PTC Annual Report for 2015

2015

Amtrak

FRA 2010-0029

The Annual Positive Train Control (PTC) Progress Report is due by March 31st of each year until full PTC system implementation is complete. The Annual PTC Progress Report must cover the railroad's implementation efforts and progress from the directly previous calendar year, and must be submitted electronically to the Federal Railroad Administration (FRA) via the FRA Secure Information Repository at https://sir.fra.dot.gov.

Name of Railroad or Entity Subject to 49 U.S.C. § 20157(a): Click here to enter railroad name.

Railroad Code: Choose railroad code.

Annual PTC Implementation Progress Report for: Choose the applicable year.

PTCIP Version Number of File with FRA (basis for goals stated): Click here to enter PTCIP Version Number.

Submission Date: Click here to enter a date.

Contents

1. Summary

Please provide a narrative summary of overall PTC implementation progress during the preceding calendar year (January 1 to December 31):

Click here to enter text.

Amtrak implemented its ACSES system on the NEC between New Rochelle, NY and Washington, DC in 2015. Amtrak had previously completed its PTC implementation on the Michigan Line between Porter, IN and Kalamazoo, MI. Radio Spectrum was purchased for the NEC, Harrisburg Line, Springfield Line and Hudson Line during 2015. Amtrak obtained FCC approvals for the use of this spectrum. Amtrak's Harrisburg Line between Philadelphia and Harrisburg, PA was in the final stages of testing at the end of 2015 and all Electric locomotives received ACSES upgrades with the new display units and new data radio systems.

Amtrak began negotiations with ARINC and Wabtec for a hosted back office server to handle its fleet that operates over the host freight carriers.

Category	Quantity Installed During Calendar Year	PTCIP Year End Goal (If Applicable)	Cumulative Quantity Installed at End of Calendar Year	Total Quantity Required for PTC Implementation
Locomotives Fully Equipped	243	250	447	517
Installation/Track Segments Completed	4	5	6	12
Radio Towers Fully Installed and Equipped	90	90	90	120
Employees Trained	6925	6925	6925	10598
Route Miles In Testing or Revenue Service Demonstration	231	241	493	899
Route Miles in PTC Operation	231	241	493	899

2. Update on Spectrum Acquisition

Required content:

- The amount of spectrum acquired and available for use during the applicable calendar year and the cumulative amount acquired and available for use at the end of the applicable calendar year, as compared to the amount the railroad stated would be acquired and available for use by the end of that calendar year and in total for PTC implementation, in the applicable revised PTCIP, as amended
- The basis for how the railroad is determining that the acquired spectrum is available for use by PTC radios (e.g., ensuring non-interference with other radios)

Spectrum Area or Location (E.g., county)	Spectrum Acquired and Available for Use (Owned/Leased) During Calendar Year	Cumulative Amount of Spectrum Acquired and Available for Use (Owned/Leased) at End of Calendar Year	PTCIP Year End Goal for Spectrum Acquired and Available for Use	Total Spectrum Required for PTC Implementation, as Reported in PTCIP
NEC (Boston to Washington/ Harrisburg, Springfield and Hudson Lines)	Owned	125 KHz of 217 MHz band	125 KHz	125 Khz
Michigan Line (Amtrak Owned Portion)	Owned	25 KHz of 220 MHz band	25 KHz	25 KHz
Michigan Line (State owned portion)	Leased for testing	Negotiating purchase of 217 MHz	25 KHz	25 KHz
Chicago	None	None	None	None

Note: In Chicago we will not be installing any base radio stations. We will use BNSF Base radio station.

†Note: To add rows for additional spectrum areas or locations, click on the blue "+" symbol at the bottom right-hand corner. Please be sure to first click anywhere inside the table to activate this function.

If this function is unavailable for your document, please manually add additional rows.

Please provide any additional narrative for Spectrum Acquisition below:

Click here to enter text.
We are in the process of obtaining 217 MHz spectrum for the Michigan Line. Once this is accomplished we will quit using the 220 MHz spectrum that we now have for the Amtrak owned portion of the Michigan Line.

