APPLICATION FOR CONVENTIONAL EXPERIMENTAL LICENSE

Introduction

Pursuant to Sections 5.3 and 5.61(c) of the Commission's rules,[1] Florida Power & Light Company ("FPL") requests an extension of its current special temporary authorization ("STA") by applying for a conventional experimental license consistent with the terms and conditions of its STA.[2] Grant of the instant application will allow FPL to continue operating uncrewed aircraft systems ("UAS") using communications links in the 902-928 MHz, 2390-2500 MHz, and 5725-5975 MHz bands for:

(1) Testing its FPLAir One uncrewed aerial vehicle ("UAV") in Rome, NY; and

(2) Safely and reliably flying FPLAir One throughout the state of Florida as part of its disaster response and recovery operations during this year's hurricane season, which runs through November 2024, and any other extreme weather events that may occur throughout the license's term.

FPL requests a conventional experimental license for the regular term of two years permitted under the Commission's rules.[3]

Purpose and Technology

The ongoing Atlantic hurricane season will continue through November 2024, after FPL's current STA expires on October 12, 2024. Accordingly, FPL seeks a conventional experimental license consistent with the terms and conditions of its current STA so that it may prepare for, more safely monitor infrastructure during, and more quickly respond to natural disasters that may strike its statewide service area.

FPL serves more than twelve million people throughout Florida,[4] and FPLAir One is a critical component in FPL's storm-response efforts. Capable of flying in tropical storm-force winds and remaining airborne for more than twenty-two hours, FPLAir One can be deployed before a major storm hits, "skirting around to its wake and following its path across [FPL's] power grid."[5] While flying, FPLAir One can gather and transmit lidar data, which FPL then uses to more safely and quickly direct ground crews for repairs and thereby shorten outages.[6]

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[1] *See* 47 C.F.R. §§ 5.3 and 5.61(c) (permitting the extension of an STA by applying for a conventional experimental license).

[2] Call Sign WX9XAV, ELS File No. 0559-EX-ST-2024.

[3] 47 C.F.R. § 5.71(a)(1).

[4] Florida Power & Light Company, *Company Profile*, https://www.fpl.com/about/company-profile.html (last accessed Sept. 19, 2024).

[5] *Florida Utility's New Drone Can Speed Hurricane Recovery*, UAS Vision (Aug. 18, 2022), https://www.uasvision.com/2022/08/18/florida-utilitys-new-drone-can-speed-hurricane-recovery/.

[6] *Id.*

The maximum flying altitude of FPLAir One will be 5,000 feet above ground level.

Frequency Bands. FPL seeks an experimental license to continue conducting the following operations in the following frequency bands:

Frequency Band (MHz)	Operations
902-928	Command and Control ("C2")
2390-2500	C2, Telemetry
5725-5975	Video Downlink

FPL clarifies that it will not use the entire requested frequency band when it transmits. However, FPL requests authority to transmit in any portion of the band referenced above to create more reliable communications links and increase flight safety.

Transmitting Equipment. FPL will use the following transmitters and antennas:

	Manufacturer	Model	No.
Transmitters	Microhard Systems Inc.[7]	N920BD	3
	Silvus Technologies[8]	SC4240-235	3
	Advance Microwave Products[9]	VHT1 – 5725-5875	2
Antennas	Hyperlink	HGV-903U	2
	SCALA	TY-900	2
	ANTCOM	TNC-M-0.87-1.99-ANT	2
	L-Com	HG2425DPD	2
	Southwest Antennas	1001-126	1
	Video Aerial Systems	Mad Mushroom v2	1

Four transmitters will continue to be installed on FPLAir One:

(1) One for C2 communications in the 902-928 MHz band;
(2) One for C2 and telemetry communications in the 2390-2500 MHz band; and

[7] Microhard Systems Inc. is an established manufacturer of wireless communication and networking solutions, specializing in the design and manufacture of long-range wireless data equipment. *See* Microhard Systems Inc., *About Us*, https://www.microhardcorp.com/about.php (last accessed Sept. 19, 2024).

[8] Silvus Technologies is one of the world's leading manufacturers of advanced multiple-input, multiple-output communications systems to help transmit high-fidelity video, voice, and data in harsh conditions. *See* Silvus Technologies, *About*, https://silvustechnologies.com/about/ (last accessed Sept. 19, 2024).

[9] Advanced Microwave Products is a developer and manufacturer of radiofrequency and microwave products, specializing in miniature video/audio transmitters and receivers for surveillance applications, lightweight video/data transmitters, and receivers for UAS applications. *See* Advanced Microwave Products, *About AMP*, https://advmw.com/ (last accessed Sept. 19, 2024).

(3) Two for video downlink communications in the 5725-5975 MHz band.

The remaining transmitters will continue to be installed on a trailer from which FPL's ground crew will operate FPLAir One.[10] Additionally, one antenna will be attached to the trailer itself, and two antennas will be installed on adjustable masts attached to the trailer.

Locations of Operations

For any continued testing operations in Rome, New York, the trailer will remain at a fixed location on Griffiss International Airport's UAS pad. The UAS pad is located at 43° 13' 25" N, 75° 23' 55" W. The radius of operations from that site will be 120.38 kilometers (*i.e.*, 65 nautical miles or 74.8 miles).

