Commuter Rail and Positive Train Control
FACT SHEET

APTA — AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

AN OUTSTANDING SAFETY RECORD

Public transit is the safest form of surface transportation available to Americans. In fact, traveling by commuter and intercity rail is **18 times safer** than traveling by automobile. Each day, commuter rail safely carries riders on 1.7 million trips.

SIGNIFICANT PROGRESS IN IMPLEMENTING PTC

According to the most recent data as of December 31, 2018, commuter railroads have made solid progress to meet the congressional mandate:
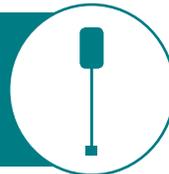
100% of all needed radio spectrum has been acquired

100% of 15,192 onboard equipment on locomotives and cab cars are PTC-installed

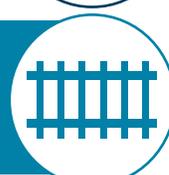**100%** of the 9,772 wayside (on-track equipment) has been completed

100% of back office control systems are ready for operation

100% of 15,119 employees have been trained in PTC

100% of the 3,339 route miles are fully operational, in testing or in revenue service demonstration

Safety is the first priority for commuter rail operators and the entire public transportation industry.

It's not simply a value we share; safety is a core operating principle and a promise to our riders.

That's why we are 100% committed to making commuter rail even safer by completing Positive Train Control (PTC) before or by the December 2020 congressional mandate.

WHAT IS POSITIVE TRAIN CONTROL (PTC)?

PTC is an unparalleled technological challenge on a scale that has never been attempted on railroads anywhere in the world. PTC is a complex, innovative technology that is designed to make commuter rail even safer.

PTC activates a series of sensors installed on railcar equipment and track that use a combination of wireless Internet, GPS, and encrypted radio transmissions to report to monitoring systems in real-time speed and location data. PTC will prevent train-to-train collisions and derailments caused by speed. However, PTC will not prevent grade-crossing collisions and trespasser fatalities.

INVENTING THE TECHNOLOGY

PTC isn't off-the-shelf technology that was readily available to buy – it has required significant innovation. The interconnected array of systems needed to be invented, developed, customized, and installed according to its use in each and every system. Commuter rail operators are working tirelessly to achieve critical milestones.

ALL 2018 MILESTONES
REACHED/ACHIEVED

Spectrum Acquired

Wayside Equipment Installed

Onboard Equipment Installed

Back-Office Control Systems Set Up

Staff Trained

In PTC Operation, Revenue Service Demonstration or Awaiting FRA Approval to Begin Testing

{100%}

OVERCOMING CHALLENGES

Total cost: PTC will cost commuter rail operators an estimated **$4.1 billion** to implement and $80 to $130 million a year in maintenance and operation costs.

Funding available: Since Congress mandated PTC in 2008, the federal government has awarded $472 million in PTC grants, of which 84 percent ($397 million) has been awarded only since May 2017. In May 2018, the Federal Railroad Administration made another $260 million available for PTC which has not been awarded yet. At a time when the national state-of-good-repair backlog stands at an estimated $90 billion, commuter railroads had to divert funds from other critical infrastructure and safety priorities.

Limited expertise: There are a limited number of contractors with the expertise to install PTC on both commuter rail and freight railroads. Both modes required the suppliers at the same time, causing delays in installation.

Acquiring spectrum: PTC requires radio spectrum to transmit data between trains and communications towers (just like the spectrum needed for everything wireless, from your garage door opener to your cellphone). Early on, a major hurdle was gaining access to the necessary spectrum.

Time to install: PTC must be installed and tested while operators simultaneously continue to provide safe, reliable service for commuters who took 501 million trips in 2017 alone.

Interoperability: Many railroads run on tracks that they own or are hosted by freight railroads, or a combination of both. Critical to the successful implementation of PTC is making sure that all trains, tracks and the back office of each railroad communicate with one another.