3. Quantity Update on Hardware Installation

Required content:

- Separated by each major hardware category and subcategory identified below, the amount of PTC hardware installed during the applicable calendar year and the cumulative quantity installed at the end of the applicable calendar year, as compared to the amount the railroad stated would be installed by the end of that calendar year and in total for PTC implementation, in the applicable revised PTCIP, as amended

3.1. Locomotive Status

Category / Installation Feature	Quantity Installed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Installed at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
Locomotive (Apparatus)[1]				
On-board Computers (e.g., Train Management Computer)	243	250	447	517
Software For Train Management and other applications	243	250	447	517
PTC Displays	243	250	447	517

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[1] Railroads may elect to add categories or subcategories if more detail is desired.

Event Recorders	243	250	447	517
Onboard Antennas and/or Transponder Readers	243	250	447	517
GPS Receivers	243	250	447	517
Locomotive Radios – Primary Communications (e.g., 220 MHz radios)	243	250	447	517
Secondary Communications (e.g., cell or Wi-Fi communications) Equipment	243	250	447	517

Please provide any additional narrative for Locomotive Status below. If any of the information called for in Section 3.1 is unavailable to the railroad at the time it is completing and submitting this form, please insert "TBD" in the appropriate field and/or use this comment box to explain when such information will be available and when the railroad expects to submit it to FRA.

Click here to enter text.
Quantities above include ACSES, ITCS and I-ETMS equipped locomotives.

3.2.   Infrastructure/Back Office Status

Category / Installation Feature	Completed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Complete at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
Infrastructure (Back Office)				
Dispatching Locations (installations complete)	2	2	4	6
Physical Back Office System Equipment (installations complete)	2	2	4	6

Are the Back Office Location(s) fully operable?	Yes
Are the Dispatching Location(s) fully operable?	Yes

Please provide any additional narrative for Infrastructure/Back Office Status below:

Click here to enter text.
Amtrak will have an I-ETMS BOS to serve its long distance fleet that operates over host carriers which will be a hosted service and will have an I-ETMS BOS in Chicago which will serve the Michigan Line.

3.3.   Installation/Territory Status

Category / Installation Feature	Quantity Installed During Calendar Year	PTCIP Year End Goal	Cumulative Quantity Installed at End of Calendar Year	Total Required for PTC Implementation, as Reported in PTCIP
Infrastructure – Wayside Installations by Territory (i.e., Subdivision, District, Track Segment, Etc.)[2]				
Identification of the Territory (i.e., Subdivision, District, Track Segment, Etc.)†: NEC and feeder lines plus Michigan Line				
Wayside Interface Units†	189	189	378	522
Communication Towers or Poles†	90	90	90	120
Switch Position Monitors†	0	0	0	0
Wayside Radios†	90	90	90	120
Base Station Radios†	90	90	90	120

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[2] Each railroad should report information in a manner consistent with its PTCIP. That is, if a railroad monitors implementation of track segments by territory or subdivision, it should report that way.

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Are all necessary communication backbone utilities for this track segment (including fiber, copper, ground wiring etc.) installed and ready for operation?† Choose Yes or No.

†Note: To add rows for additional territories and associated sub-components, click on the blue "**+**" symbol at the bottom right-hand corner. Please be sure to first click anywhere inside the table to activate this function. If this function is unavailable for your document, please manually add additional rows.

Please provide any additional narrative for Installation/Territory Status below. If any of the information called for in Section 3.3 is unavailable to the railroad at the time it is completing and submitting this form, please insert "TBD" in the appropriate field and/or use this comment box to explain when such information will be available and when the railroad expects to submit it to FRA.

Click here to enter text.
Amtrak does not use radios at every WIU location. Amtrak only installs base radio stations. In cab signal territory there WIUs at every location are not required. In I-TSC and I-ETMS territory WIUs are networked over fiber.

