

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Request of PTC-220, LLC for Waivers of)	WT Docket No. 08-256
Certain 220 MHz Rules)	
)	
Construction Progress Report)	

To: Chief, Wireless Telecommunications Bureau

**PTC-220, LLC
CONSTRUCTION PROGRESS REPORT**

I. INTRODUCTION

PTC-220, LLC (“PTC-220”) submits this Construction Progress Report to satisfy the requirements of paragraph 16 of the Memorandum Opinion and Order (“*2009 Waiver Order*”) adopted by the Federal Communications Commission (“FCC”) on June 25, 2009.¹ This Report details the progress made during the past six months in implementing the Systemwide Build-out Plan (the “Build-out Plan”) submitted by PTC-220 on November 1, 2010 in the above-referenced docket. The Build-out Plan explained how PTC-220’s 220 MHz licenses (“Licenses”) would be used in deploying a nationwide positive train control (“PTC”) system, as required by Federal statute.² The construction of the Licenses will be undertaken in large part by each of PTC-220’s

¹ *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, Memorandum Opinion and Order, 24 FCC Rcd 8537 (2009).

² In October 2015, Congress extended the PTC implementation deadline from December 31, 2015 to December 31, 2018. *See* Positive Train Control Enforcement and Implementation Act of 2015, Pub. L.

member railroads,³ although PTC-220 will also coordinate construction activities by non-member railroads.

II. SITE BUILD-OUT ACTIVITY

Since the May 1, 2018 Report,⁴ PTC-220's member railroads have continued to build new or prepare existing base station sites and install base station radios. As before, preparatory work at existing sites includes, among other things, coverage predictions, design and installation of antenna systems, upgrading of site power systems, site pre-wiring, and backhaul design. The table below indicates the progress to date for each PTC-220 member railroad, by state, for base station site preparation and base radio installations. Some of the installed radios are being actively used in various field testing programs or PTC operations in revenue service, while others are currently powered off, awaiting final frequency coordination. However, most of the installed radios are in service and supporting PTC operations.

No. 114-73 § 1302, 129 Stat. 568 (2015) (*PTCEI Act*); 49 U.S.C. § 20157(a)(1). In light of the new statutory deadline, PTC-220 in December 2015 filed requests for a further extension of its substantial service deadlines until December 31, 2018. The FCC granted these requests in March 2016.

³ PTC-220's members are BNSF Railway ("BNSF"), Canadian National Railway ("CN"), Canadian Pacific Railway ("CP"), CSX Transportation ("CSX"), Kansas City Southern Railway ("KCS"), Norfolk Southern Railway ("NS"), and Union Pacific Railroad ("UP").

⁴ *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, PTC-220, LLC Construction Progress Report, WT Docket No. 08-256 (November 1, 2017).

State	BNSF		CN		CP		CSX		KCS		NS		UP	
	Installed	Radio	Installed	Radio	Installed	Radio	Installed	Radio	Installed	Radio	Installed	Radio	Installed	Radio
AL	4	4	2	2			63	56			45	45		
AR	7	6							9	9			29	29
AZ	21	21											13	13
CA	49	48											107	107
CO	21	21											59	59
FL							44	40			2	2		
GA							72	66			43	43		
IA	26	26	16	0	23	23							25	25
ID	6	6											24	24
IL	42	41	38	32	6	6	26	24	5	5	26	26	53	53
IN			3	3			49	43			32	32		
KS	40	38							3	3			36	36
KY			3	3			82	79			15	15		
LA	6	6	7	7			1	1	29	29	2	2	22	22
MA							19	19						
MD							36	34			3	3		
MI			18	18			19	14			4	4		
MN	36	36	8	8	29	29							3	3
MO	41	41			7	7			14	14	7	7	29	29
MS	3	3	26	26			3	3	12	12	11	11		
MT	67	67												
NC							42	40			29	29		
ND	54	54			16	16								
NE	32	32											37	37
NJ							6	6			4	4		
NM	16	16											15	15
NV													58	58
NY					14	14	67	60			14	14		
OH			1	1			74	69			41	41		
OK	26	26							6	6			10	10
OR	13	12											81	81
PA							60	57			75	75		
SC							56	56			22	22		
SD	10	10												
TN	2	2	6	6			66	61			30	30	1	1
TX	58	58							25	25			136	136
UT													39	39
WA	53	53											18	18
WI	3	3	24	23	15	15							15	15
WV							112	109			10	10		
WY	6	6											28	28
VA							75	66			52	52		
Total	642	636	152	129	110	110	972	903	103	103	467	467	838	838

Totals	
Site Prep	Radio
3,284	3,186

In addition to the base station deployment programs, PTC-220 member railroads are installing mobile radios in their locomotive fleets.

