BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY DEUEL HARVEST WIND ENERGY SOUTH LLC FOR ENERGY FACILITY PERMITS OF A WIND ENERGY FACILITY AND A 345 KV TRANSMISSION FACILITY IN DEUEL COUNTY, SOUTH DAKOTA FOR THE SOUTH DEUEL WIND PROJECT

SD PUC DOCKET EL24-023

PRE-FILED REBUTTAL TESTIMONY OF CHRISTOPHER HARRINGTON ON BEHALF OF DEUEL HARVEST WIND ENERGY SOUTH LLC

December 5, 2024

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer and business address.

A. My name is Christopher Harrington. I am a Project Manager at Capitol Airspace Group ("Capitol Airspace"). My business address is 6350 Walker Lane, Suite 450, Alexandria, Virginia 22310.

Q. On whose behalf are you providing this testimony?

A. I am providing this testimony on behalf of Deuel Harvest Wind Energy South LLC ("South Deuel Wind") in support of its Facility Permit Application ("Application") to the South Dakota Public Utilities Commission. The Application is for facility permits to construct and operate a wind energy facility which will have a nameplate capacity of up to 260 megawatts ("MW") and deliver up to 250 MW to the point of interconnection ("Wind Energy Facility"), and a transmission facility which will operate at 345 kilovolts ("kV") and be approximately 6 miles in length ("Transmission Facility"). The Wind Energy Facility and the Transmission Facility are collectively referred to as the Project.

Q. Briefly describe your educational background and professional experience.

A. I graduated with distinction from the United States Naval Academy in 2010 with a Bachelor of Science in Quantitative Economics. Following graduation, I was commissioned into the United States Marine Corps and completed flight school in 2013. My military service included deployments and detachments to the western pacific, from Korea to Australia, both on and off naval ships. I have accumulated over 2,500 flight hours in the T-34, TH-57, and AH-1 and spent seven years as a Marine Corps Reserve Instructor Pilot training Navy, Marine Corps, and Coast Guard student pilots. My Federal Aviation Administration ("FAA") certifications include Certified Flight Instructor (Instrument rated). I also earned a Masters of Business Administration from the University of Florida.

I joined Capitol Airspace in November 2021 as a Project Manager and in that role, I provide project management and strategic advocacy services to Capitol Airspace

clients across a broad spectrum of wind, solar, and building projects. My resume is attached as **Exhibit 1.**

Q. Have you ever testified in a commission or court proceeding?

A. No. This is the first time I will be providing testimony in a commission or court proceeding.

II. OVERVIEW

Q. What is your role with respect to the Project?

A. I was retained by South Deuel Wind to provide expert testimony in response to concerns raised by the Lake Cochrane Improvement Association ("LCIA") and Intervenor Matt Holden about the Project's potential impact to the Lake Cochrane Seaplane Base (FAA identifier SD2) (the "Seaplane Base" or "SD2"). Capitol Airspace Group had prepared an obstruction evaluation and airspace analysis for the Project in 2021, which was attached as Appendix S to South Deuel Wind's Application.

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my Rebuttal Testimony is to discuss the FAA's responsibility and role in preserving the safety and efficiency of the National Airspace System. This testimony includes the airspace protections the FAA applies under 14 CFR Part 77 to seaplane bases in general. I then discuss the Lake Cochrane Seaplane Base specifically and how the FAA will review the proposed turbine locations in proximity to the Seaplane Base. Finally, I respond to the concerns and claims LCIA and Mr. Holden have raised in this proceeding.

