RTDC PTC 2015 Annual report

2015

DENVER RTD

[Docket Number]

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): Regional Transportation District

Railroad Code: RTDC

Annual PTC Implementation Progress Report for: 2015

PTCIP Version Number of File with FRA (basis for goals stated): Rev. 1 (original filed 3-16)

Submission Date: 4/19/2016

Contents

1. Summary

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

Most of the RTD Eagle Project PTC equipment was installed in year 2015, followed by field testing, and starting of integration testing for the East Corridor line segment – the first segment to be open for service in 2016.

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	50	50	50	54
Installation/Track Segments Completed	3	3	3	3
Radio Towers Fully Installed and Equipped	50	50	50	50
Employees Trained	35	35	35	102
Route Miles In Testing or Revenue Service Demonstration	23	23	23	36
Route Miles in PTC Operation	0	0	0	36

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
East Corridor segment	1	1	1	1
Gold Line segment	1	1	1	1
Northwest Electrified segment	1	1	1	1

†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:

On 2012, RTD acquired and is authorized to use the necessary 4.9 GHz (Public Safety) spectrum required for the operation of its PTC data communications system for all 3 (EC, GL, NWES) segments.

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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)	50	50	50	54
Software For Train Management and other applications	50	50	50	54
PTC Displays	50	50	50	54
Event Recorders	50	50	50	54
Onboard Antennas and/or Transponder Readers	50	50	50	54
GPS Receivers	50	50	50	54
Locomotive Radios – Primary Communications (e.g., 220 MHz radios)	50	50	50	54

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

Secondary Communications (e.g., cell or Wi-Fi communications) Equipment	NA	NA	NA	NA

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.

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)	1	1	1	1
Physical Back Office System Equipment (installations complete)	1	1	1	1

Are the Back Office Location(s) fully operable?	No
Are the Dispatching Location(s) fully operable?	No

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

Click here to enter text.
The Back Office and Dispatching Location are under final testing.

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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.)†: East Corridor segment				
Wayside Interface Units†	42	42	42	42
Communication Towers or Poles†	31	31	31	31
Switch Position Monitors†	0	0	0	0
Wayside Radios†	0	0	0	0
Base Station Radios†	62	62	62	62
Are all necessary communication backbone utilities for this track segment (including fiber, copper, ground wiring etc.) installed and ready for operation?† Yes				
Identification of the Territory (i.e., Subdivision, District, Track Segment, Etc.)†: Gold Line segment				
Wayside Interface Units†	19	19	19	19
Communication Towers or Poles†	8	8	8	8
Switch Position Monitors†	0	0	0	0

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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.

OMB Control No. 2130-0553

Wayside Radios†	0	0	0	0
Base Station Radios†	16	16	16	16

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

Identification of the Territory (i.e., Subdivision, District, Track Segment, Etc.)†: Northwest Electrified segment

Wayside Interface Units†	17	17	17	17
Communication Towers or Poles†	11	11	11	11
Switch Position Monitors†	0	0	0	0
Wayside Radios†	0	0	0	0
Base Station Radios†	22	22	22	22

Are all necessary communication backbone utilities for this track segment (including fiber, copper, ground wiring etc.) installed and ready for operation?† 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.

East Corridor installations are under integration testing, Gold Line and Northwest Electrified Segments are under field testing.

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
Employees who Install, Maintain, Repair, Modify, Inspect, and Test the PTC System	9	9	9	9
Employees who Dispatch Train Operations	0	0	0	0
Train and Engine (Operations) Employees	17	17	17	17
Roadway Worker Employees	0	0	0	0
Direct Supervisors of the Above Employees	14	14	14	14

Please provide any additional narrative for Employee Training below:

Originally-filed PTCIP showed 35 in year 2015 however staffing/training schedules have been updated as Eagle project has moved forward.

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[3] *See* 49 C.F.R. § 236.1041(a).

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

N/A

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:

Click here to enter text.
Most of the RTD Eagle Project PTC equipment was installed in year 2015, followed by testing. RTD may have some challenges during the 2016 testing, demonstration, and certification.

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: East Corridor (EC)	23.2	O Not Started O Installing ⊙ Testing O Operational/Complete	Q2, 2016
Segment: Gold Line (GL)	11.4 (4.2 mile shared with NWES)	O Not Started ⊙ Installing O Testing O Operational/Complete	Q3, 2016
Segment: Northwest Electrified Segment (NWES)	5.9 (4.2 miles shared with GL)	O Not Started ⊙ Installing O Testing O Operational/Complete	Q4, 2016

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.
N/A

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

FRA F 6180.166 (2-16)

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

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:

Click here to enter text.
N/A

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.

FRA approved RTD PTCIP Main Line Track Exclusion Addendum allows a) tenant railroad Amtrak trains to operate in RTD Denver Union Station (DUS) under non-PTC, and b) tenant railroad BNSF yard trains to operate outside the RTD Denver Union Station (DUS) interlocking under non-PTC mode, RTD to provide protection circuits.

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:
Amtrak	N/A: tenant to operate on non-PTC mode	O Not Started O Installing O Testing ⊙ Operational/Complete
Burlington Northern and Santa Fe Railway (BNSF)	N/A: tenant to operate on non-PTC mode	O Not Started O Installing O Testing ⊙ Operational/Complete

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
Q2, 2016

Please provide any additional narrative for PTCSP Submission below:

Click here to enter text.
RTD will submit PTCSP when RTD Eagle project East Corridor Line enters Service Performance Demonstration in Q2 2016.

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

Please provide Update on Testing and Integration efforts below:

Click here to enter text.
EC line under final system integration test. GL and NWES lines under field tests.

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); (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:

Click here to enter text.
N/A

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.