III. SPECTRUM

A. Spectrum Capacity

As previously reported, based on PTC-220's capacity prediction models, it currently has sufficient spectrum capacity for member and non-member railroad lessees to satisfy their PTC deployment obligations required by the December 31, 2018 deadline established pursuant to the Rail Safety Improvement Act of 2008 ("RSIA"), as amended by the 2015 PTCEI Act. However, PTC-220 has identified a few dozen markets across the country where additional spectrum will be needed to support increased reliability.

In September, applications were filed for the assignment of 220 MHz spectrum in eight markets from NRTC. These applications were consented to in October, and a closing of the transaction is anticipated before year end. For the remaining priority markets, PTC-220 is currently evaluating its spectrum acquisition options.

C. Non-Member Spectrum Leases

PTC-220 currently has active spectrum manager leases with several non-member railroads including Amtrak, CalTrain, Conrail, MetroLink, North Country Transit District, Metra, Sound Transit, and the Terminal Railroad Association of St. Louis. Dallas Area Rapid Transit, the South Florida Regional Transportation Authority and the State of Florida, DOT, have entered into sublease arrangements with PTC-220 members BNSF and CSX, respectively. In addition, the Metro North testing lease has been further extended to December 31, 2018, and a new testing lease was signed with Belt Railway Company of Chicago. Other non-member railroads are currently considering leasing arrangements with PTC-220, and PTC-220 anticipates possible future negotiations with other non-member railroads. Some short-line railroads may also need long-term spectrum leases, depending on the PTC requirements of their owned track.

D. Extension Requests

PTC-220 members have almost completed the milestone of having *all* locomotive, wayside and base station PTC radios installed by year end, and PTC-220 expects approximately 99% of these radios to be on-air and operational by that time. Thus, there is no question that the PTC radio network will be built-out and in use by the current substantial service deadline associated with PTC-220 licenses. However, there are additional steps beyond having a fully functioning RF network that are required before a PTC system can commence revenue service or provisional revenue service operations. Despite substantial progress, rail carriers will not achieve full revenue service deployment as determined by the FRA by the end of the year. One reason for this is the need to complete interoperability testing with tenant carriers. This step in the PTC certification process requires tenant railroads, including commuter railroads, to install radios in their own locomotives and ensure that the proper back-office functionality is in place.

In passing the PTCEI Act in 2015, Congress recognized the significant remaining challenges in achieving full PTC implementation even by December 2018, and allowed for the approval of “alternative schedules” that would permit railroads to seek an extension to complete full PTC implementation by December 31, 2020. In order to qualify for such an extension, Class I freight railroads must satisfy six statutory criteria, requiring that they have, by the end of this year:

- (1) installed all PTC system hardware, including all radios;
- (2) acquired all necessary spectrum;
- (3) completed required employee training;
- (4) filed a revised implementation plan setting out an alternative schedule;
- (5) certified to the FRA that they will be in full compliance with PTC statutory requirements by the date in the alternative schedule; and
- (6) initiated Revenue Service Demonstration (“RSD”) or implemented an operational PTC system on more than 50 percent of their track that is required to have PTC.

It is expected that all railroads – commuter, passenger and freight – will be seeking extensions

from the FRA. Because of the FRA's conclusion that a host carrier is not fully implemented until tenants achieve interoperability, this is true even for railroads that have initiated revenue service on 100% of their track that is required to have PTC. Thus, to the extent that the FCC's showing of substantial service is tied to implementation of PTC revenue service on 100% of rail lines required to have PTC, PTC-220 expects to submit a request in December for a further extension of the FCC's December 31, 2018 substantial service showing deadline applicable to most of its licenses.

IV. CONCLUSION

PTC-220 and its member railroads have nearly completed the deployment of the necessary RF infrastructure to support PTC. All PTC-220 members will, by December 31, 2018, have installed all RF components required for their PTC systems and will also have satisfied all other statutory criteria to apply for an extension, up until December 31, 2020, for achieving full PTC implementation.

Respectfully submitted,

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