Q. What exhibits are attached to your rebuttal testimony?

A. The following exhibits are attached to my Rebuttal Testimony:

- Exhibit 1: Resume
- Exhibit 2: SD2 Chart Supplement

- Exhibit 3: South Dakota Board and Commissions, Attachment 4

III. FEDERAL AVIATION ADMINISTRATION

Q. Describe the role and function of the FAA under 14 CFR Part 77.

A. Under 14 CFR Part 77, the FAA outlines the requirements for when a proposed structure, permanent or temporary, needs to be filed with the FAA. Once a structure is filed with the FAA, the FAA's Aeronautical Study Process is then governed by 14 CFR Part 77, which determines if a proposed structure is an obstruction and/or a hazard to air navigation. If a structure is identified as an obstruction, the FAA will issue a Determination of No Hazard ("DNH") so long as the obstruction does not create a significant adverse impact on the relevant airspace. Obstructions are required to have the appropriate marking and lighting and once issued, the FAA's Determination of No Hazard may come with a petition period. The petition period is a 30-day period that can be included in a DNH for a structure that exceeds 14 CFR Part 77 obstruction standards and the period begins on the DNH date of issuance. During this period, interested parties may petition to the FAA's Rules and Regulations Group. Petitions must be aeronautically-based and include new information or facts not previously considered or reviewed during the FAA's aeronautical review process.

Q. How does the FAA categorize, and protect for, airspace in terms of public and private use?

A. The FAA establishes and enforces regulations that pilots must follow to ensure the safe and efficient operation of aircraft within the National Airspace System. The FAA also regulates the design and operation of airports. Airports can be identified as either a private use airport, meaning it is available for use by the owner only or by the owner and other authorized personnel, or public use, meaning the airport is available for general public use without the requirement for prior approval. Seaplane bases can be either private use or public use. Lake Cochrane Seaplane Base is a public use seaplane base.

Under 14 CFR Part 77.5(c)(1), the FAA dictates that only public-use airports are evaluated to determine if a proposed structure will affect the efficient and safe use of navigable airspace. The FAA does not assess for impacts to private airports. The FAA has intentionally established safety standards that are based on the type of airport being protected and the nature of its operations.

The FAA will evaluate public-use seaplane bases for potential airspace concerns if the base's sea lanes are outlined by visual markers. However, in the absence of marked sea lanes, the FAA will not evaluate obstacle identification surfaces defined in 14 CFR Part 77 or aeronautical use surfaces defined in FAA Order 8260.3 United States Standard for Terminal Instrument Procedures (AC 150/5395-1B para 3.2.5.1).

Q. Discuss some of the regulations you mention above.

A. In addition to 14 CFR Part 77 described above, Joint Order 7400.2P, *Procedures for Handling Airspace Matters*, describes the federal policy for adjudicating airspace concerns to include a discussion of the FAA's aeronautical study process.

Q. Does the FAA conduct analyses as it concerns the installation and operation of wind turbines such as proposed in this docket and their possible impact on aviation?

A. Yes. If proposed structures exceed FAA notice criteria defined by 14 CFR Part 77.9, which the proposed turbines in this docket do because they are taller than 200 feet AGL, that structure, permanent or temporary, would need to be filed with the FAA so that an aeronautical study can be conducted. The FAA established this notice criteria to ensure that structures that exceed certain heights or are near airports are reviewed to determine if they would pose a hazard to air navigation.

In addition, structures that exceed a 100:1 (run:rise) slope within 20,000 feet of a public use airport runway (longest runway greater than 3,200 feet in length), 50:1 slope within 10,000 feet of a public use airport runway (longest runway less than 3,200 feet in length), or 25:1 slope within 5,000 feet of a public use heliport landing area, must also be submitted to the FAA for aeronautical study. Lastly, if the FAA ever asks a sponsor to file, he/she is then obligated under 14 CFR Part 77.9 to submit notice to the FAA for an aeronautical study. The FAA uses the term "sponsor" to represent the company or the client; this person or business is ultimately responsible for the construction or alteration that has been submitted to the FAA.

In addition to 14 CFR Part 77.9 notification criteria, if a structure exceeds the "instrument approach areas", incorporated by reference in FAA Order 7400.2P, notice would need to be submitted to the FAA. Proposed structures that exceed 14 CFR Part 77.9 notification criteria or instrument approach areas must be submitted to the FAA for aeronautical study.

