Radiocommunication Study Groups

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North American Broadcasters Association (NABA)

WORKING PARTY 1B
(COPY TO ITU-R WORKING PARTY 6A)

Information on Medium Frequency Broadcast Operation and Listening in Portions of Region 2 for WPT Impact Assessment

The North American Broadcasters Association (NABA) has been following industry activities as Study Group (SG) 1 considers potential standards for wireless power transfer (WPT) devices in response to Resolution **958 (WRC-15)**. NABA represents the broadcast industry in Canada, Mexico, and the United States. In previous input to Working Party (WP) 1A (in Document 1A/309) with copy to WP 1B (in Document 1B/270) NABA has expressed its concern over proposed operational frequency band 71-90 kHz frequency range for medium power WPT and 100-148.5 kHz frequency range for low power and small power WPT devices. Switching supplies in WPT devices may generate harmonic interference which will cause detrimental impact on radio listening in portions of Region 2.

The Annex to this document summarizes the Medium Frequency broadcast band operations in Canada, Mexico, and the United States. Additionally, NABA believes that MF broadcasting offers similarly significant communications access to other areas in Region 2, which are not reported in this study.

NABA requests that WP 1B includes the annexed information into Annex 1 (*Information on LF and MF broadcast transmitters subject to impact From WPT*) to Document 1B/303 (Annex 4 – *Working document towards a preliminary draft new Report ITU-R SM.[WPT-SPEC-MNGM]*). NABA has noted from the discussions in WP 1A and WP 1B in their June 2018 meeting that this information hasn't been forwarded to the next meeting of WP 1B in November 2018 because it was submitted initially to WP 1A (with copy to WP 1B) in June.

Annex: 1

ANNEX

Report of MF Broadcasting across Portions of Region 2

1 Executive Overview

Wireless power transfer (WPT) devices represent a significant source of potential interference to MF broadcasting in Region 2. Previous reports and studies have identified reception interference to broadcast stations operating between 540 kHz and 610 kHz from 15W wireless chargers designed for mobile devices. The potential impact of WPT devices intended for electric vehicles and operating at 3 kW – 11 kW constitutes a larger threat to AM broadcasting.

MF broadcasting provides an important communication channel to hundreds of millions of people across Region 2 on a daily basis. This service is especially important during times of emergency and disaster when critical, life-saving information must be rapidly conveyed.

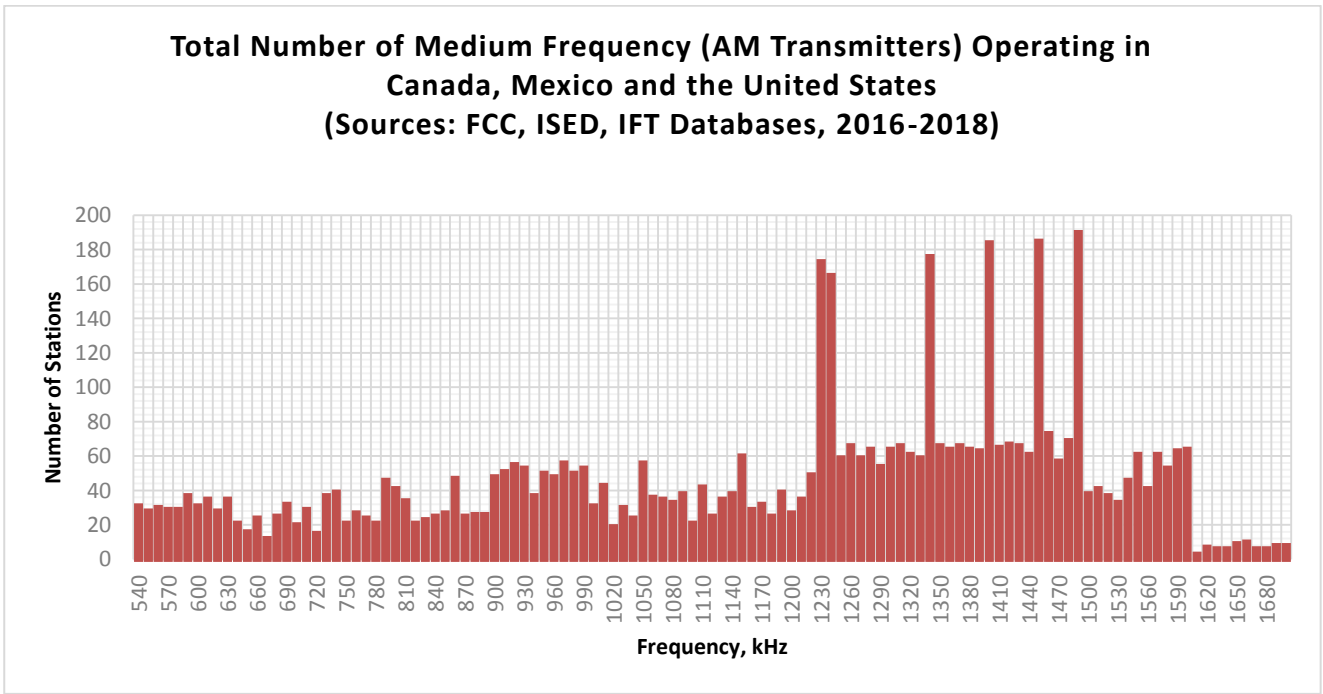
NABA strongly urges all parties to review broadcast protection requirements and adhere to these requirements in the design and production of WPT devices.