4. Quantity Update on Employees Trained

Required content:

- Separated by each employee category identified below, the number of employees trained during the applicable calendar year and the cumulative number of employees trained at the end of the applicable calendar year, as compared to the number the railroad stated would be trained by the end of that calendar year and in total, in the applicable revised PTCIP, as amended

Employee Category[3]	Number of Employees Trained During Calendar Year	PTCIP Year End Goal	Cumulative Number of Employees Trained at End of Calendar Year	Total Reported in PTCIP

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[3] *See* 49 C.F.R. § 236.1041(a).

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OMB Approval Expires 9/30/2016
OMB Approval Granted 3/16/2016

Employees who Install, Maintain, Repair, Modify, Inspect, and Test the PTC System	200	200	300	350
Employees who Dispatch Train Operations	50	50	90	90
Train and Engine (Operations) Employees	1100	1100	2224	3633
Roadway Worker Employees	3929	3929	3929	4198
Direct Supervisors of the Above Employees	Included in above	Included in above	Included in above	Included in above

Please provide any additional narrative for Employee Training below:

Click here to enter text.
Amtrak has 3 different PTC systems and some employees will have to be trained on more than one system. It is difficult at this time to give exact numbers. They will be better defined as the systems are rolled out.

5. Progress on Implementation Schedule/Milestones

Required content:

- Describe the extent to which the railroad or other entity is not complying with the implementation schedule it provided in its revised PTCIP, as amended

Amtrak is fully compliant with its amended PTCIP which it filed in January 2016. Amtrak will complete all PTC installation before the December 2018 deadline. Most of Amtrak's property now has PTC fully in service.

6. Summary Update of Challenges/Risks

Required content:

- Any update to the summary of remaining technical, programmatic, operational, or other challenges that the railroad or other entity provided in its revised PTCIP, as amended, including challenges with availability of public funding, interoperability, spectrum, software, permitting, and testing, demonstration, and certification

- Schedule Risk Updates (e.g., funding, technology, agreements)

Please provide Summary Update of Challenges/Risks below:

Funding is always a risk for Amtrak. Amtrak depends on federal funding for its capital improvements which include PTC.
Interoperability is an issue and risk. When the Class I railroads begin to implement PTC there could be radio interference. Amtrak is working on mitigation plans to correct RF interference.
Interoperability with tenant commuter railroads is also a risk. Most of these railroads are not as far along as Amtrak and there could be interoperability issues as their systems come on line. Amtrak is working closely with its tenant railroads along with AAR to address these issues.

7. Progress on Revenue Service Demonstration (RSD) or Implementation

Required content:
- The total number of route miles on which PTC has been initiated for revenue service demonstration or implemented, as compared to the total number of route miles required to have a PTC system (see Section 1 Summary Table)
- Estimated start date (month and year) for RSD

Segment Identification[4]	Number of Route Miles in Segment	Status at End of Calendar Year *Current status of installation/track segment.* **Choose one:**	Estimated Start Date for Revenue Service Demonstration (if not already completed)
Segment *(add additional rows for segments as necessary):* NEC (Boston to Washington)	396	○ Not Started ○ Installing ○ Testing ⊙ Operational/Complete	completed

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[4] Segment identification should be consistent with segments listed in Section 3.3.

Philadelphia to Harrisburg	104	Testing	March 2016
Springfield Line (New Haven to Springfield, MA)	62	Installing	Dec. 2017
Empire Connection	10	Testing	April 2016
Michigan Line (Amtrak Owned)	97	Operational	Completed
Michigan Line (State Owned)	135	Installing	June 2017
Hudson Line (Poughkeepsie to Hoffmans)	94	Installing	Dec. 2017
Chicago Union Terminal	1.5	Not Started	Dec. 2017

Note: To add additional rows, click on the blue "+" symbol at the bottom right-hand corner. Please be sure to first click anywhere inside the table to activate this function.

If this function is unavailable for your document, please manually add additional rows.

Please provide any additional narrative for Revenue Service Demonstration or Implementation below:

Click here to enter text.

