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STA Application for Interim Operation at Increased Power During Construction Permit Application Pendency
Milwaukee Media LLC
WIWN Television, Fond du Lac, WI
File Number: BLCDT-20120817ABF

This Technical Statement provides supplemental information associated with the FCC application of Milwaukee Media LLC (Milwaukee Media) for Special Temporary Authority (STA) to increase the Effective Radiated Power (ERP) of Station WIWN, operating on Virtual Channel 68 and on Digital Channel 5 and licensed to the community of Fond du Lac, WI (WIWN) to address inherent technical challenges associated with reception of Low-VHF signals. Milwaukee Media has an application pending to increase WIWN's ERP to 48 kW. *See* File No. 0000036131. While that application is pending, Milwaukee Media seeks authorization to operate WIWN at a power level consistent with that provided to other Low-VHF stations in Zone I. As demonstrated below, this request will not cause interference to any other station and is in the public interest.

Difficulty of Low-VHF Digital Television Operation

It is well known in the world of broadcast engineering that Digital Television (DTV) transmission is far more difficult in the Low-VHF portion of the RF spectrum than it is in the High-VHF and UHF portions. This circumstance arises from the combination of more and increasing thermal and man-made noise in that part of the spectrum; long-distance propagation of signals, increasing interference; the longer wavelengths requiring considerably larger antennas for efficient operation; consumers no longer being able to acquire efficient antennas for Low-VHF use, let alone doing so; maximum broadcast power levels having been set based on analog-era assumptions about numerous such factors; and the Commission's rules not having been updated to counter these effects.

The FCC itself long has recognized the problems with DTV broadcast operations in the Low-VHF part of the RF spectrum. As the Commission has stated, "VHF channels have certain characteristics that have posed challenges for their use in providing digital television service."[1] In further explanation, the Commission said, "the propagation characteristics of these channels allow undesired signals and noise to be receivable at relatively farther distances, nearby electrical devices tends to emit noise in this band that can cause interference, and reception of VHF signals requires physically larger antennas … relative to UHF channels."[2] Despite this seeming understanding of the circumstances, broadcast television stations assigned to Low-VHF channels generally are expected to transmit at power levels imagined over 25 years ago, several years before there was experience with any actual DTV broadcasting, to be equivalent in signal delivery to the power levels allowed to stations in the higher-frequency bands. As nearly a quarter-century of experience has shown, virtually from the beginning, such is not the case.

Certain stations operating on Low-VHF channels have been able at least partially to ameliorate the problems described; the FCC has permitted them to increase power. The problems of Low-VHF operation became well-known and especially acute at the time of the digital transition, when certain stations that had been operating at UHF were forced to move to lower channels because of the reallocation of the high end of the UHF broadcasting

[1] *Matter of Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Notice of Proposed Rulemaking, ET Docket No. 10-235, FCC 10-196 ¶ 42 (rel. Nov. 30, 2010).
[2] *Id.*

spectrum to other services at the end of the digital transition. Some of their cases have become well known. Milwaukee Media seeks a similar remedy.

Specific Rule from Which Relief is Sought

Section 73.622(f)(6) limits DTV stations in Zone I to a maximum of 10 kW ERP at 305 meters Height Above Average Terrain (HAAT), with lower power required at higher antenna elevations. WIWN seeks Special Temporary Authority to operate at a power level of 34 kW ERP at its existing HAAT of 338 m. 34 kW is the ERP value that has been authorized by the Commission to other Zone I Low-VHF stations in similar circumstances to those of WIWN. *See, e.g.*, Application of WPVI, File No. BPCDT-20090617ADQ; Application of WRGB, File No. BPCDT-20090622AB. Earlier showings, provided with a WIWN application for construction permit timely filed in the appropriate spectrum repack filing window and still pending, demonstrated that WIWN will not cause impermissible new interference to other broadcast television stations at the higher power level sought in that application. Those showings, which still are on file in the WIWN record in the Commission's Licensing and Management System (LMS), also pertain to operation by WIWN at the lower power sought in this STA request, as lower power operation will cause lower interference levels.

Serving the Public Interest

WIWN is receiving communications from would-be consumer viewers who are having difficulty or finding it impossible to receive the station's signals. Numerous existing viewers also have reached out to the station to advise management of their difficulty in receiving a good quality picture on a consistent basis. WIWN offers programming that is of interest to those potential viewers, as demonstrated by their efforts to receive WIWN's programming, including their communication with the station seeking help in doing so. WIWN represents an additional "voice" in the Milwaukee market, but that voice only can be heard when its signals can be successfully received. The FCC does not allocate spectrum to licensees with the intention that the subject spectrum not be efficiently used and that stations' voices not be heard. Reaching an audience and providing it with a station's programming is the fundamental service in the public interest represented by free, over-the-air television broadcasting. Enabling WIWN better to reach the audience seeking its programming thus inherently serves the public interest.

Duration of the STA

As mentioned previously, WIWN has an application for construction permit (in File Number 0000036131) on file with the FCC seeking to increase its power to the limit imposed by avoiding impermissible levels of new predicted interference to other stations. That application was timely filed by WIWN during the filing window established by the Commission for full-service stations seeking to improve their facilities following the similar filing window for stations that had been reassigned to new channels in the spectrum repack following the Incentive Spectrum Auction. Action on that WIWN application by the FCC still is pending. WIWN expects to operate at the higher power level sought in this STA request until anticipated approval of its construction permit application.

Environmental Considerations and Radio Frequency Radiation

WIWN has on file with its construction permit application in LMS a statement with respect to calculated levels of radio frequency radiation from the proposed WIWN facility, including undertakings with respect to protecting the public and personnel working at the transmitter site. That showing indicates that the proposed facility will not exceed the RF exposure limits for general populations/uncontrolled conditions prescribed in OET Bulletin No. 65. Since the emitted power level would be lower in the requested STA, while the antenna pattern would be the same, it is implicit that the operation proposed under STA similarly would not exceed the RF exposure limits for general population/uncontrolled conditions. Thus, the document currently on file in LMS for the construction permit application also is applicable to this request for STA.