2 Introduction

MF broadcasting is increasingly challenged by man-made noise and interference. Yet, AM radio is relied upon to provide critical local news, weather, traffic, sports, and emergency information.

Listening in the MF band continues to be vibrant across Canada, Mexico, and the United States. Recent analysis of the radio station databases maintained by the FCC (U.S.), IFT (Mexico), and ISED (Canada) identifies over 5 000 MF broadcast transmitters operating across these North American countries and serving a population over 570 million people. With vast geographic areas to cover, medium-frequency transmissions are still the most cost-effective way to fill in areas not otherwise covered by short-range VHF stations.

FIGURE 1



3 Market Study

United States

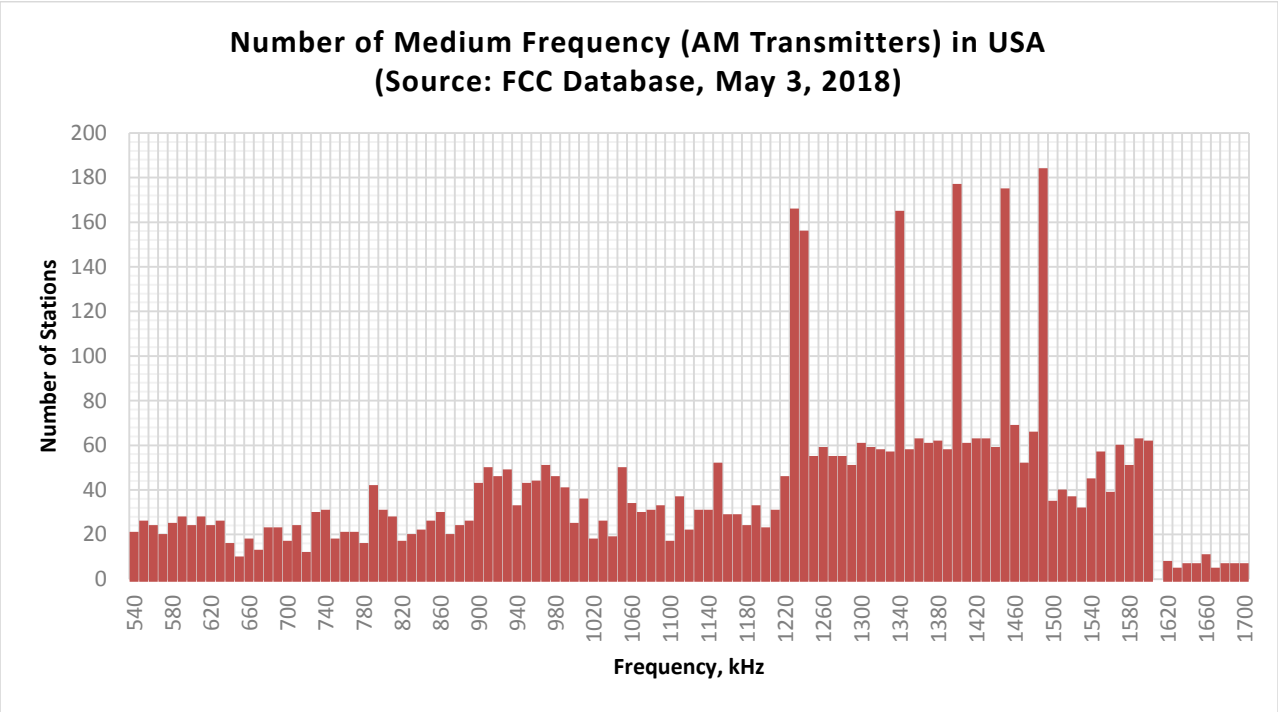
In the United States alone, over 4 685 MF transmitters are in operation across all 50 states. AM radio listening in the US reaches 64 698 500 listeners age 18+ weekly.[1]