Q. Please explain how the FAA uses the terms "obstruction" and "hazard".

A. The FAA applies the term "obstruction" for structures that exceed 14 CFR Part 77.17 obstruction standards and 14 CFR Part 77.19 imaginary screening surfaces. There are several subcomponents to the 14 CFR Part 77.17 obstruction standards. One of these subcomponents, 14 CFR Part 77.17(a)(1), identifies any structure that is above 499 feet AGL at the site of the object as an obstruction regardless of its location. Exceeding either a 14 CFR Part 77.17 obstruction standard or a 14 CFR Part 77.19 imaginary screening surface does not automatically result in the issuance of a determination of hazard. Proposed structures must have airspace impacts that constitute a substantial adverse effect to warrant the issuance of determinations of hazard.

The FAA defines "hazard" in Joint Order 7400.2P, *Procedures for Handling Airspace Matters*. "Hazard" applies to a structure that has, or would have, a

substantial adverse effect on navigable airspace, negotiations with the sponsor have been unsuccessful in eliminating the substantial adverse effect, and the affected aeronautical operations and/or procedures cannot be adjusted to accommodate the structure without resulting in a substantial adverse effect.

Q. Can structures be automatically classified as an obstruction?

A. Yes. Structures that exceed 14 CFR Part 77 obstruction standards and imaginary screening surfaces are classified as obstructions.

Q. How does the FAA regulate obstructions and mitigate the impact of obstructions on aviation safety?

A. The FAA regulates potential obstacles by requiring notice to the agency when structures exceed 14 CFR Part 77.9 notice criteria surfaces. Filing with the FAA then initiates the Aeronautical Study Process, where the FAA evaluates for aeronautical effect. As I noted above, structures that exceed 14 CFR Part 77 obstruction standards and imaginary screening surfaces are automatically classified as obstructions. If the proposed structure triggers an airspace impact, the FAA will then determine if the impact can be mitigated or whether the impact is creating a significant adverse effect, which would constitute a Determination of Hazard.

Q. Is the FAA typically involved in the siting and design of wind projects such as the Project here?

A. Yes. The FAA reviews and conducts aeronautical studies on wind turbines that require FAA notice and subsequently adjudicates them as either “hazard” or “no hazard.” The outcome of the FAA’s review may influence changes developers make to their turbine layout or scope of the wind project.

IV. SEAPLANE BASES

Q. Briefly describe what a seaplane base is, and how it functions.

A. According to FAA Advisory Circular 150/5395-1B, *Seaplane Bases*, a seaplane base is "a designated area of water used or intended to be used for the landing and takeoff of seaplanes and shore side access. It also may include water taxi channels, anchoring locations, ramp service, and possibly on-shore facilities for pilots, passengers and aircraft needs." Seaplane bases offer air services where land airports are either infeasible or unavailable.

Q. How is a seaplane base different from a land-based airport in terms of potential FAA-applied airspace protection?

A. Seaplane base runways can be unmarked, whereas most land-based public-use airports have marked runways. Based on whether or not the seaplane base has marked runways, in accordance with 14 CFR Part 77, the FAA may or may not provide airspace or notice criteria protection as it would a public use, land-based airport.

14 CFR Part 77.3 states that, for the purpose of notifying the FAA of proposed construction, and determining the aeronautical effect of the proposal, a "seaplane base is considered to be an airport only if its sea lanes are outlined by visual markers." Because 14 CFR Part 77 surfaces are tied to defined and marked runway ends, the regulatory airspace or notice criteria protections offered by 14 CFR Part 77 only apply if the sea lanes are marked.

Q. Can a seaplane base be public or private use?

A. Yes. Depending on its FAA registration, a seaplane base can be designated for public use or private use. The Lake Cochrane Seaplane Base is listed as a public use facility, meaning that permission is not required to land.

Q. Are there any public airports located within the Project Area?

A. There are no public airports located within the Project Area. The nearest public-use airport is the Lake Cochrane Seaplane Base (SD2) at 3.66 nautical miles from the nearest turbine location, No. 22. Myers Field (CNB) is the next closest public-use airport to the project area at 12.6 nautical miles from the nearest turbine.

