

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC**

In the Matter of)	
)	
FCC Seeks Comment on Recommendations)	IB Docket No. 16-185
Approved by the World Radiocommunication)	
Conference Advisory Committee)	
)	

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

The Association of American Railroads (“AAR”)¹ respectfully submits these comments on the World Radiocommunication Conference Advisory Committee’s (“WAC’s”) draft recommendations for consideration at the 2019 World Radiocommunication Conference (“WRC-19”).² AAR limits its comments to WRC -19 Agenda Items 1.11, 1.9.1 and 1.9.2. AAR encourages the International Bureau (the “Bureau”) to recommend, to the extent possible, greater international harmonization of the frequencies already used in the U.S. for railway radiocommunication systems. Further, AAR urges the Bureau to ensure that the railroads’ extensive investments in railway radiocommunication systems are protected from interference from new systems developed in the frequencies identified in Agenda Items 1.9.1 and 1.9.2.

America’s railroads are a vital national resource, critical to our success and productivity. They are literally the engines that power the 21st century economy. In 2014, America’s major

¹ The Association of American Railroads (“AAR”) is a voluntary non-profit membership organization whose freight railroad members operate 82 percent of the line-haul mileage, employ 95 percent of the workers and account for 97 percent of the freight revenues of all railroads in the United States. More information on AAR is available at <https://www.aar.org/Pages/AboutUs.aspx>.

² *FCC Seeks Comment on Recommendations Approved by the World Radiocommunication Conference Advisory Committee*, Public Notice, DA 16-1216 (rel. Oct. 25, 2016) (“*Public Notice*”).

freight railroads supported 1.5 million jobs, nearly \$274 billion in output, and \$88 billion in wages across the U.S. economy.³ Railroads account for approximately one-third of all U.S. exports by volume, providing a vital link to international markets for American firms, farmers and resource producers.⁴ Like most other industries, railroads have embraced modern technologies to provide better, safer and more economical services to their consumers.

AAR and its members hold licenses in several spectrum bands used for critical rail safety and communications systems. For example, AAR holds licenses for spectrum in the 220 MHz band throughout the contiguous United States that its members use for Positive Train Control (“PTC”) services. To date, railroads have retained more than 2,400 system personnel to implement PTC and have spent close to \$6.5 billion on PTC development and deployment.⁵

AAR’s members hold licenses in several other spectrum bands as well. For example, railroads use several channels in the 160 MHz band (160.215-160.565 MHz) for railroad communications services such as voice service, maintenance-of-way (“MOW”) equipment, signal maintenance and wayside health and diagnostics. Railroads also use spectrum in the 450 MHz and 900 MHz bands for a variety of services such as Advanced Train Control Systems and Automatic Equipment Identification.

AAR supports the WAC’s recommendation that WRC-19 study and, as appropriate, take action to globally (or regionally) harmonize spectrum bands to support train and trackside railway radiocommunication systems. AAR also encourages the WAC to recognize incumbent

³ See AAR, THE ECONOMIC IMPACT OF AMERICA’S FREIGHT RAILROADS 1 (Aug. 2016), <https://www.aar.org/BackgroundPapers/Economic%20Impact%20of%20US%20Freight%20Railroads.pdf>.

⁴ *Id.*

⁵ See AAR, Policy Issues – Positive Train Control, <https://www.aar.org/policy/positive-train-control>.

railroad operations in the 160 MHz frequencies and recommend protection for these services from additional mobile maritime radiocommunication services.

WRC-19 Agenda Item 1.11 proposes taking “necessary actions, as appropriate, to facilitate global or regional harmonized frequency bands to support railway radiocommunication systems between train and trackside within existing mobile service allocations, in accordance with Resolution 236 (WRC-15).”⁶ Resolution 236, adopted by the last World Radiocommunication Conference (“WRC-15”), recognizes that “information and radiocommunication technologies in railway radiocommunication systems between train and trackside provide improved railway traffic control, passenger safety and improved security for train operations” and notes that international standards and harmonized spectrum would promote greater economies of scale and global deployment of these systems.⁷

AAR agrees with the findings in Resolution 236 that railway radiocommunication systems serve important economic and public safety purposes. As noted above, AAR has invested significant resources deploying train and trackside systems like PTC. AAR also supports international spectrum harmonization as a general matter. For example, railroad operators domestically and abroad use portions of spectrum between 450 MHz and 455 MHz, and the WAC should encourage the ITU to study this spectrum band for a global railway radiocommunication systems allocation.

Spectrum near the 160 MHz frequencies is a strong candidate for international harmonization as well. Indeed, use of these frequencies by rail systems is not limited to the United States. While American railroad operators use spectrum just above 160 MHz for

⁶ See *Public Notice*, Attach. A at 8.

