

**Railroad Safety Advisory Committee**  
**Task Statement: Train Braking Modernization Working Group**

**Task No.: 2023-03**

**Date initially presented to the RSAC: March 27, 2023**

**Purpose:** Consider and identify potential methods of modernizing train brake equipment and brake-related processes and procedures to improve train braking effectiveness, including consideration of the use of locomotive distributive power (DP) or electronically controlled pneumatic (ECP) brake systems, or a combination of those systems.

**Background:** On May 8, 2015, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published a final rule (HM-251) which, among other items, defined “high hazard flammable train” (HHFT) and a “high-hazard flammable unit train” (HHFUT) HM-251 also required HHFTs transporting at least one flammable liquid classified as a Packing Group (PG) I material be operated with an ECP braking system by January 1, 2021, and all other HHFUTs be operated with an ECP braking system by May 1, 2023. 80 FR 26644. On September 25, 2018, PHMSA repealed the HM-251 final rule based on the mandate of Section 7311 of the FAST Act (requiring a determination of whether the rule’s brake requirements were justified based on whether the final RIA demonstrated that the benefits exceeded the costs. 83 FR 48393. On February 21, 2023, the Secretary of Transportation announced that the Department would pursue further rulemaking on HHFTs and ECP brakes.<sup>1</sup>

**Description:** The Working Group (WG) will review the braking effectiveness of trains with different combinations of DP and various train lengths to determine if braking effectiveness can be improved. In addition, the working group will evaluate the feasibility of requiring ECP brake implementation on HHFTs and other trains transporting large quantities of hazardous materials, trains of a certain length, and trains using any number of DP units. As part of this work, the WG will work with other research partners to determine if the addition of ECP brakes can improve the safe stopping distances of trains. Finally, the WG will recommend regulatory revisions as appropriate.

**Issues requiring specific reports:**

- Determine any changes to ECP brake technology or challenges to its implementation, and identify any potential improvements since PHMSA repealed the HM-251 final rule.
- Determine the logistical and financial feasibility of ECP brake technology implementation on HHFTs and other trains transporting large quantities of hazardous materials, trains of a certain length, and trains using any number of DP units.

**Refer to/establish the following working group:** Train Braking Modernization Working Group

**Target dates: One year from acceptance.** The WG will report planned activity to the full Committee at each scheduled Committee meeting, including milestones for the completion of projects and progress toward completion.

**Disposition:** Accepted

**Date:** April 14, 2023

---

<sup>1</sup> See <https://www.transportation.gov/briefing-room/us-department-transportation-fact-sheet-steps-forward-freight-rail-industry-safety>.