Traditionally, in the U.S., these stations have long been the flagship outlets for news, talk, and sports programming due to their extensive signal coverage capabilities, especially for high-power stations. Of the top 10 highest-billing radio stations in America, five of them are MF broadcasters.

The histogram of Figure 2 shows the distribution with frequency of the 4 685 operating AM stations in the US.

Total number of stations:	4 685
Maximum Power Level:	50 kW
Minimum Power Level:	0.135 kW

FIGURE 2



Canada

In June of 2017, Edison Research released the first-ever Share of Ear study in Canada. It was commissioned by the radio industry marketing and advocacy group Radio Connects. Results of the study showed that broadcast radio stations account for 61 percent of all Canadian listening. Correspondingly, the U.S. had 50 percent during the same period.

While there has been a steady shift from MF (AM) to VHF (FM) listening where the spectrum allows, a core group of 227 AM radio stations remain across Canada. This number represents 8% of

[1] Nielsen Fall 2017 Survey period, Total Person 12+, Mon-Sun 6AM-12 Mid.

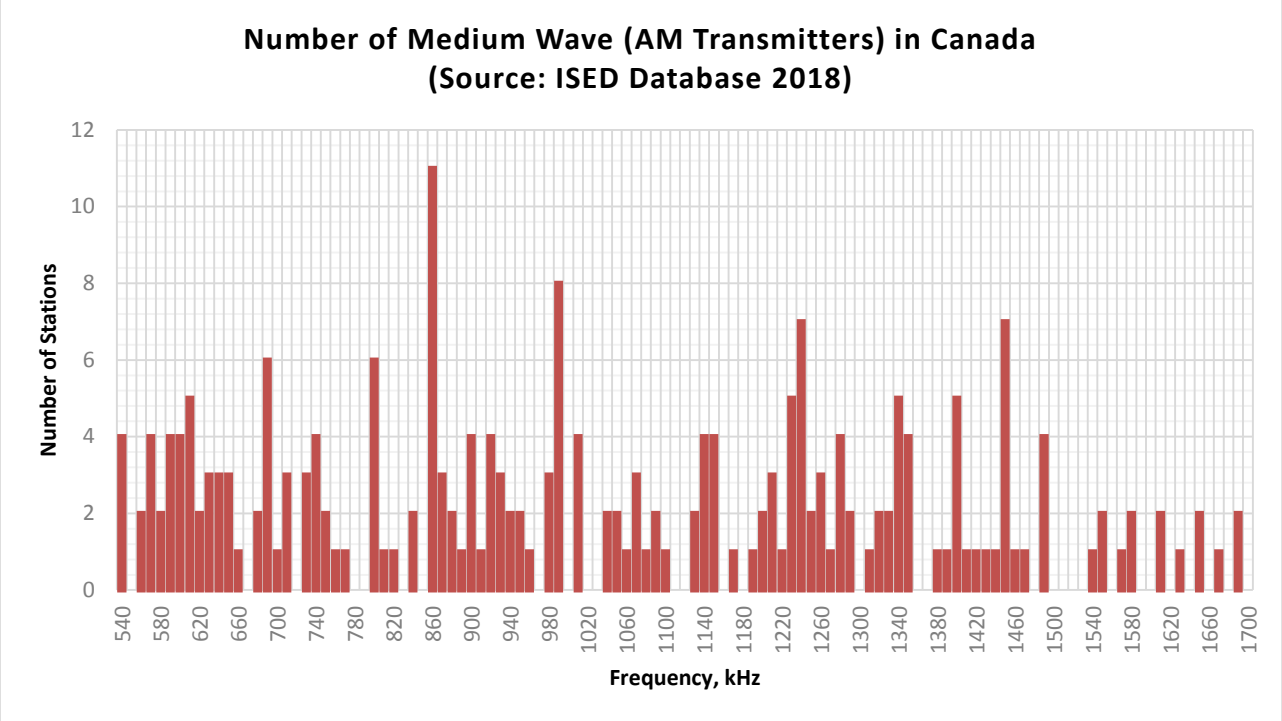
the total number of operating radio stations in Canada. Further to that, Canada has protected allocations for an additional 482 AM frequencies.