Q. Are you familiar with the Lake Cochrane Seaplane Base?

A. Yes. The Seaplane Base is located on Lake Cochrane in Gary, South Dakota. It is approximately 3.66 nautical miles east of the nearest wind turbine in the South Deuel Wind Project Layout. Based on the FAA's chart supplements, the seaplane base is closed between 1 Dec and 1 May.[1] It does not contain any published instrument approach procedures. Lastly, the seaplane base does not have any markers or buoys to identify the runway.

Q. What does the lack of marked sea lanes mean for FAA airspace protections for the Lake Cochrane Seaplane Base?

A. In the case of the Lake Cochrane Seaplane Base, there are no marked runway ends so the 14 CFR Part 77 surfaces do not exist.

Q. Is the Lake Cochrane Seaplane Base otherwise subject to the FAA regulations defined under 14 CFR Part 77?

A. Yes, while not afforded 14 CFR Part 77 airspace protections, the Lake Cochrane Seaplane Base falls within the scope of the regulations defined under 14 CFR Part 77. The type of seaplane base and the nature of its operations will determine what 14 CFR Part 77 subcomponents apply.

[1] *See* **Exhibit 2,** SD2 Chart Supplement, available at https://aeronav.faa.gov/afd/31oct2024/nc_375_31OCT2024.pdf (containing an airport notice stating "Aprt CLOSED 1 Dec to 1 May.").

Q. Does the Lake Cochrane Seaplane Base operate under Visual Flight Rules?

A. The Seaplane Base operates under visual flight rules ("VFR"), which are a set of rules that govern flights under visual meteorological conditions ("VMC") and navigating via ground or geographic reference points. VFR weather requirements, defined under 14 CFR Section 91.155, vary depending on the type of airspace being navigated but are designed to assist the pilot in meeting the VFR requirement to "see and avoid" other aircraft and obstacles. The Lake Cochrane Seaplane Base sits in Class G airspace, which means that for a pilot to legally fly in/out of the seaplane base during the daytime, the pilot must have at least 1 statute mile (5,280 feet) of flight visibility and be able to remain clear of the clouds. The seaplane base is not approved to be operated under instrument flight rules ("IFR").

V. AIRSPACE ANALYSIS

Q. Were you part of the team from Capitol Airspace who prepared the Obstruction Evaluation and Airspace Analysis, attached as Appendix S to South Deuel Wind's Application?

A. No. I was not an employee of Capitol Airspace when the Obstruction Evaluation and Airspace Analysis was conducted in July of 2021. However, I am familiar with these types of reports generally and have studied the report completed for the Project.

Q. Describe the obstruction evaluation and airspace analysis Capitol Airspace performed.

A. Capitol Airspace conducted an obstruction evaluation and airspace analysis for the Project. The purpose for the analysis was to identify obstacle clearance surfaces established by FAA that could limit the placement of 551, 591, and 640- AGL wind

turbines. Capitol Airspace evaluated all 14 CFR Part 77 imaginary surfaces, published instrument approach and departure procedures, visual flight rules operations, FAA minimum vectoring altitudes, minimum IFR altitudes, and enroute operations. At the time of this analysis, specific wind turbine locations had not been identified. This analysis assessed height constraints overlying an approximately 71- square-mile study area to aid in identifying optimal wind turbine locations; the study area encompassed the turbine locations LCIA has raised concerns about, 21, 22, and 49. This analysis concluded that the three turbines do not adversely impact IFR procedures. I discuss this in more detail in Section VI of my testimony.

Q. Describe the methodology Capitol Airspace used to perform its 2021 Obstruction Evaluation and Airspace Analysis.

A. Capitol Airspace studied the proposed Project based on location information provided by South Deuel Wind. Using this information, Capitol Airspace generated graphical overlays to determine proximity to airports, published instrument procedures, enroute airways, FAA minimum vectoring altitude and minimum IFR altitude charts, as well as military airspace and training routes. Capitol Airspace evaluated all 14 CFR Part 77 imaginary surfaces, published instrument approach and departure procedures, visual flight rules operations, FAA minimum vectoring altitudes, minimum IFR altitudes, and enroute operations. All formulas, headings, altitudes, bearings and coordinates used during this study were derived from the documents and data sources below.

