



Federal Airways & Airspace®

January 27, 2019

Ref No. 20FAA002GN

Kenneth Farber
Senior Counsel
Avangrid Service Company
162 Canco Road
Portland, Maine, 04013

Re: *Opinion Letter on Mr. Ed Friedman Letter of 12124/2019*

Dear Mr. Farber:

As you requested, Federal Airways & Airspace (FA&A) has reviewed the December 24, 2019 letter from Ed Friedman, Chair, Friends of Merrymeeting Bay to Doug Herling regarding Central Maine Power Company's (CMP) new towers at the Chops crossing on Merrymeeting Bay and, in particular, requirements of the Federal Aviation Administration (FAA) to light the towers. It is Mr. Friedman's contention that under the FAA's regulations and guidance, CMP was not required to install lighting on its new towers and, having done so, the Company should now re-file for a change in status to remove the lights. Mr. Friedman also suggests that pending approval of such a request, CMP should extinguish the lighting and provide a Notice to Airmen (NOTAM) of unlit towers and wire crossing and should also abandon its request to enhance the current lighting with a radar activated system.

FA&A CREDENTIALS

Federal Airways and Airspace (FA&A) is a private, woman owned, small business that was established in 1984. Its founder was motivated by the need within the telecommunications industry to automate the obstacle evaluation process of locations for proposed towers. In addition to our commercial and government software FA&A also provides consulting services to industries that need to comply with the rules and regulations of the FAA. FA&A employs a team of highly trained Airspace Specialists with expertise in FAR Part 77 as well as Terminal Instrument Procedure Analysis (TERPS criteria). **[It seems in their best interest to encourage both perception of and or actual need of obstacle lighting]**

SUMMARY OF FA&A OPINION

As discussed below, it is FA&A's opinion that Mr. Friedman's analysis is not consistent with FAA policy or with generally accepted industry practice in implementing the FAA regulations and guidance. Adopting Mr. Friedman's recommendations would increase safety risks for aviation and subject CMP to substantial liability risks should there ever be an aviation incident. Accordingly, FA&A advises CMP to maintain the currently installed

obstruction lighting system. In addition, the company should continue with its efforts to obtain expeditious approval from the FAA for the proposed radar system to augment the current lighting. **[While clearly the presence of lighting is “safer” than not, the issue is moot if there are virtually no aircraft in the vicinity and no confusing surrounding structures that could possibly obscure towers or wires. Eighty years of unlit towers only 40’ lower with more air traffic and no accidents is a pretty good indication of risk and liability exposure. Contrast this with liability exposure from CMP putting a metering device on 595,000 homes in Maine that emits what the World Health Organization classifies as a possible human carcinogen (low level radiofrequency radiation-RFR) considered by the world’s top insurance companies Lloyds of London, Swiss Re and others as in their category of highest risks and excluded from any liability coverage. Consider too the increased liability from installing high powered RFR-microwave emitting units at the tower location proximal to many residents].**

DISCUSSION

It might be helpful to put the current situation into perspective. In 2019 CMP replaced two lattice towers on either side of the Kennebec River. These towers are each 240’ tall and double circuited with a 34.kV and a 115kV three phase line, there is a static wire on top with marker balls. A lighting study was conducted by CMP's consultant and was submitted to the FAA originally in 2016 and updated in February 2018. The lighting study recommended that the towers each include lighting, specifically, L-866 daytime and L-885 nighttime. FA&A agrees that it was appropriate for CMP's consultant to include that recommended lighting in the Company's Notice of Proposed Construction that it submitted to the FAA for approval. **[No evidence that consultant TRC conducted a “lighting study” or that they were qualified to do so. Appearances only indicate they looked up FAA lighting recommendations for catenary crossings and included those in the project. The FAA indicated to FOMB by phone they could be quite flexible. TRC also submitted NRPA application to DEP for a Permit By Rule (PBR) indicating only that towers were being replaced with no indication visual impacts would be substantially different. While a straightforward replacement of existing structures is generally eligible for PBR, visual impact is a factor considered in full NRPA permits. DEP has the discretion to escalate a PBR to full permit application if they know there are likely to be significant changes. TRC did not advise DEP the sky would be lit for the first time ever with the new towers. A radar installation would also be outside of anything considered in the PBR application and both lighting and radar should be subject to federal NEPA review.]**

On March 3, 2019, the FAA issued its Determination of No Hazard to Air Navigation. One of the conditions for the Determination requires that the towers be marked/lighted in accordance with FAA Advisory Circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, a med-dual system-Chapters 4,8 (M-Dual), & 12. Chapter 2.1 of the referenced Circular states that " Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet (61m) above ground level (AGL) or exceeds any obstruction standard contained in 14 CFR Part 77 should be marked and/or lighted"(emphasis added). **[It also says: However, an FAA aeronautical study may reveal that the absence of marking and/or lighting will not impair aviation safety.** Importantly, 14 CFR Part 77, referenced above in the Circular requires marking/lighting if the height of the structure is above 200 feet and within a certain distance from an airport.

