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| U.S. Radiocommunications Sector  Fact Sheet | |
| **Working Party:** ITU-R WP1A | **Document No:** USWP1A-## |
| **Ref:** Recommendation ITU-R SM.2110-1, *Guidance on frequency ranges for operation of non-beam wireless power transmission for electric vehicles* | **Date:** 03 February 2023 |
| Document Title: Proposed preliminary draft revision to Recommendation ITU-R SM.2110-1 | |
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| **Purpose/Objective:** Add frequency range of 22-25 kHz for heavy-duty WPT-EV applications based on studies and a technical information report (TIR) SAE J2954/2 released in 2022. | |
| **Abstract:** The SAE J2954 taskforce has studied wireless power for electric vehicles (WPT-EV) for more than a decade. In 2016, the SAE J2954 taskforce made a world-wide recommendation for a nominal frequency of 85 kHz for light-duty WPT-EV applications (i.e., 79-90 kHz as now indicated in Recommendation ITU-R SM.2110-1), which was codified into the SAE J2954 Standard when it was released in 2020. Furthermore, the SAE J2954 committee indicated in that same 2016 recommendation that the frequency band of 21.05 kHz – 38.10 kHz could also be considered for future heavy-duty applications.  Most recently the SAE J2954 committee has studied heavy-duty applications in more depth and released a Technical Information Report (TIR) titled, [SAE J2954/2, Wireless Power Transfer for Heavy-Duty Electric Vehicles](https://www.sae.org/standards/content/j2954/2_202212/) in December, 2022. This report includes important technical information about wireless power transfer for heavy-duty vehicle applications. Specifically, it notes that two bands of frequencies are considered for heavy-duty wireless power depending on specific field-applicability. The frequency ranges are 79-90 kHz (same as light-duty) and 22-25 kHz (specific to some heavy-duty applications).  The SAE J2954 EMC sub-committee has noted some regional concerns with the existing frequency range of 19-21 kHz presently specified in Recommendation ITU-R SM.2110-1 since this band is designated for SFTS (although no known operational signal is active) and that the third harmonic of this band falls within active SFTS 60 kHz broadcasts in the United States, and which also may be used in other regions. Accordingly, the SAE J2954 taskforce is proposing to add the band 22-25 kHz to Recommendation ITU-R SM.2110-1. | |