Decision 10-11-009 November 19, 2010

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Implementation of Collision-Avoidance Systems on Commuter Rail Lines in California.	Rulemaking 08-11-017 (Filed November 21, 2008)

DECISION ON IMPLEMENTATION OF COLLISION-AVOIDANCE SYSTEMS ON COMMUTER RAIL LINES IN CALIFORNIA

1. Summary

This decision determines that it is no longer necessary for the Commission to take action in this proceeding, Order Instituting Rulemaking 08-11-017 (R.08-11-017). Since the issuance of R.08-11-017, Congress passed the Rail Safety Improvement Act of 2008, which required that each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation must install a positive train control system (an advanced collision avoidance system) by December 31, 2015. Such systems prevent train-to-train collisions resulting from human or mechanical errors. Because of this Federal requirement, which makes a separate Commission requirement moot, the Commission's Consumer Protection and Safety Division has submitted a report and recommendation titled *Commuter Rail Collision-Avoidance Report in R.08-11-017*, dated December 15, 2009, which recommends that the Commission take no further action concerning implementation of collision-avoidance systems

for commuter rail systems operating in California. This decision adopts that recommendation and closes the proceeding.

2. Background

On November 25, 2008, the Commission issued this Order Instituting Rulemaking (R. or OIR) 08-11-017 (Rulemaking) to determine whether intrastate commuter rail systems operating in California should implement a collision-avoidance safety system and, if so, what the minimum scope of such a safety system should be.

This Rulemaking came in the wake of the September 12, 2008 head-on collision of a Metrolink commuter train and a freight train operated by the Union Pacific Railroad (UP) in Chatsworth, California. Twenty-five lives were lost in that collision, and 135 others were injured. At the time of the collision, the Metrolink train was travelling at approximately 42 miles per hour (mph) on a single track which was shared with freight trains.[1] The UP freight train proceeding in the opposite direction was on the same track, travelling at approximately 40 mph despite having applied the emergency brakes which reduced the speed, and ultimately collided with the Metrolink commuter train.[2]

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[1] Joel Rubin, Ann M. Simmons and Mitchell Landsberg, "'Total destruction': At least 17 die in head-on Metrolink crash," Los Angeles Times, September 13, 2008, http://www.latimes.com/news/local/la-me-traincrash13-2008sep13,0,2874450.story.

[2] NTSB Document Management System, File ID 409821, Metrolink Cab Event Recorder Data Speed, http://www.ntsb.gov/Dockets/Railroad/DCA08MR009/409821.csv.

The investigation by the Commission's Consumer Protection and Safety Division (CPSD) and the National Transportation Safety Board (NTSB) revealed a critical series of human errors leading up to the tragic collision:[3]

- After stopping, unloading and loading passengers at the Chatsworth station, the Metrolink train should have departed the station slowly, in anticipation of the need to stop before the next signal, which was red.
- The Metrolink train engineer should have stopped the train in advance of the red signal. Instead, the train operator proceeded through the red stop signal into a blind curve where the Metrolink train collided with the UP freight train approaching from the opposite direction on the same track.
- The Metrolink train operator was engaged in numerous cell phone calls and text messages during the minutes preceding the stop at the Chatsworth station. His cell phone records also indicate that his last text message occurred just before the collision impact.[4]

The Chatsworth tragedy brought to the forefront the urgency of reducing hazards on the railways, especially on tracks that are shared by passenger trains and freight trains. It also underscored the woeful inadequacy of having only visual signals to warn locomotive engineers and other rail personnel of other trains on the same track. The industry has made great progress in collision avoidance systems. If such a system had been in place, the Chatsworth accident

[3] *Ibid.*

[4] *Ibid.*; see also NTSB, "Cellular/Wireless Device Records Factual Report Metrolink Engineer," Exhibit 6A, Docket No. DCA-08-MR009, February 24, 2009, http://www.ntsb.gov/Dockets/Railroad/DCA08MR009/414046.pdf .

could have been avoided.[5] In response to this tragedy, the Commission took swift action by instituting this Rulemaking.

3. Discussion

The Commission initially instituted this rulemaking to consider the effectiveness of current technological options and the economic and logistical feasibility of implementing collision-avoidance systems on the intrastate commuter rail systems operating in California. That issue has become largely moot, as discussed below.