- 14 CFR Part 77 Safe, Efficient Use, and Preservation of the Navigable Airspace
- FAA Order 7400.2N Procedures for Handling Airspace Matters
- FAA Order 8260.3E United States Standard for Terminal Instrument Procedures
- FAA Order 8260.58B United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design

- Technical Operations Evaluation Desk Guide for Obstruction Evaluation/Airport Airspace Analysis (1.5.1)
- United States Government Flight Information Publication, US Terminal Procedures
- National Airspace System Resource Aeronautical Data.

Of note, the following orders and publications have since been updated: 7400.2P, 8260.3G, 8260.58C, and the Technical Operations Evaluation Desk Guide 1.7.1. None of the updates to these orders and publications change my conclusions regarding the Lake Cochrane Seaplane Base airspace and turbine locations 21, 22, and 49.

Q. What did the 2021 airspace analysis conclude?

The 2021 airspace analysis concluded that at 551, 591, and 640 feet AGL, wind turbines in the eastern section of the study area will exceed the Lake Cochrane Airport 14 CFR Part 77.17(a)(2) obstruction standard and will be identified as obstructions. Importantly, the analysis noted at the time that the FAA may choose *not* to apply the 14 CFR Part 77.17(a)(2) obstruction standard to the Lake Cochrane Seaplane Base. As I noted above, per 14 CFR 77.3, a seaplane base is only considered to be an airport, and afforded 14 CFR Part 77 airspace protections, if its sea lanes are outlined by markers. Capitol Airspace has since confirmed via satellite imagery the absence of marked sea lanes and therefore the lack of 14 CFR Part 77 airspace protections.

The report also noted that at 551, 591 and 640 feet AGL, all proposed wind turbines will exceed 14 CFR Part 77.17(a)(1) – a height of 499 feet above ground level at the site of the object – and will be identified as obstructions regardless of their location. Further, at 591 and 640 feet AGL, proposed wind turbines in the southwestern section of the study area will require an increase to a Milbank Municipal (1D1) RNAV (“GPS”) Approach to Runway 31 TAA minimum altitude. At 640 feet AGL, proposed wind turbines in the southwestern corner of the study area

will require an increase to the Minneapolis ("ZMP") Air Route Traffic Control Center ("ARTCC") Sector PFSD01 MIA. If the FAA determines that the proposed construction would *not* have a substantial adverse effect on navigable airspace and that the impacts are able to be mitigated, the agency will issue Determinations of No Hazard. The determinations will list the discovered airspace impacts, if any, and the determined mitigation that will occur once both the project construction begins and the required notification is made to the FAA.

Q. Did you perform an additional airspace analysis as it relates to the Lake Cochrane Seaplane Base?

A. Yes. Capitol Airspace performed an airspace analysis specific to the Lake Cochrane Seaplane Base in October 2024.

Q. How did you perform that analysis?

A. The scope of the analysis involved research into several governing documents that the FAA operates within, to include 14 CFR Part 77, Joint Order 7400.2P, and FAA Advisory Circular 150/5395-1B. The intent of the analysis was to determine what FAA airspace protections, if any, are afforded the Lake Cochrane Seaplane Base.

Q. What type of protected airspace is afforded to the Lake Cochrane Seaplane Base?

A. Under 14 CFR Part 77, there are no applicable FAA airspace protections afforded to the Lake Cochrane Seaplane Base because the sea lanes are not outlined by visual markers. Specifically, 14 CFR Part 77.3 states that seaplane bases are "considered to be an airport only if its sea lanes are outlined by visual markers." Satellite imagery of the seaplane base indicates that sea lanes are not marked in accordance with FAA Advisory Circular 150/5395-1B, Seaplane Bases, Chapter 3.2.5. Additionally, correspondence from the LCIA to the South Dakota Department of Transportation on May 24, 2017 acknowledges that "Marker buoys and anything permanently anchored in the water other than docks, boat lifts, and the like are not allowed on the Lake [sic]...Due to the variable direction of the wind a marked

