



PUBLIC NOTICE

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WIRELESS TELECOMMUNICATIONS BUREAU SEEKS COMMENT ON REQUEST FOR WAIVER TO FACILITATE DEPLOYMENT OF POSITIVE TRAIN CONTROL SYSTEMS

WT Docket No. 13-59

Comment Date: April 8, 2013

Reply Comment Date: April 23, 2013

By this Public Notice, the Wireless Telecommunications Bureau (Bureau) seeks comment on the request of PTC-220, LLC (PTC-220) for waiver of Sections 90.723(f) and 90.729(b) of the Commission's rules to facilitate deployment of positive train control (PTC) systems in the United States.¹

Pursuant to the Rail Safety Improvement Act of 2008,² Congress required freight and commuter railroads to install and operate PTC systems by December 31, 2015. PTC systems are intended to reduce the risk of rail accidents caused by human error, including train-to-train collisions, derailments caused by excessive speed, and unauthorized train movements in work zones. PTC wireless communications networks enable real-time information sharing between trains, rail wayside devices, and "back office" applications, regarding train movement authorities, speed restrictions, train position and speed, and the state of signal and switch devices.³

PTC-220, a joint venture of the nation's seven Class I freight railroads, was formed to facilitate the development and deployment of interoperable PTC communications systems in the United States to benefit both freight and commuter rails. To serve this purpose, PTC-220 acquired and now holds sixteen licenses in the 220 MHz band, including four nationwide licenses,⁴ six J Block licenses (which together form a *de facto* nationwide license),⁵ and six E Block licenses.⁶ PTC-220 plans to lease spectrum to, and

¹ PTC-220 Request for Waiver, filed February 1, 2013 (file nos. 0005631265, 66, 69-75, 77, 78, 81, 82, 84, 86, and 89) (Waiver Request).

² Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, § 104, 122 Stat. 4848, 4857 (2008).

³ To determine the amount of time to stop a train, for example, a PTC system must account for terrain, a train's weight and length, its braking technology, and other factors.

⁴ These licenses include two Phase I nationwide licenses (WPFR284 and WFPF444), one L Block nationwide license (WPOI701), and one M Block nationwide license (WPOJ271).

⁵ These licenses include call signs WPOI702, WPOI703, WPOI704, WPOI705, WPOI706, and WPOI708.

support, non-member railroads that lack adequate spectrum for PTC purposes.⁷ PTC-220 seeks, through the waiver request, to maximize the use of its spectrum for its members and others to implement PTC.

Power and Antenna Height Limitations of Section 90.729(b).

In 2009, the Commission granted PTC-220 a waiver of Section 90.715 to deploy a time division duplex (TDD) PTC system that utilizes both the lower 220-221 MHz and upper 221-222 MHz bands for base and mobile transmissions.⁸ The Commission found that waiver of Section 90.715 was in the public interest and would facilitate PTC deployments “in highly congested areas shared by multiple freight and commuter railroads.”⁹

Commission rules currently permit operations with greater effective radiated power (ERP), and antenna height above average terrain (HAAT) in the lower 220-221 MHz band than in the upper 221-222 MHz band. Specifically, stations in the lower 220-221 MHz band are permitted to use 500 watts ERP with a HAAT of up to 150 meters.¹⁰ When a station in the lower 220-221 MHz band exceeds 150 meters HAAT, it must reduce its ERP correspondingly. Section 90.729(b), by contrast, prohibits licensees from operating fixed stations in the upper 221-222 MHz band with an ERP greater than 50 watts and with HAAT higher than 7 meters, except that transmissions from antennas that are higher than 7 meters above average terrain will be permitted if the ERP is reduced below 50 watts ERP by $20 \log_{10}(h/7)$ dB, where h is the HAAT in meters.¹¹

PTC-220 requests a waiver of Section 90.729(b)’s limits to allow operations in the upper 221-222 MHz band to exceed 50 watts ERP with antenna HAAT greater than 7 meters.¹² PTC-220 states that under the rule’s current limits, base station transmissions in the upper 221-222 MHz band would have a much smaller coverage footprint than those with higher power and antenna height in the lower 220-221 MHz band. PTC-220 states that waiver of Section 90.729(b)’s power and height limits would enable it to increase network capacity and allow more railroads to benefit from PTC-220’s member networks, including commuter and short line railroads, and especially in congested markets.

PTC-220 states that an increase in the power and antenna height limits for PTC-220’s nationwide and *de facto* nationwide licenses will cause no co-channel user interference because there are no other co-channel users. Regarding its regional E Block frequencies, where there are co-channel licensees in neighboring market areas, PTC-220 states that harmful interference to co-channel users is unlikely.¹³ PTC-220 further states that the strict emission mask required by Section 90.210(f) will mitigate the risk of

⁶ These licenses include WPOJ279 (Rochester, MN-IA-WI), WPOJ280 (Minneapolis-St. Paul, MN-WI-IA), WPOJ281 (San Francisco-Oakland-San Jose, CA), WPOI774 (Memphis, TN-AR-MS-KY), WPOI800 (St. Louis, MO-IL), and WPVL860 (Los Angeles-Riverside-Orange County, CA-AZ).