3.1. Rail Safety Improvement Act of 2008

Immediately following the Chatsworth tragedy, Congress passed the Rail Safety Improvement Act of 2008 (RSIA, signed by President Obama on October 16, 2008, as Public Law 110-432). In part, RSIA requires that each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation must install a positive train control system (PTC), an advanced collision avoidance system, by December 31, 2015. As stated by Senator Feinstein, "[i]f Positive Train Control had been in place on Metrolink on September 12th, I believe 25 people would still be alive today."[6]

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[5] Senator Diane Feinstein's October 16, 2008 testimony on Senate Floor and September 23, 2008 briefing to Congress at http://feinstein.senate.gov/public/index.cfm?FuseAction=NewsRoom.VideoLibrary.

[6] Senator Diane Feinstein's testimony at the Metrolink hearing held on October 8, 2008 at http://feinstein.senate.gov/public/index.cfm?FuseAction=NewsRoom.FeinsteininNews&ContentRecord_id=2da49ace-5056-8059-76f3-ffb1c605360f&Region_id=&Issue_id=.

3.2. Positive Train Control

PTC refers to a type of collision avoidance technology that combines digital communications with global positioning system technology to monitor train locations and speeds. PTC provides train crews, wayside workers, and central dispatch offices with up-to-the-minute location of trains at all times and allows computerized speed and brake applications in advance of difficult or dangerous circumstances. For instance, if an engineer fails to comply with signals sent from instruments along the tracks, an electronic device in the train's cab automatically applies the brakes. PTC therefore is capable of preventing train-to-train collisions, over-speed derailments, and casualties or injuries to roadway workers (e.g., maintenance-of-way workers, bridge workers, and signal maintainers) operating within their limits of authority as a result of unauthorized incursion by a train. Experts have stated that such a fail-safe system would greatly improve train safety, especially in areas such as Southern California, where many miles of track are shared by both commuter lines and freight carriers heading to and from the busy Port of Los Angeles.

PTC systems vary widely in complexity and sophistication based on the level of automation and functionality they implement, the system architecture utilized, the wayside system upon which they are based (i.e., non-signaled, block signal, cab signal, etc.), and the degree of train control they are capable of assuming.

At the present time and in response to RSIA, the affected rail industry is aggressively pursuing development of the PTC implementation plans required by the RSIA, to implement the individual PTC systems which can operate most effectively with optimal interoperability.

3.3. Federal Railroad Administration

The Federal Railroad Administration (FRA) has taken the federal government lead on supporting rail carriers that have statutory reporting and PTC installation requirements. FRA is also working to develop a new performance-based federal regulation to address the various statutory requirements of the RSIA and to better support railroads that must install PTC systems. This new regulation is being crafted to ensure, among other things, uniform system safety throughout the nation's railways.

3.4. Consumer Protection and Safety Division

CPSD, in response to R.08-11-017, submitted a report and recommendation titled *Commuter Rail Collision-Avoidance Report in R.08-11-017*, dated December 15, 2009 (Report). Therein, CPSD examined, compared and analyzed competing collision avoidance technologies and ultimately concluded that PTC is the superior technology amongst the collision-avoidance technology alternatives currently available, stating that PTC technology is "the single most appropriate and effective collision-avoidance system for commuter rail systems operating in California."

Since the RSIA already requires the nation's Class I railroads and commuter rail systems to implement PTC by the end of 2015, no further Commission directive in that regard is necessary. The Class I freight railroads operating in California, i.e., BNSF Railway and UP, are committed to implementation of PTC in the Los Angeles Basin by December 31, 2012, and the

remainder of the state—as well as the country as a whole—by December 31, 2015.[7]

Aside from its collision-avoidance technology analysis and recommendations, CPSD recommended that the Commission 1) ban cell phones and other personal electronic devices (PEDs) in the locomotive cabs and in cab cars, 2) require installation of inward-facing video cameras in the locomotive cabs and cab-cars, and 3) request FRA to rescind FRA's waiver of its Delayed in Block signage requirements.[8] We deem these latter recommendations to either outside the scope of this OIR or unnecessary for us to decide here.

With reference to the PED issue, FRA has already adopted a permanent order banning PEDs in specified railroad operations including locomotives and

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[7] Report at 4.

