hoover, Kenneth & Debra Hossler, Greg & Laura Jess, Mike & Tiffany Kessler, Leonard & Beverly Kubitz, Gary & Michelle Miller, Steven & Kelley Miller, Kim Mitchell, Charles & Linda Morsher, Patricia Motry, Steven & Linda Mulligan, Doug & Jennifer Myers, Linda Niederkohr, Kevin & Jennifer Oney, Nicholas & Michelle Reiter, Tom & Lori Scheele, Elaine Schultz, James & Victoria Seliga, Eugene & JoAnn Smith, James & Elaine Steinmetz, Herman & Patricia Studer, Christine Vogt, Mark Weber & Cindra Riley, Charles & Rhonda Weyer, Ann Wright, and Chris & Danielle Zeman (together, the "Local Residents").

**Q.3. Are you aware of a second Bald Eagle nest that has been found within the footprint of the Republic Wind facility?**

**A.3.** Yes. It is referred to as the N & F nest and it is in the Project Area of the Republic Wind project. It is southeast of the Weller nest, which also is in the Project Area of the Republic Wind project.

**Q.4. As stated in the decision of the Administrative Law Judges to reopen the hearing in this case, one of the topics of the reopened hearing is the significance of the half-mean inter-nest distance proposed by the U.S. Fish and Wildlife Service. What is the meaning of the term "half-mean inter-nest distance" as used by the U.S. Fish and Wildlife Service?**

A.4. The half-mean inter-nest distance is one-half of the average distance between all active eagle nests within 10 miles around a project's footprint. It is based on the assumption that each Bald Eagle's territory goes halfway to the closest neighboring Bald Eagle nest and on the assumption that Bald Eagles tend to stay out of other Bald Eagles' territories. The half-mean inter-nest distance calculated by the USFWS for the Republic Wind project included the numerous Bald Eagle nests near Sandusky Bay in the average of inter-nest distances. Due to an abundance of fish for the eagles to eat in the Sandusky Bay region, the Bald Eagle nests there are closer together than the inland Bald Eagle nests in Seneca County where the eagles often have to travel farther to find enough food. Consequently, the inter-nest distances in Seneca County tend to cover more territory than the inter-nest distances in the Sandusky Bay area.

**Q.5. What is the significance of the half-mean inter-nest distance as used by the U.S. Fish and Wildlife Service?**

A.5. This term is used in the Eagle Conservation Plan Guidance issued by the U.S. Fish and Wildlife Service ("USFWS"), which is usually referred to as the Eagle Conservation Plan (ECP).

This guidance was previously marked and admitted in this case as LR Exhibit 15. To understand the term's purpose, one must understand how this term is used in the ECP. The ECP classifies wind projects in three categories to determine how likely they are to kill or otherwise take eagles: (1) Category 1 –high risk to eagles, potential to avoid or mitigate impacts is low; (2) Category 2 – high or moderate risk to eagles, opportunity to mitigate impacts; and (3) Category 3 – minimal risk to eagles. See Pages 25-26 of the ECP. According to the ECP, "[c]onstruction of projects at sites in category 1 is not recommended because the project would likely not meet the regulatory requirements for permit issuance and may place the project developer or operator at risk of violating the BGEPA [the Bald and Golden Eagle Protection Act]." See Page 25 of the ECP. The ECP recommends that any project meeting a Category 1 status must modify or abandon the project if it cannot reduce its status to at least Category 2.

If a wind project "has an important eagle-use area or migration concentration site within the project footprint," then it is a Category 1 project. See Page 25 of the ECPG. The ECP's definition of an "important eagle-use area" is "an eagle nest, foraging area, or communal roost site that eagles rely on for breeding, sheltering, or feeding, and the landscape features surrounding such nest, foraging area, or roost site that are essential for the continued viability of the site for breeding, feeding, or sheltering eagles (as defined in 50 CFR 22.26)." See Page 35 of the ECP. The nest is just one of the important areas within the territory and development must identify and avoid all important use areas in an eagle's territory during all seasons of the year as well as the travel corridors between the use areas. These use areas and corridors can be determined by observing the eagles' activities.