⁷ Waiver Request at 21-22.

⁸ Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules, *Memorandum Opinion and Order*, 24 FCC Rcd 8537, 8544-45 ¶18 (2009) (PTC-220 2009 Waiver Order). The 220 MHz band was planned as a frequency division duplex (FDD) band (with the lower one megahertz designated as the base transmit band and the upper one megahertz designated as the mobile transmit band).

⁹ PTC-220 2009 Waiver Order, 24 FCC Rcd at 8544-45 ¶18.

¹⁰ 47 C.F.R. § 90.729(a).

¹¹ 47 C.F.R. § 90.729(b).

¹² Waiver Request at 7-9, 11-15.

¹³ *Id.* at 12.

interference to adjacent channel licensees.¹⁴ PTC also proposes that we adopt frequency and geographic spacing requirements to reduce the possibility of interference to adjacent channel licensees.¹⁵

We seek comment on PTC-220's request for waiver of the power and antenna height limitations of Section 90.729(b), including the potential for interference to co-channel and adjacent channel licensees and PTC-220's proposed remediation measures. Parties that oppose the waiver request should provide the specific technical basis for their opposition to the requested relief.

Coordination Requirements of Section 90.723(f).

PTC-220 also requests a waiver of Section 90.723(f), which requires coordination of Phase II 220-222 MHz licensees' facilities to ensure that certain base or fixed station frequencies are selected to avoid interference in the 220-222 MHz band.¹⁶ Specifically, Section 90.723(f) requires licensees with base or fixed stations transmitting on frequencies in sub-band B of the lower 220-221 MHz band and with base or fixed stations receiving on sub-band A of the upper 221-222 MHz band to coordinate the location of stations to avoid interference where the transmitting and receiving frequencies are 200 kHz or less removed from one another.¹⁷ PTC-220 states that waiver of Section 90.723(f) is necessary to avoid extended deployment delays that would occur if PTC-220 is required to enter into coordination discussions with hundreds of Phase II licensees across the country. PTC-220 proposes a process for coordination that is intended to preserve the rights of potentially affected licensees, and has committed to take measures necessary to prevent or correct interference to co-channel and adjacent channel receivers.¹⁸

We seek comment on PTC-220's request for waiver of Section 90.723(f) and the elements of its proposed coordination paradigm. Parties that oppose the waiver request should provide the specific basis for their opposition to the requested relief.

Procedural Matters

Interested parties may file comments and reply comments in response to the waiver request on or before the dates listed on the first page of this *Public Notice*. All pleadings must reference WT Docket No. 13-59. Parties may file comments using (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.¹⁹

- Electronic Filers: File comments electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
- If multiple docket or rulemaking numbers appear in the caption of this proceeding, ECFS filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers

¹⁴ *Id.* at 13.

¹⁵ *Id.* at 14-15.

¹⁶ Waiver Request at 9-10, 15-17.

¹⁷ 47 C.F.R. § 90.723(f).

¹⁸ Waiver Request at 16-17.

¹⁹ See Electronic Filing of Documents in Rulemaking Proceedings, *Report and Order*, GC Docket No. 97-113, 13 FCC Rcd 11322 (1998).

should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, “get form.” A sample form and directions will be sent in response.

- 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.

Send filings by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). Address filings to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- Deliver hand-delivered or messenger-delivered paper filings to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554 between 8:00 AM and 7:00 PM. Use rubber bands or fasteners to hold deliveries together. Dispose of all envelopes before entering the building.
- Send commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- Send U.S. Postal Service first-class, Express, and Priority mail to 445 12th Street, SW, Washington DC 20554.

Parties are requested to send one copy of their comments and reply comments to Best Copy and Printing, Inc., Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (800) 378-3160, e-mail FCC@BCPIWEB.com.

Documents in WT Docket No. 13-59 are available for viewing on ECFS, <http://www.fcc.gov/cgb/ecfs>, by entering the docket number, 13-59. These documents are available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th St. SW, Room CY-A257, Washington, D.C. 20554. The documents are also available for purchase from Best Copy and Printing, Inc., telephone (800) 378-3160, facsimile (301) 816-0169, e-mail FCC@BCPIWEB.com, telephone (202) 488-5300, facsimile (202) 488-5563, TTY (202) 488-5562, e-mail fcc@bcpiweb.com.

Alternate formats of this *Public Notice* (computer diskette, large print, audio recording, and Braille) are available to persons with disabilities by contacting the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY), or send an e-mail to fcc504@fcc.gov.

This proceeding has been designated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²⁰ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of

²⁰ See 47 C.F.R. §§ 1.1200(a), 1.1206.

electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

For further information, please contact Richard Arsenault, Chief Counsel, Mobility Division, Wireless Telecommunications Bureau at (202) 418-0920 or via email at Richard.Arsenault@fcc.gov, or Rodney Conway, Engineer, Mobility Division, at (202) 418-2904 or via email at Rodney.Conway@fcc.gov.

Action by the Chief, Mobility Division, Wireless Telecommunications Bureau.

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