In Florida, the trailer will continue to function as a mobile station that can be moved around the state, depending on the area affected by a particular storm. When transmitting, the trailer will remain stationary. A diagram of the trailer is attached to this narrative.

FPL pre-coordinates its flights with the Federal Aviation Administration ("FAA"), local airports, and local public safety organizations. When operating FPLAir One, FPL monitors the surrounding airspace to ensure that aircraft and any transmitting equipment on the trailer remain protected.

Stop Buzzer

At all times in which the transmitters are in use, FPL will continue to maintain a single point of control and stop buzzer capability. The stop buzzer contact will be capable of addressing interference concerns and resolving any harmful interference through any and all available means. The stop buzzer contact information will remain as follows:

Name:	Eric Schwartz
Telephone:	(561) 904-3496
Email:	eric.schwartz@fpl.com

Request for Waiver

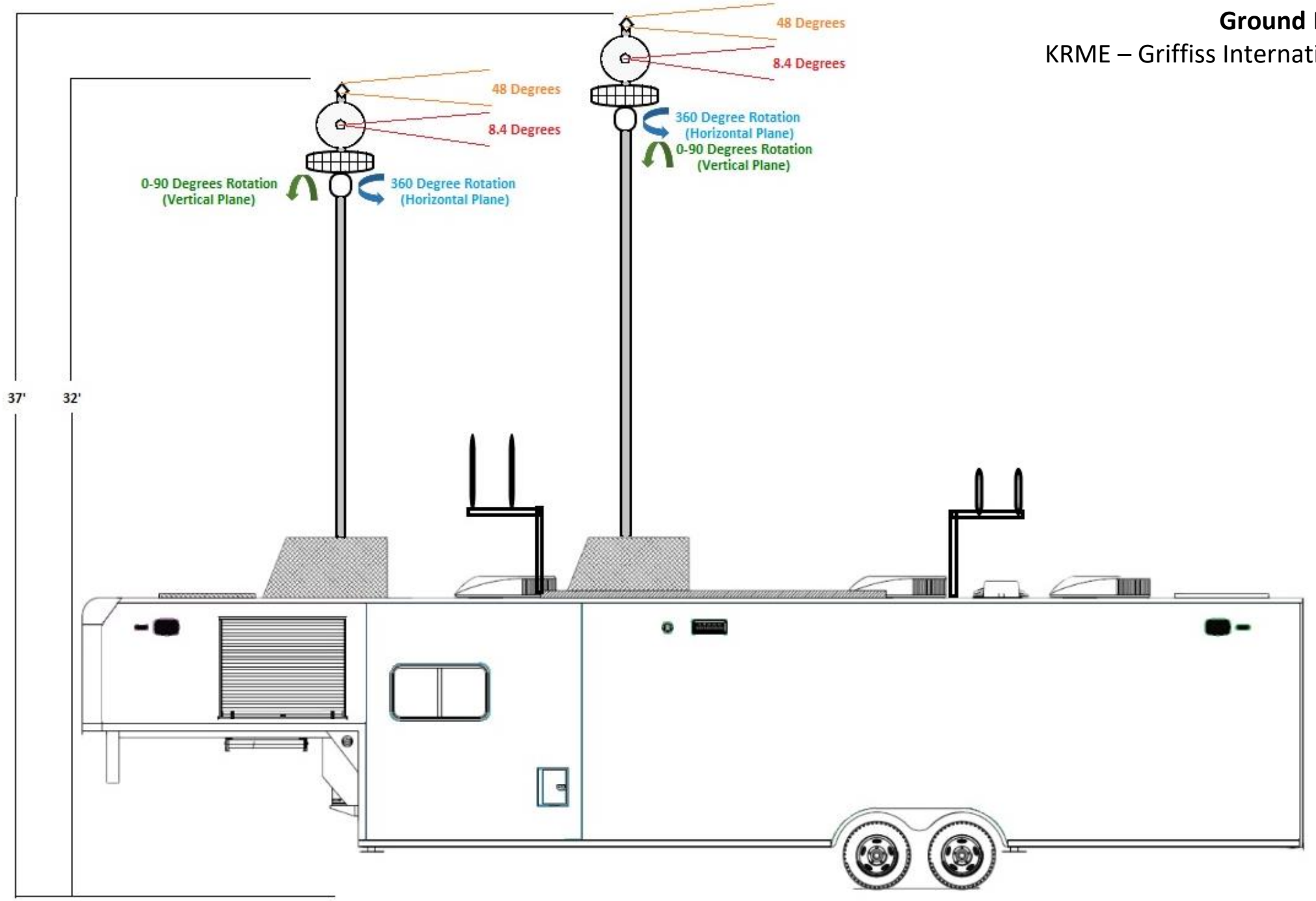
To the extent necessary, FPL requests a waiver of the station identification requirements in Section 5.115 of the Commission's rules.[11] Grant of the requested waiver will serve the public interest by allowing FPL to expand its use of FPLAir One to monitor its network and ensure consistent, reliable service across Florida.

[10] FPL clarifies that the third Silvus transmitter is reserved for backup.

[11] 47 C.F.R. § 5.115.

Ground Elevation

KRME – Griffiss International Airport – 504’ MSL2



Trailer Dimensions

1. Length – 43’
2. Width – 8’