landing path would not be useful anyway (SD Boards and Commissions, Attachment 4, Page 3)." Therefore, the absence of marked sea lanes prevents the FAA from evaluating obstacle identification surfaces defined in 14 CFR Part 77 or aeronautical use surfaces defined in FAA Order 8260.3 *United States Standard for Terminal Instrument Procedures* (AC 150/5395-1B para 3.2.5.1). Capitol Airspace's analysis concluded that the 14 CFR Part 77.17 obstruction criteria surface originally identified in its 2021 obstruction evaluation and airspace analysis do not apply to the Lake Cochrane Seaplane Base.

The Lake Cochrane Seaplane Base does not currently have IFR procedures such as instrument departures or instrument approaches that require terminal obstacle clearance areas. There are no filings in the FAA's Obstruction Evaluation / Airport Airspace Analysis ("OE/AAA") system to indicate a 'plan-on-file' to create IFR procedures. Finally, the FAA's notice criteria tool does not indicate that the Lake Cochrane Seaplane Base is afforded protections under 14 CFR Part 77.9(b) or Joint Order 7400.2P Instrument Approach Areas.

VI. RESPONSE TO LCIA'S CONCERNS

Q. The LCIA raises concerns regarding turbine locations 21, 22, and 49 because they are "obstructions." Does this mean that turbines 21, 22, and 49 will adversely impact air traffic safety?

A. No. Turbine locations 21, 22, and 49 are represented by their Aeronautical Study Numbers (ASN) 2023-WTE-1905-OE, 2023-WTE-1906-OE, and 2024-WTE-11092-OE , respectively. Based on the results of Capitol Airspace's 2021 Obstruction Evaluation and Airspace Analysis, these three turbines do not impact IFR procedures. The FAA's aeronautical review process will conduct additional analysis regarding the potential impact–if any–of these three turbines on navigable airspace.

Q. Does the fact that these turbines are "obstructions" mean they would likely interfere with the safety of the Lake Cochrane Seaplane Base airspace?

A. No. As noted above, exceeding a 14 CFR Part 77 imaginary surface alone does not automatically result in the issuance of a determination of hazard. In accordance with 14 CFR 77.31, proposed structures must have airspace impacts that constitute a substantial aeronautical impact to warrant the issuance of determinations of hazard. This means that turbine locations 21, 22, and 49 will undergo a full aeronautical study and increased scrutiny from the FAA. Following this full assessment, the FAA will issue a Determination of No Hazard, or a Determination of Hazard. A Determination of No Hazard would indicate that turbine locations 21, 22, and 49 would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities.

Q. Have you formed an opinion regarding whether turbine locations 21, 22 or 49 pose an airspace safety risk to the Lake Cochrane Seaplane Base?

A. Yes. After conducting an airspace analysis of the seaplane base and assessing the current regulations, the FAA does not afford airspace protection to the Lake Cochrane Seaplane Base. Therefore, and in accordance with 14 CFR Part 77, turbine locations 21, 22, and 49 do not pose an airspace safety risk to the seaplane base.

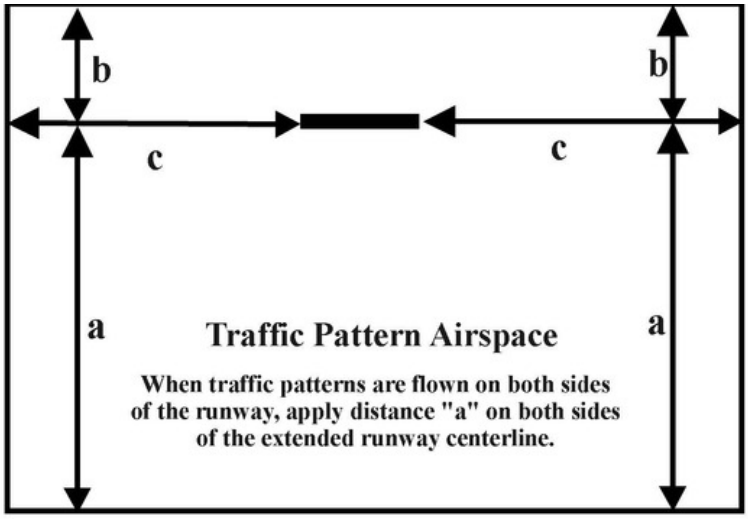
Q. In your opinion, is Deuel County's three-mile setback of wind turbines from the Lake Park District at Lake Cochrane necessary to ensure the airspace safety of the Lake Cochrane Seaplane Base?

