



# PUBLIC NOTICE

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## Wireless Telecommunications Bureau Seeks Comment on Spectrum Needs for the Implementation of the Positive Train Control Provisions of the Rail Safety Improvement Act of 2008

WT Docket No. 11-79

Comment Date: June 20, 2011  
Reply Comment Date: July 11, 2011

The Wireless Telecommunications Bureau (Bureau) seeks comment from freight and passenger railroads, equipment manufacturers, railroad associations, and other interested parties on spectrum issues related to the implementation of positive train control (PTC) pursuant to the Rail Safety Improvement Act of 2008 (RSIA),<sup>1</sup> and corresponding Federal Railroad Administration (FRA)<sup>2</sup> regulations. The record received in response to this Public Notice will be instrumental in a Commission determination of what future proceedings or actions, if any, might facilitate an effective, efficient, and timely process for railroads to acquire spectrum to comply with the PTC implementation requirements under the RSIA and FRA regulations.

The RSIA, which was enacted on October 16, 2008, and the corresponding regulations issued by the FRA require passenger and major freight railroads to implement PTC on most major track lines by December 31, 2015.<sup>3</sup> PTC is a system designed to prevent train-to-train collisions, over-speed derailments, incursions into established work zone, and the movement of trains through switches left in the wrong position.<sup>4</sup> PTC accomplishes this by establishing a communications-based network linking trains to equipment along the track and centralized office locations to provide information to a locomotive about its authority to proceed along the track at a particular speed.<sup>5</sup> These networks include the use of

<sup>1</sup> Pub. L. No. 110-432, 122 stat. 4848 (2008).

<sup>2</sup> Positive Train Control Systems, Docket No. FRA-2008-1032, 75 Fed. Reg. 2598 (Jan. 15, 2010).

<sup>3</sup> 49 U.S.C. § 20157(a); 49 C.F.R. § 236.1005(b). *See also* 49 C.F.R. § 236.1019 (exempting railroads from the requirement to implement PTC on certain track lines).

<sup>4</sup> *See* 49 U.S.C. § 20157(i)(3); 49 C.F.R. § 236.1005(a). The FRA also adopted additional safety requirements for PTC systems implemented on high-speed rail lines. *See* 49 C.F.R. § 236.1007 (establishing additional PTC requirements as the speed of freight and passenger operations increases from 50 and 60 miles per hour to 90, 125, and 150 miles per hour).

<sup>5</sup> *See* United States Government Accountability Office, Report to Congressional Committees, Rail Safety: Federal Railroad Administration Should Report on Risks to the Successful Implementation of Mandated Safety Technology, at 2 (Dec. 2010) (GAO Report).

data radios to enable wireless communication between locomotives and wayside units along the track.<sup>6</sup> The RSIA requires PTC systems to be interoperable to accommodate the movement of trains over track owned by other railroad carriers.<sup>7</sup>

The RSIA and FRA regulations require the railroads to submit specified plans to the FRA on the status of their PTC implementation.<sup>8</sup> The first of these plans – the PTC implementation plan – was required to be filed with the FRA by April 16, 2010.<sup>9</sup> The FRA received 41 PTC implementation plans in 2010.<sup>10</sup> Railroads provided information about the extent to which they will implement PTC and provided a timeframe for such implementation.<sup>11</sup> A few railroads indicated in their PTC implementation plans that the procurement of spectrum could be a risk factor in PTC implementation.<sup>12</sup> Furthermore, in December 2010, the Government Accountability Office (GAO) released a report detailing the railroads’ progress in developing and implementing PTC and assessing the risks to successful implementation by December 2015.<sup>13</sup> As a part of its inquiry, GAO interviewed industry and government experts and requested that a select group of rail safety technology experts complete a questionnaire about implementing a number of rail safety technologies.<sup>14</sup> Some of these experts indicated that the acquisition of adequate spectrum in the 220 MHz frequency range, specifically in dense, metropolitan areas, could present a challenge.<sup>15</sup> In light of these concerns, the Bureau now seeks comment from freight and passenger railroads, equipment

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<sup>6</sup> See GAO Report at 12. Wayside units are devices installed at signals, switches, and other locations along the track that monitor the status to signals and switches and communicate that information to locomotives directly or through railroads’ centralized office systems. GAO Report at 17-18.

<sup>7</sup> 49 U.S.C. § 20157(a)(2), (i)(1).

<sup>8</sup> See 49 U.S.C. § 20157(a)(1). Railroads will also be required to file a PTC Development Plan and PTC Safety Plan. 49 C.F.R. §§ 236.1013, 236.1015. The FRA will have to approve the PTC Safety Plan and issue a PTC System Certification before any PTC system can be installed. 49 U.S.C. § 20157(h); 49 C.F.R. § 236.1015(a). The FRA will also conduct an annual review to ensure railroads are complying with their plans. 49 U.S.C. § 20157(c).

<sup>9</sup> 49 U.S.C. § 20157(a)(1) (“Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation shall develop and submit to the Secretary of Transportation a plan for implementing a positive train control system by December 31, 2015.”); 49 C.F.R. § 236.1009.

<sup>10</sup> GAO Report at 18-19; List of Railroads and Docket Numbers, <http://www.fra.dot.gov/downloads/safety/PTCDocketNumbers.xls> (last visited May 4, 2011).

<sup>11</sup> See GAO Report at 19; 49 C.F.R. §§ 236.1009, 236.1011.

