

**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) Case No. 17-2295-EL-BGN
for a Wind-Powered Electric Generating)
Facility in Republic and Sandusky Counties,)
Ohio.)

**DIRECT TESTIMONY OF
FRANCIS T. MARCOTTE**

on behalf of

Republic Wind, LLC

October 21, 2019

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q-1. Please state your name, current title, and business address.**

3 **A-1.** My name is Francis T. Marcotte. My address is 1033 Tallokas, Crestview, FL 32536.

4 **Q-2. What is your professional background?**

5 **A-2.** In my career, I was an independent aviation air safety investigator specializing in helicopter
6 accident reconstruction and analysis. I am a certified Airline Transport Pilot (ATP) pilot
7 through the Federal Aviation Administration (“FAA”), with over 9,000 hours of helicopter
8 flight time, and I have served as a captain, flight safety manager, and heliport design
9 consultant. I have also previously served as an expert witness in cases involving a variety
10 of aviation and helicopter operational issues, including the operation of helicopters in and
11 around wind farm sites.

12 **Q-3. On whose behalf are you offering testimony?**

13 **A-3.** I am testifying on behalf of the Applicant in the case, Republic Wind, LLC (“Applicant”
14 or “Republic Wind”).

15 **Q-4. What is the purpose of your testimony?**

16 **A-4.** The purpose of my testimony is to provide the Board and Staff with expert-level guidance
17 and information regarding the operation of helicopters for emergency medical services
18 (“EMS”) flights in and around wind farms in general and the Republic Wind site
19 specifically. My goal in this case is to provide a pilot’s perspective on the operation of
20 helicopters around not just wind farms but obstructions in general and how, when properly
21 trained and equipped, pilots can safely and effectively operate a helicopter around wind
22 turbines.

23 **Q-5. Please summarize your educational background and experience flying helicopters.**

24 **A-5.** I graduated from the U.S. Coast Guard Academy in Connecticut in 1968. I completed my
25 Navy flight training in 1970 and immediately began flying Coast Guard rescue helicopters.
26 In 1973, I attended the first of my safety trainings at The University of Southern California
27 – Los Angeles and then later at Arizona State University. My rescue flying operations
28 occurred in all types of weather conditions with no radar, no autopilot, and no global

29 positioning system (“GPS”) to aid in flight, all while in a single-engine-amphibious
30 Sikorsky helicopter. I left the U.S. Coast Guard as a safety officer at Air Station Miami in
31 1980 to become the Director of Flight Safety for SFO Helicopter Airlines. I flew Bell 206
32 helicopters with FAA-approved weather minimums of 300 foot ceilings with only 2 miles
33 visibility in both daytime and nighttime conditions. My EMS flying experience began in
34 1988 for REACH Air Medical Services in Santa Rosa, California. While there, among
35 other things, I flew an Augusta 109 single pilot instrument flight rules (IFR) helicopter in
36 the California coastal mountains. I retired from the cockpit in February of 2012. During
37 the final years of my flying career, I flew A-Star helicopters for Era Helicopters, with a
38 focus on the flight of helicopters to aid the offshore oil industry. A copy of my curriculum
39 vitae is attached to my testimony.

40 **Q-6. Have you ever been involved in operating a helicopter as part of EMS flights?**

41 **A-6.** Yes.

42 **Q-7. Please describe your experiences in operating helicopters in such EMS flights?**

43 **A-7.** I had ten years of experience flying Coast Guard rescue missions across the country and
44 two years of dedicated EMS service at the Santa Rosa Memorial Hospital in northern
45 California. While in the Coast Guard, I acted as Aircraft Commander Senior Duty Officer
46 and Flight Safety Officer at two of the busiest rescue units in the country—Miami and San
47 Francisco. These units completed as many as 1,000 rescue responses annually. While in
48 the Coast Guard, I was engaged in true “all weather” flying involving site rescues and
49 transport to the nearest hospital, airport or vessel. In both my experience with the Coast
50 Guard and the civil EMS unit, I transported numerous types of victims with varying
51 injuries, conditions and situations.

52 **Q-8. When operating a helicopter as part of an EMS flight program, what are your top**
53 **priorities?**

54 **A-8.** Safety is my top priority. One must be able to respond to the worst situations and do no
55 harm to the victim or the first responders. While speed is important, it is not always critical,
56 because oftentimes the first responders have stabilized the subject in need of transport.

57 **Q-9. Have you ever flown a helicopter near a wind farm?**

58 **A-9.** Yes.

59 **Q-10. Is it possible to safely operate a helicopter within and near a wind farm in either**
60 **daytime or nighttime conditions?**

61 **A-10.** Yes. Helicopter pilots already deal with flying around buildings, trees, power lines,
62 antennas and other structures that rise hundreds of feet into the air. Just as instruction on
63 flying near power lines is an essential part of the safety training for pilots, flying near wind
64 turbines should already be a part of all flight training programs, particularly for EMS crews.

65 From a technical perspective, it should be noted that there are large areas of undisturbed
66 air immediately in front of and on both sides of each wind turbine located on a typical wind
67 farm site. Helicopter pilots will find this undisturbed air quite usable. Plus, technological
68 advances such as GPS aircraft positioning and mapping equipment are tools that allow
69 pilots and flight following management personnel the ability to fly and track EMS flights
70 near wind turbines. On top of that, onboard GPS associated obstruction hazard warning
71 systems will backup in-flight pilots. Onboard weather monitoring displays will also
72 highlight areas of bad weather to avoid, particularly when the area around wind turbines is
73 obstructed. The increased use of night vision goggles (NVG), if necessary, will allow pilots
74 to avoid wind farm areas and assist the final approach and landing in and near the wind
75 turbines. All told, it is possible to complete a helicopter EMS flight in and around wind
76 turbines, and in fact, this scenario presents no greater difficulty than other existing
77 obstacles or obstructions present.

78 **Q-11. If there were an injury accident on a property near a wind turbine, where would an**
79 **EMS flight pilot typically land the helicopter?**

80 **A-11.** Once the accident site is reached and established by the initial first responders, the
81 helicopter pilot would then approach the situation depending on the particular
82 circumstances presented. The ideal situation – as with any obstruction like trees, power
83 lines, or towns – is to land the helicopter as near to the on-scene first responders as possible,
84 and slightly down-wind and/or uphill from them if practicable.

85 **Q-12. Are there different aspects of operating a helicopter near a wind farm that distinguish**
86 **it from operating a helicopter in other locations?**

87 **A-12.** Yes, but after proper training and testing, the rescue missions around wind farms should
88 become routine as procedures are developed and formalized. The air disturbances around
89 wind farms are not dissimilar to the conditions involved in landing helicopters on roof top
90 helipads or vessels. Both can be done safely with proper training.

91 **Q-13. Does the presence of a nearby wind farm delay the time it takes for an EMS flight**
92 **helicopter to arrive on the scene?**

93 **A-13.** Not necessarily. During a flight with clear weather, good visibility and ceilings above
94 1,000 feet, there should be no significant delay because of the alternate flight paths that
95 exist within the wind farm.

96 **Q-14. Does this conclude your testimony?**

97 **A-14.** Yes, it does, except that I reserve the right to update this testimony to respond to any further
98 testimony in this case.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Direct Testimony of Francis Marcotte was served upon the following parties of record via regular or electronic mail this 21st day of October 2019.



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Summary: Testimony of Francis Marcotte on behalf of Republic Wind, LLC electronically filed by Teresa Orahod on behalf of Devin D. Parram