A. No. Under 14 CFR Part 77, there are no applicable FAA airspace protections afforded to the Lake Cochrane Seaplane Base. Any setback would therefore be in excess of what the FAA protects for based on the seaplane base's existing configuration. Additionally, a three-mile setback from the Lake Cochrane Park District would be in excess of how the FAA would hypothetically protect VFR

operations for the Lake Cochrane Seaplane Base if the runway were marked appropriately. I believe that the FAA has created, through its regulatory and operational role, the safest air traffic system in the world. Airports that do not uphold a particular standard do not receive as many FAA protections. If the FAA had reason to protect a particular type or category of airport, then the appropriate rules would be in place.

Q. When 14 CFR Part 77 airspace protections exist for a particular airport, what areas around the airport protect for VFR traffic operations?

A. Airspace protection areas would be defined as VFR traffic pattern airspace. VFR traffic pattern airspace is used by pilots operating during VMC. The airspace dimensions are based on the category of aircraft which, in turn, is based on the approach speed of the aircraft. 14 CFR Part 77.17(a)(2) and 77.19 (as applied to a visual runway) imaginary surfaces establish the obstacle clearance surface heights within VFR traffic pattern airspace. For example, Category A traffic pattern airspace refers to aircraft with approach speeds of less than 91 whereas Category B traffic pattern airspace refers to aircraft with approach speeds of 91 knots or greater but less than 121 knots. The graphic below, from FAA Order 7400.2P Procedures for Handling Airspace Matters, depicts the dimension of the different categories of traffic pattern airspace. Referencing the table below, distance “c” represents the distance in nautical miles of the extended runway centerline out from the runway end. Distances “a” and “b”, also measured in nautical miles, are measured perpendicular to segment “c”.



Aircraft Category	Distance (nautical miles)			
	a	b	c	d*
A	1.25	.25	1.25	.375
B	1.5	.25	1.5	.5
C	2.25	.5	2.25	.875
D	4.0	.5	3.0	1.0

*Increase distance "C" by adding distance specified in "d" for each aircraft over four (of the same category) anticipated to be operating in the traffic pattern at the same time.

Q. How would VFR traffic pattern airspace apply to the Lake Cochrane Seaplane Base if it had a marked landing strip?

A. *If* the Lake Cochrane Seaplane Base were afforded the airspace protection defined under 14 CFR Part 77, then Category B would be the largest potential category of traffic pattern airspace that would surround the airport, with Category A being the most likely category to be applied. Based on Category A and B traffic pattern airspace, the proposed wind turbines would still reside well beyond the lateral boundaries of this airspace, as defined by the table above, which is less than the nearest turbine location, 3.66 nautical miles east of the Seaplane Base.

VII. CONCLUSION

Q. In summary, do you believe turbine locations 21, 22, or 49 should be removed from the Project Layout because of the Lake Cochrane Seaplane Base?

A. No, I do not. I have reviewed the Lake Cochrane Seaplane Base and the applicable FAA requirements defined under Title 14 CFR Part 77 and do not believe that these locations pose an aviation risk to the seaplane base. Ultimately, the FAA will conduct a full aeronautical study on these locations to ensure that they do not pose a hazard to air navigation. So long as these sites receive, as expected, Determinations of No Hazard from the FAA, the sites should be deemed authorized and constructible from an airspace safety perspective.

Q. Does this conclude your testimony?

A. Yes.

Dated this 5th day of December, 2024

/s/ Christopher Harrington
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Christopher Harrington