The footprint of a wind project may serve as important eagle-use areas for nests outside of that footprint. Thus, the ECP states that "projects that have eagle nests within ½ the mean

project-area inter-nest distance of the project footprint should be carefully evaluated (see Appendix H). If it is likely eagles occupying these territories use or pass through the project footprint, category 1 designation may be appropriate." See Page 25 of the ECP. The term "project footprint" as used in the ECP is defined as "the minimum-convex polygon that encompasses the wind-project area inclusive of the hazardous area around all turbines and any associated utility infrastructure, roads, etc." See Page 36 of the ECP. This definition of the "project footprint" encompasses the entire "Project Area" for the Republic Wind project as the term "Project Area" is used in Republic Wind's application.

Thus, the ECP uses the half-mean inter-nest distance to determine whether eagles nesting on nests located outside of a wind project's footprint are likely to use or pass through the territory inside the project footprint for foraging and other activities. If so, then the wind project is classified as a Category 1 project that poses a high risk to eagles and for which the potential to avoid or mitigate impacts is low.

The State of Ohio's extensive studies of Bald Eagle territories over the last 40 years have proven that the size of the average inland Bald Eagle territory covers a radius of approximately 2.5 miles around the nest to encompass the "important eagle-use areas" of the territorial pair. Therefore, if the half-mean inter-nest distance calculated by the USFWS for the Republic Wind project is less than 2.5 miles, it does not adequately protect Bald Eagles from the wind turbines.

**Q.6. What is the distance of the half-mean inter-nest distance in the area proposed for the Republic Wind project?**

A.6. The USFWS concluded that this distance was 1.17 miles. See Applicant's Exhibit 1C (the Amended Application), Appendix E to Exhibit J at Part 9 [online docket at p. 25 of the pdf.].

**Q.7. What are the ramifications of the N&F nest with respect to the half-mean inter-nest distance proposed by U.S. Fish and Wildlife Service?**

A.7. Because Bald Eagles regularly travel throughout the half-mean inter-nest distance of 1.17 miles proposed by the USFWS, the eagles from the N & F nest are in danger of colliding with and being killed by any wind turbine within that distance as the Bald Eagles travel to find food and nesting materials. However, a buffer of 1.17 miles between the nest and the wind turbines would not be adequate to protect the eagles. This buffer should be increased to 2.5 miles, since the eagles travel for that distance to forage for food and to conduct other activities.

**Q.8. Does this conclude your testimony?**

A.8. Yes.

## CERTIFICATE OF SERVICE

On September 9, 2020, the docketing division's e-filing system will electronically serve notice of the filing of this document on the following counsel for the parties: Sally W. Bloomfield (sbloomfield@bricker.com), Dylan Borchers (dborchers@bricker.com), Joshua D. Clark (jclark@senecapros.org), Leah F. Curtis (lcurtis@ofbf.org), Chad A. Endsley (cendsley@ofbf.org), Jennifer Flint (jflint@bricker.com), Miranda Leppla (mleppla@theoec.org), Amy M. Milam (amilam@ofbf.org), Mark Mulligan (mulligan_mark@co.sandusky.oh.us), Devin D. Parram (dparram@bricker.com), Chris Tavenor (ctavenor@theoec.org), Trent Dougherty (theoec.org), Dane Stinson (dstinson@bricker.com), Derek Devine (dwd@senecapros.org), and Jodi Bair (jodi.bair@ohioattorneygeneral.gov). On the same date, I served a copy of this filing by electronic mail on the above-listed counsel, Dennis Hackenburg at Dennyh7@frontier.com, and Mike and Tiffany Kessler at mkessler7@gmail.com.

*/s/ Jack A. Van Kley*
Jack A. Van Kley

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Summary: Testimony of Mark Shieldcastle electronically filed by Mr. Jack A Van Kley on behalf of Local Resident Intervenors