

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of **REPUBLIC**)
WIND, LLC for a Certificate of Environmental)
Compatibility and Public Need for a Wind-) Case No. 17-2295-EL-BGN
Powered Electric Generating Facility in Seneca)
and Sandusky Counties, Ohio.)

DIRECT SUPPLEMENTAL TESTIMONY OF

**Isaac Old
Resource Systems Group, Inc.**

on behalf of

Republic Wind, LLC

October 28, 2019

1 **Q-1. Please state your name.**

2 **A-1.** My name is Isaac Old.

3 **Q-2. Are you the same Isaac Old who previously filed testimony in this case on**
4 **October 21, 2019?**

5 **A-2.** Yes, I am.

6 **Q-3. What is the purpose of your pre-filed supplemental testimony?**

7 **A-3.** The purpose of my testimony is to respond to the Supplement to the Staff Report filed
8 October 18, 2019 (“Supplemental Staff Report”). The Supplemental Staff Report
9 proposes Condition 58 which would place a noise limitation on one turbine location
10 (turbine location 37). This recommendation is inconsistent with the noise standard
11 applied throughout the rest of the project area and inconsistent the OPSB’s precedent
12 regarding operational noise limits.

13 **Q-4. Have you reviewed the October 18, 2019 Supplemental Staff Report?**

14 **A-4.** Yes.

15 **Q-5. By way of background, can you recap the findings from RSG’s Noise Impact**
16 **Assessment Report (“Noise Report”) you prepared for this project?**

17 **A-5.** RSG determined that the average nighttime sound level is 41 dBA for the project area.
18 Applying the OPSB’s precedent regarding an operational sound level limit of 5 dBA
19 above the average nighttime ambient sound level, RSG concluded that the operational
20 sound limit for this project is 46 dBA L_{eq} (1 hr) measured at any nonparticipating sensitive
21 receptor. In addition, sound propagation modeling was performed for each of the
22 proposed models at all 50 of the proposed turbine locations. After incorporating noise
23 reduced operation (NRO) modes for certain turbines, modeling results showed that for
24 the eight turbine scenarios evaluated, none of the nonparticipating receptors would
25 experience sound levels in excess of 46 dBA due to the project.

26 **Q-6. In its July 25, 2019 Staff Report, does Staff make any recommendation regarding**
27 **operational noise for the project?**

28 **A-6.** Yes. Staff recommends Condition 44, which states:

1 The facility shall be operated so that the cumulative nighttime
2 sound level at any nonparticipating sensitive receptor within one
3 mile of the project boundary will not exceed 5 dBA over the
4 project area ambient nighttime average sound level (Leq), except
5 during daytime operation that is in accordance with Ohio
6 Adm.Code 4906-4-09(F)(2).
7

8 This condition appears to be consistent with the noise design goal used in our
9 noise study which was based on OPSB precedent. This is also consistent the
10 projected noise impacts modeled by RSG. Based upon the ambient nighttime
11 average sound level (Leq) of 41 dBA, Republic Wind is not expected to exceed
12 46 dBA at nonparticipating receptors when using NRO at certain turbine
13 locations.
14

15 **Q-7. During its investigation, did Staff discover that certain receptors were omitted from**
16 **the Noise Study?**

17 **A-7.** Yes. After the July 25, 2019 Staff Report was issued, it was discovered that ten receptors
18 were inadvertently omitted from the Noise Study. After this was discovered, Republic
19 Wind immediately submitted sound propagation modeling results for these receptors.

20 **Q-8. Did the projected sound levels at these ten receptors exceed the 46 dBA noise**
21 **limitation (average nighttime sound level + 5 dBA)?**

22 **A-8.** No. As you can see on pages 3 and 4 of the Supplemental Staff Report, none of these
23 receptors were modeled to have sound levels that meet or exceed 46 dBA L_{eq} (1-hr).

24 **Q-9. Staff proposes Condition 58 in the Supplemental Staff Report which states that the**
25 **“Applicant shall not use turbine models Siemens Gamesa SG145 (4.5 MW), Nordex**
26 **N149 (4.5 MW), or Nordex N149 (4.8 MW) at turbine location 37.” What is Staff’s**
27 **rationale for this new condition?**

28 **A-9.** Staff recommends that wind turbine-only sound levels should not exceed 41 dBA at each
29 of ten receptors that were inadvertently omitted from the noise study for Republic Wind.
30 To achieve this sound level, Staff recommends limiting turbine models allowed at the
31 closest turbine location (T37) to those receptors that show sound levels of 41 dBA or
32 lower at all receptors. It appears that Staff is making this recommendation because, in
33 Staff’s opinion, “occupants at the missing receptor locations should have been given

information on potential noise impacts much earlier in the process.” Supplemental Staff Report at pg. 3.

Q-10. What is your opinion regarding Condition 58?

A-10. By proposing the specific noise condition for T37, Staff is applying different and inconsistent sound level limits for receptors in the project area. This recommendation also is inconsistent with OPSB precedent regarding accepted noise limits at nonparticipating receptors. Further, this is also inconsistent with Condition 44, which applies an ambient nighttime sound level + 5 dBA standard. The 41 dBA sound level specified by OPSB staff is equal to the nighttime ambient sound level calculated from preconstruction sound level monitoring. For all the receptors, except for the ten, Staff is applying an ambient nighttime sound level + 5 dBA standard. The ambient nighttime sound level + 5 dBA standard has been used in prior OPSB cases. Yet, Staff has departed from this precedent for one turbine location seemingly based solely on the fact that occupants may have been unaware of the noise impacts. It is true ten receptors were inadvertently omitted from the Noise Report, but this does not change the fact that occupants at these receptors will not experience noise levels that exceed 46 dBA L_{eq} (1 hr) which was derived based on OPSB precedent for sound level limits.

Q-11. Is Condition 58 consistent with the Board’s rules regarding limitations on operational noise for wind farms?

A-11. No. In Condition 44 and page 38 of the July 25, 2019 Staff Report, Staff indicates that Republic Wind should comply with Ohio Adm. Code 4906-4-09(F)(2), which states that the “facility shall be operated so that the facility noise contribution does not result in noise levels at any non-participating sensitive receptor within one mile of the project boundary that exceed the project area ambient nighttime average sound level (L_{eq}) by five A-weighted decibels (dBA).” Condition 58 is inconsistent with the rules because it limits noise levels at nonparticipating sensitive receptors near T37 to ambient nighttime average sound level and eliminates any allowance for a 5 dB exceedance of the ambient nighttime average sound level.

1 **Q-12. Do you have any other concerns regarding Condition 58?**

2 **A-12.** Yes. Staff's recommendation does not consider that NROs could be employed for all of
3 the proposed turbine models to achieve the 41 dBA limitation. Currently NRO is only
4 employed at T37 for the Siemens/Gamesa SG4.5-145 turbine model and only the lowest
5 NRO mode is used (N1), so higher sound level reduction could be achieved with a higher
6 NRO mode. Republic Wind could achieve the 41 dBA limitation with all of the currently
7 proposed turbine models if NROs are used. Therefore, there is no reason eliminate
8 certain turbine options. Although I disagree with the 41 dBA limitation, Republic Wind
9 should be able use any of the proposed turbine models at T37 because it can meet this 41
10 dBA limitation using NROs.

11 **Q-13. Does this conclude your testimony?**

12 **A-13.** Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Direct Supplemental Testimony of Isaac Old was served upon the following parties of record via regular or electronic mail this 28th day of October 2019.



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Summary: Text Supplemental Testimony of Isaac Old on behalf of Republic Wind, LLC
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