8. Update for Intercity or Commuter Rail Passenger Transportation (if applicable)

If this section is not applicable to your railroad, please mark N/A.

Required content (if applicable):
- For each entity providing regularly scheduled intercity or commuter rail passenger transportation, a description of the resources identified and allocated to implement PTC

Please provide Update for Intercity or Commuter Rail Passenger Transportation below, if applicable:

All information provided in detail in the above sections.

9. Update on Interoperability Progress and Other Formal Agreements

Required content:
- For host railroads: provide updates to any agreements and key milestones for all tenant operations
- For tenant railroads: provide updates to any agreements and key milestones for all operations over tracks hosted by another railroad

Host and Tenant Railroads: Please provide a general update on interoperability in the textbox below.

Click here to enter text.
Amtrak and the tenant railroads using the NEC are working together through AAR on interoperability issues. A committee has been formed to issue standards for ACSES and to address interoperability issues.
Amtrak has offered to install I-ETMS for any carriers which were willing to pay for its installation. To date only Norfolk Southern has asked Amtrak to install I-ETMS. All other carriers have agreed to operate with ACSES. NS will manage the project to install I-ETMS on portions of the NEC where NS operates. If NS does not meet the deadline, Amtrak will require NS to equip its locomotives with ACSES.

Host Railroads Only: For each tenant, please provide additional tenant information below.

Tenant Identification *(Please add rows for additional tenants as necessary)*	Estimated Tenant Locomotive Fleet *(if the tenant does not have a separate PTCIP on file)*	Current Tenant Implementation Status *Choose one:*
New Jersey Transit	Unknown	○ Not Started ⊙ Installing

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		○ Testing ○ Operational/Complete
Massachusetts Bay Transportation Auth.	Unknown	Operational
CSX Corp.	Unknown	Operational
Providence Worcester Railroad	Unknown	Operational
Connecticut Southern	Unknown	Unknown
Pan Am	Unknown	Unknown
The Long Island Rail Road	Unknown	Unknown
Connecticut DOT	Unknown	Unknown
Norfolk Southern	Unknown	Unknown
Southeastern Pennsylvania Transportation Authority	Unknown	Testing
Conrail Shared Assets	No locomotives of their own	N/A
Maryland Area Regional Commuter Railroad	Unknown	Unknown
Virginia Railway Express	Unknown	Unknown
METRA (Chicago)	Unknown	Unknown

Note: To add additional rows, click on the blue "+" symbol at the bottom right-hand corner. Please be sure to first click anywhere inside the table to activate this function.

If this function is unavailable for your document, please manually add additional rows.

10. Estimated PTC Safety Plan (PTCSP) Submission Date (if not already submitted)

If this section is not applicable to your railroad, please mark N/A.

PTCSP Submission Date
December 2016

Please provide any additional narrative for PTCSP Submission below:

Amtrak will complete its PTCSP for ACSES by December 2016 and will submit a PTCSP for I-ETMS by June 2017.

11. Testing and Integration Efforts (if applicable, laboratory, integration, and revenue service demonstration)

Please provide Update on Testing and Integration efforts below:

Details have been provided above.

12. Updated Information That FRA Can Use to Maintain Its Geographic Information System (GIS) Database – Segments Complete and Operable

In its annual progress reports, a subject railroad or entity may submit a geographic information system (GIS) shapefile to indicate where various rail segments that must have PTC are located, as long as it includes the following fields: (1) a PTC attribute field (coded with "Y" if line segment is to have PTC installed, otherwise left blank); (2) a SUBDIV attribute field (populated with subdivision name);

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(3) a MONTH attribute field (populated with the month in which PTC is to be installed); and (4) a YEAR attribute field (populated with the year in which PTC is to be installed). A railroad may submit this information by means other than shapefile format.

Please provide any additional narrative for GIS Information below:

Amtrak does not have this data available.

Public reporting burden for this information collection is estimated to average 38.41 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0553**. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection, including suggestions for reducing this burden to OMB's Office of Information and Regulatory Affairs, Attn: FRA OMB Desk Officer.