<sup>12</sup> See, e.g., Canadian Pacific Railway, Docket No. FRA-2010-0058, Positive Train Control Implementation Plan, at 4-4 (ver. 1.1 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0058-0007>; The Kansas City Southern Railway, Docket No. FRA-2010-0059, Positive Train Control Implementation Plan, at 1-2, 3-2, 4-1, 5-7 (ver. 1.1 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0059-0005>; Long Island Railroad, Docket No. FRA-2010-0031, PTC Implementation Plan, at 1-3-4, 4-7, 7-1, 7-3 (ver. 2.1 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0031-0005>; Metro-North Railroad, Docket No. FRA-2010-0032, PTC Implementation Plan, Vol. 1, at 1-37, 4-7 (ver. 5.0 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0032-0005>; New Jersey Transit, Docket No. FRA-2010-0033, Positive Train Control Implementation Plan, 66, 73, 86 (ver. 2.0 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0033-0004>; Northern Indiana Commuter Transportation District, Docket No. FRA-2010-0043, PTC Implementation Plan, at 3-6, 4-15 (ver. 3.4 posted Nov. 17, 2010), *available at* <http://www.regulations.gov/#!documentDetail;D=FRA-2010-0043-0008>.

<sup>13</sup> GAO Report at 3.

<sup>14</sup> *Id.* at 4.

<sup>15</sup> *Id.* at 76 (Appendix III: Detailed Results of Experts’ Assessment of Rail Safety Technologies).

manufacturers, railroad associations, and other interested parties on spectrum issues related to the implementation of PTC.

The Bureau seeks comment from stakeholders regarding the frequency bands and amount of spectrum needed to successfully implement PTC. We recognize that any difficulties in meeting the spectrum needs for PTC are directly related to the geographic areas where PTC must be deployed and the current spectrum environment in those areas. Thus, we seek comment on geographic areas where meeting the spectrum needs for PTC are likely to present the most challenges. The Bureau further recognizes that PTC system functionalities and components may differ depending upon the frequencies and amount of spectrum available, so we seek information regarding how the use of different frequencies and amounts of spectrum could affect the functionalities and components of a PTC system. We also seek input regarding how aspects of various rail operations affect the amount of spectrum or frequencies needed to successfully implement PTC. Such factors could include the speed of train operations, the number of track lines in a certain geographic area, the amount of rail traffic on track lines, the temporal separation of trains, and the hours of operation of commercial services on a track line. The Bureau also seeks comment on the spectrum coverage area that will be needed by the railroad industry for PTC implementation. For example, we seek input regarding the approximate amount of geography on either side of a track line where signal coverage is necessary to operate a PTC system, recognizing that a freight or passenger rail would not require spectrum solutions outside a certain distance from a track line.

While the Bureau has taken action on many assignment applications and technical waivers regarding spectrum for PTC purposes, the Bureau seeks comment regarding policy actions that would further facilitate the acquisition of spectrum by railroads subject to the RSIA for PTC implementation. We seek comment regarding whether it is possible for railroads or industry participants that already hold spectrum rights to facilitate PTC implementation for railroads, which are not currently FCC licensees or lessees, operating on the same track or in the same geographic area (*e.g.*, urban area or FCC license area). More generally, we request information regarding any testing that has been performed on PTC systems (utilizing various frequency bands and amounts of spectrum) in the United States or in other countries. Finally, the Bureau invites comment on any other pertinent issues regarding spectrum needs for successful PTC system deployment.

This matter shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.<sup>16</sup> Persons making oral *ex parte* presentations are directed to the Commission’s statement reemphasizing the public’s responsibility in permit-but-disclose proceedings and are reminded that memoranda summarizing the presentation must contain the presentation’s substance and not merely list the subjects discussed.<sup>17</sup> More than a one- or two-sentence description of the views and arguments presented is generally required.<sup>18</sup> Other rules pertaining to oral and written presentations are set forth in Section 1.1206(b) as well.<sup>19</sup>

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<sup>16</sup> 47 C.F.R. §§ 1.1200, 1.1206. Filings pertaining to specific railroad industry participants (*e.g.*, assignment applications and waiver requests) that are already part of adjudicatory proceedings before the Commission and comments regarding such specific requests should be filed in the appropriate docket and not refiled in this proceeding. This Public Notice does not change the *ex parte* status of any pending proceedings, filings, or requests currently before the Commission.

<sup>17</sup> See Commission Emphasizes the Public’s Responsibilities in Permit-But-Disclose Proceedings, *Public Notice*, 15 FCC Rcd 19945 (2000).

<sup>18</sup> See 47 C.F.R. § 1.1206(b)(2).

<sup>19</sup> *Id.* § 1.1206(b).

Pursuant to sections 1.415 and 1.419 of the Commission's rules,<sup>20</sup> interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. All comments should refer to WT Docket No. 11-79. Comments may be filed using: (1) the Commission's Electronic Comment Filing System ("ECFS"), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.<sup>21</sup>

Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of the proceeding, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number

Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Paper filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. The filing hours are 8:00 a.m. to 7:00 p.m.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.

Comments, reply comments, and *ex parte* submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12<sup>th</sup> Street, S.W., CY-A257, Washington, D.C., 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

People with Disabilities: To request information in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the FCC's Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

For further information, contact Erin McGrath, Wireless Telecommunications Bureau, Mobility Division, at 202-418-2042.

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<sup>20</sup> See 47 C.F.R. §§ 1.415, 1419.

<sup>21</sup> See Electronic Filing of Documents in Rulemaking Proceedings, GC Docket No. 97-113, *Report and Order*, 13 FCC Red 11322 (1998).