⁷ See ITU, Resolution 236, *Railway Radiocommunication Systems between Train and Trackside*, Final Acts WRC-15 at 292 (Nov. 27, 2015).

communications services, the Asia-Pacific Telecommunity (“APT”) has noted that, in Japan, train operators use the 156.8375-160 MHz band for an emergency, collision avoidance cut-off system.⁸ Rail operators would benefit from greater global economies of scale if the ITU identified spectrum around 160 MHz for harmonization and dedicated railway communications uses.

But harmonization should not come at the expense of AAR’s (and its members’) prior investments in life-saving infrastructure. The 220-222 MHz band in the U.S. is allocated for fixed and land mobile uses under Part 90 of the FCC’s rules,⁹ but the same frequencies are allocated for different services in other ITU regions.¹⁰ China and India, for example, have allocated the 216-223 MHz band for aeronautical radionavigation service on a primary basis.¹¹ To the extent additional regions can allocate the 220 MHz frequencies for railway radiocommunication systems, operators in the U.S. and abroad would benefit from greater economies of scope and scale. More importantly, AAR urges the Bureau to work to guard against any decisions that could deny American railroads the benefits of their investment-backed expectations that led them to purchase spectrum licenses and build-out PTC systems in this band.

Similarly, AAR has concerns regarding Agenda Items 1.9.1 and 1.9.2, the underlying Resolutions associated with those items and the WAC’s stated positions on the agenda items. Agenda Item 1.9.1 addresses regulatory actions within the frequency band 156-162.05 MHz to allow for the deployment of autonomous maritime radio devices, and Agenda Item 1.9.2

⁸ See Asia-Pacific Telecommunity, *Working Document Towards a Draft APT Report on System Description of Railway Radiocommunication System Between Train and Tracksides (RSTT)*, Doc. No. AWG-20/TMP-43 (Rev.1) (Sept. 8, 2016).

⁹ 47 C.F.R. § 2.106.

¹⁰ *Id.*

¹¹ *Id.* n.5.240.

addresses allocating the 156.0125-157.4375 MHz and 160.6125-162.0375 MHz for a satellite component for VHF Data Exchange Systems (“VDESs”).¹² Resolution 362, the ITU resolution underlying Agenda Item 1.9.1, suggests that the use of certain frequencies in the 156-162.05 MHz range, and identified in Appendix 18 to the Radio Regulations, should be limited to autonomous maritime radio devices (without noting the need to protect existing terrestrial users of these bands, such as railroads).¹³

AAR’s members use many of the transmitting frequencies near 160 MHz and identified in Appendix 18 for railway operations systems. These systems are crucial to the safe, productive operation of America’s railways, and cannot afford to experience co-channel or adjacent channel interference from autonomous maritime radio devices. Currently, the proposed U.S. view on Agenda Item 1.9.1 is that the U.S. supports ITU-R studies prescribed in Resolution 362, but that these studies should take into account protection of Global Maritime Distress and Safety Systems and Automatic Identification Systems.¹⁴ Railway radiocommunication services are also an important incumbent use of these spectrum frequencies, and AAR therefore urges the Bureau to explicitly recognize that any ITU-R studies of these frequencies should take these services into account along with GMDDS and AIS operations.

Railroads also operate on spectrum in close proximity to the frequencies proposed for the VDES satellite component, and need protection from potential adjacent channel interference

¹² See *Public Notice*, Attach. A at 4-5.

¹³ See ITU, Resolution 362, *Autonomous Maritime Radio Devices Operating in the Frequency Band 156-162.05 MHz*, Final Acts WRC-15 at 310 (Nov. 27, 2015). WRC-15 Resolution 360 identifies the 156.0125-157.4375 MHz and 160.6125-162.0375 MHz bands as a potential home for the VDES satellite component, but does not contain parallel language to that found in Resolution 362, potentially barring other devices and systems from the identified frequency bands. See *id.* at 305-307.

¹⁴ See *Public Notice*, Attach. A at 4.

issues. But in contrast to the language in Agenda Item 1.9.1, the U.S.'s stated position on Agenda Item 1.9.2 recognizes that the ITU's studies of this spectrum "should also take into account the protection of existing terrestrial services which operate in these and adjacent frequency bands." AAR supports this caveat and, to the extent the Bureau does not specifically recognize railway radiocommunication services as an incumbent use of the frequencies identified in Agenda Item 1.9.1, urges the Bureau in the alternative to use parallel language in Agenda Items 1.9.1 and 1.9.2.

AAR supports the Bureau and the ITU's efforts to harmonize spectrum for railway radiocommunication services, and encourages the Bureau to recommend for ITU-R study frequencies railroads are currently using in the United States. But harmonization should not come at the expense of stranded investment in important safety-of-life equipment. Moreover, AAR urges the Bureau to explicitly recognize incumbent uses by America's railroads of particular spectrum bands identified in ITU resolutions for alternative uses. The Bureau should only support studies of those bands if the studies specifically take into account protection of existing railway radiocommunication systems that operate in or adjacent to those bands.

Respectfully submitted,

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November 8, 2016