The Canadian Prairies, a region in Western Canada, comprising the provinces of Alberta, Saskatchewan, and Manitoba, is the Canadian portion of the North American Great Plains. The First Nations peoples, native to the region, are an important influence on this Prairie culture. Radio is very effective in reaching and serving this large geographic expanse and in targeting the distinct languages of the indigenous peoples. Medium Frequency broadcasting in particular is especially suited to efficiently deliver usable signals over large geographic areas.

The Histogram of Figure 3 represents the 227 operating AM stations in the Canadian market and the frequency distribution for those stations.

Total number of stations:	227
Maximum Power Level:	50 kW
Minimum Power Level:	0.1 kW (night-time)

FIGURE 3



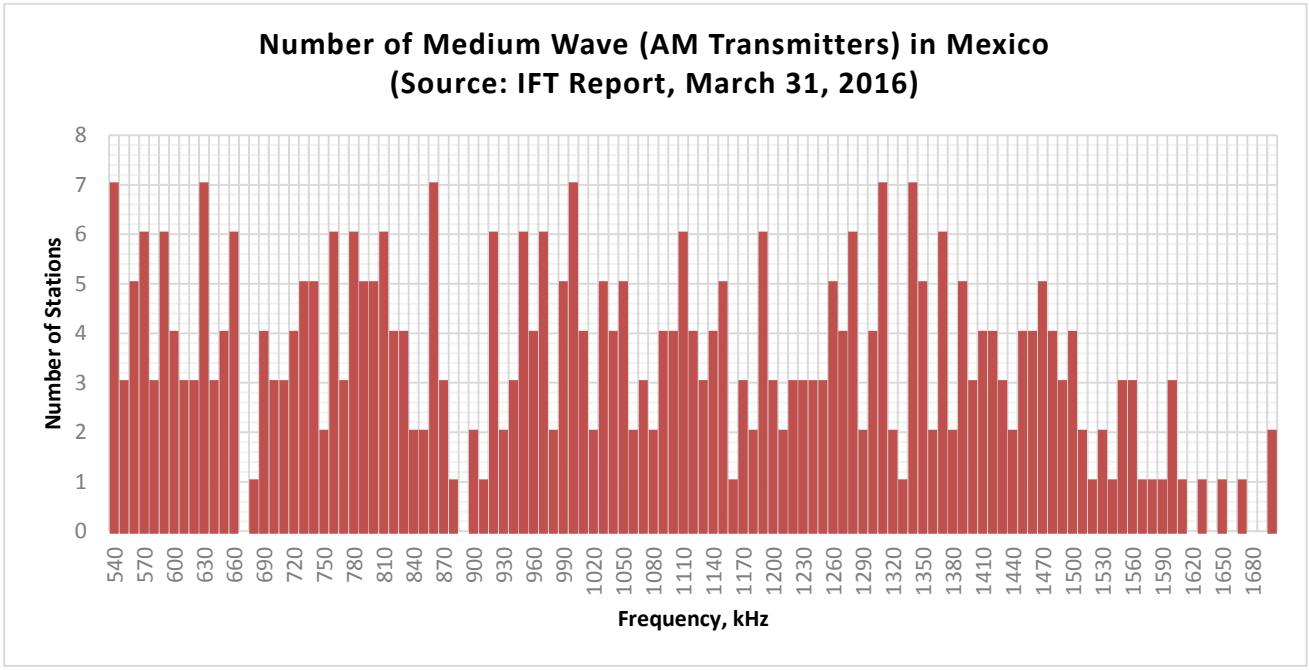
Mexico

A national media survey published by IFT in 2016 highlights that 15% of the population in Mexico actively listens to MF radio.[2]

The Histogram represents the 393 operating MF (AM) stations in Mexico and the frequency distribution of those stations.

Total number of stations:	393
Maximum Power Level:	250 kW
Minimum Power Level:	0.025 kW (night-time)

FIGURE 4



[2] IFT: *Reporte trimestral de audiencias de radio y televisión con perspectiva de género, abril – junio 2017.*