Mr. Friedman is correct in his letter that the Chop Point towers do not meet the requirements of 14 CFR Part 77 to automatically require lighting/markings because the

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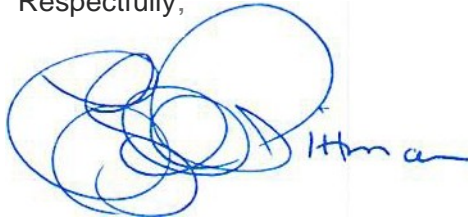
towers are not located within the mandated distance from an airport. Mr. Friedman goes on to suggest that because the Circular uses the word "should" rather than "must" that CMP had discretion to not install lighting. Mr. Friedman is incorrect in his interpretation of the Circular. Because CMP's Determination letter specifically includes an obstruction lighting specification, it is the FAA policy that the lighting is mandatory. **[The FAA determined there would be no hazard if the towers are lit as specified. It does not make a determination on whether there would be a hazard without lighting, given location, air traffic and or other factors or, if other less impactful marking would suffice, neither does the FAA present a citation for why lighting or marking is required]**

Moreover, even if the lighting had not been a requirement in the Determination letter, CMP nonetheless would have wanted to include it on the towers. The language in Chapter 2.1 of the Circular cited above and referenced by Mr. Friedman is viewed by experts in the industry as setting the standard of care for applicants, meaning that "should" is generally viewed as "shall" **["must" is the only definitive word in statute or regulation compelling a requirement. For years "shall" was used as a synonym but no longer is the preferred choice given case law. "Should", is not even in the running. "Should" does not compel and would be laughed out of court.]** unless there is a compelling reason not to include the lighting. **[There is.]** It is FA&A's opinion that CMP's use of tower lighting is following the reasonable and expected standard of care in the industry. To do otherwise, as suggested by Mr. Friedman, would subject aviators to safety risks and CMP to liability risks that should be avoided. **[See above referencing 80 years of no lights and more air traffic and again, the FAA has indicated their willingness to be flexible should CMP request a marking and lighting study, typically providing community input.]**

In light of FA&A's above analysis, we also conclude that Mr. Friedman's suggestion of extinguishing the lighting and issuing a NOTAM is not an appropriate option. A main use of a NOTAM is for reporting obstruction light outages. It is designed to notify the aviator of such equipment outages/failures. Outages related to what one may consider nuisance related, when it has been deemed by installation/maintenance professionals that obstruction lighting to be in good working order, would, in our opinion, be an abuse of the NOTAM system. Furthermore, from a National Transportation Safety Board (NTSB) **[NOTAMS are issued for any an endless variety of issues affecting airspace and ground conditions. CMP issued a NOTAM last June I believe when lights were out for a while. Permanent NOTAMS are also issued.]** perspective, if obstruction lighting were extinguished pending a marking and lighting study (lights in good working order), even though a NOTAM was in place notifying the aviator of the unlit existing structure, we believe Central Maine Power (CMP) would dramatically widen their liability footprint. Aircraft accident risk would significantly increase along with the potential for fatalities due to a mishap. **[see above re. liability]** Chapter 1.5 of the referenced Circular notes the sponsor is responsible for adhering to the approved lighting limitations and/or recommendations given in the determination and should notify the FAA prior to removal of marking and/or lighting. We advise CMP against potentially compromising aviation safety or increasing the Company's liability footprint by pursuing a NOTAM on lighting systems that were recommended by the FAA and complied with by CMP. **[Aviators are responsible for reviewing NOTAMS, weather and charts before a flight. If there is an accident the blame does not fall on CMP for issuing a NOTAM or having an unlit tower noted as such on charts, it is called pilot error.]**

FA&A appreciates that CMP sought our expertise to respond to the questions raised by Mr. Friedman. Please don't hesitate to contact me should you have any follow-up questions. For your convenience I have attached my CV to this letter.

Respectfully,

A handwritten signature in blue ink, consisting of several overlapping loops followed by the name "Pittman" written in a cursive style.

Clyde Pittman, Director of Engineering
Federal Airways & Airspace, Inc.