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| U.S. Radiocommunications SectorFact Sheet |
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| **Purpose/Objective:** This contribution proposes to add a report on protection ratio testing to Annex 8 of SM.2451-1 that is relevant to Region 2, especially North America.  |
| **Abstract:** AM broadcasting at MF (Band 6) frequencies is extremely popular in the Americas region (ITU-R Region 2) with thousands of AM stations serving listeners over geographical areas ranging from small cities to large regions. Region 2 MF stations broadcast on a 10 kHz channel raster. According to data tabulated in the 2024 edition of the World Radio TV Handbook (WRTH), there are 7,419 MF stations operating in ITU Region 2 on various channels from 530 to 1700 kHz.Wireless charging of electric vehicles (WPT-EV) is expected to involve use of a fundamental frequency in the band 79-90 kHz. This contribution includes the results of a perceptual interference study that was recently conducted to determine how harmonic frequencies of emissions from WPT-EV systems can produce perceptible interference to AM radio reception and to determine minimally acceptable protection ratios. The study found that frequencies of 80, 85, or 90 kHz fare better in disguising obtrusive interactions with AM station frequencies in Region 2 on account of the relationship with the 10 kHz channel raster in Region 2. The study also found that protection ratios of 14 to 27.9 dB are needed to provide “acceptable” reception of AM stations at a particular signal level in the presence of WPT-EV harmonic interference throughout the planned service and licensed service area.. |