[8] In 1996, FRA issued *Emergency Order No. 20*, *Notice 1* (61 Fed. Reg. 6876 (Feb. 22, 1996), http://www.fra.dot.gov/downloads/safety/eo20.pdf at 2.), and *Notice No. 2* (61 Fed. Reg. 8703 (March 5, 1996), at http://www.fra.dot.gov/downloads/safety/eo20_n2.pdf.). *Notice No. 1* required commuter railroads follow the train delayed in block rule, which in short provided that the railroads do the following:

> ... adopt and comply with an operating rule requiring that, when a passenger train stops for any reason, including a station stop, or its speed is reduced below 10 m.p.h., the train shall proceed under any speed limitations set forth in applicable railroad operating rules, and in addition, must be prepared to stop before passing the next signal; the train must maintain the prescribed speed until the next wayside signal is clearly visible and that signal displays a proceed indication, and the track to that signal is clear….

Notice No. 2, added a requirement for related signs: "… that appropriate signs be installed at each affected signal and at the departure end of stations." Metrolink implemented the delay-in-block rule but, like most (but not all) of the commuter railroads, obtained a waiver from the FRA for the installation of signs.

operating cabs.[9] In addition, in 2008, the Commission opened a separate OIR, R.08-10-007, to consider adoption of a General Order relating to PED use on rail transit systems.[10] As for the inward-facing cameras issue, the Commission is already considering the potential requirements for inward-facing cameras, in the currently pending parallel proceeding, R.08-10-007.

With reference to the Delayed in Block signage recommendation, CPSD recommends that the Commission request FRA to withdraw or rescind FRA's commuter rail system waivers of Emergency Order No. 20, Notice No. 2. CPSD advises that such a rescission of FRA waiver will result in additional signage and safety enhancement during the interim period before PTC implementation. We believe it is a good idea. However, the Commission currently has no proceeding designed specifically to address the above Delayed in Block recommendation, and Metrolink is currently planning to voluntarily install those signs, which largely addresses the underlying concern leading to that recommendation.

Thus, the only outstanding issue for this OIR is what, if anything else, should the Commission require the intrastate passenger commuter rail agencies to do in the interim until the PTC systems are fully implemented, by or before 2015. CPSD recommends that the Commission support the rail industries' current focus, directed resources, and efforts toward development and

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9 FRA's final PTC rule was published in the Federal Register January 15, 2010, and the rule became effective March 16, 2010. Amendments prompted by comments to the final rule were published September 27, 2010, and become effective November 26, 2010. See http://edocket.access.gpo.gov/2010/2010-24102.htm.

10 R.08-10-007, *Order Instituting Rulemaking to determine whether the temporary measures adopted in Resolution SX-88 or other measures banning personal use of electronic devices by rail transit personnel should be adopted on a permanent basis*. Filed and effective on October 16, 2008.

implementation of the complex PTC systems. To assist the expeditious and thoughtful implementation of PTC systems and the much needed improvement of rail safety, CPSD recommends that the Commission not take any action that would impede or delay implementation of the PTC systems mandated by RSIA. We agree.

4. Conclusion

We support the rail industry's current efforts towards expeditious implementation of the PTC systems in compliance with RSIA. We therefore adopt the CPSD's recommendation that we take no further action concerning implementation of collision-avoidance systems for commuter rail systems operating in California. This decision closes the proceeding.

5. Comments on Proposed Decision

The proposed decision of the Commissioner on this matter was mailed to the parties in accordance with section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. No comments were received.

6. Assignment of Proceeding

John A. Bohn is the assigned Commissioner and Kimberly Kim is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. On November 25, 2008, the Commission issued R.08-11-017 to determine whether intrastate commuter rail systems operating in California should implement a collision-avoidance safety system and, if so, what the minimum scope of such a safety system should be.

2. Since the issuance of R.08-11-017, the Congress passed RSIA, which required, by 2015, the nation's rail industry (operating the freight trains and commuter passenger trains) on these shared tracks must install an advanced collision-avoidance system, referred to as positive train control system, to prevent train-to-train collisions resulting from human or mechanical errors.

3. The Commission's CPSD has also prepared and submitted a report and recommendation titled the *Commuter Rail Collision-Avoidance Report in R.08-11-017*, dated December 15, 2009, and recommends that the Commission take no further action concerning implementation of collision-avoidance systems for commuter rail systems operating in California.

Conclusions of Law

1. It is no longer necessary for the Commission to take action in this proceeding, R.08-11-017, because federal law requires each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation to install a positive train control system (an advanced collision avoidance system) by December 31, 2015 .

2. The Commission should adopt CPSD's recommendation and close the proceeding immediately for administrative efficiency.

O R D E R

IT IS ORDERED that this proceeding is closed.

This order is effective today.

Dated November 19, 2010, at San Francisco, California.

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
TIMOTHY ALAN SIMON
NANCY E. RYAN
Commissioners