

SECTION 305 NGENC Executive Board

MINUTES

FEBRUARY 22,
2019

8:30AM EASTERN

9TH ANNUAL MEETING

FACILITATOR	<i>Eric Curtit, Chair, S305 NGENC Executive Board</i>
ATTENDEES	<p>Board Members and state participants: Eric Curtit, Eric Curtit also as proxy for Ray Hessinger, NYSDOT, Charlie King, Tim Ziethen, Michael Lestingi, Tim Hoeffner, Ron Pate, Allan Paul, Brian Beeler II, Michael Jenkins, Arun Rao, Phil Meraz for Amanda Martin, Momo Tamaoki for Kyle Gradinger, John Oimoen, Marci Petterson, Jason Biggs,</p> <p>Amtrak/FRA/AASHTO Support: Caroline Kieltyka, Strat Cavros, Kamasha Hendrickson, Steve Hewitt, Larry Salci, Beth Nachreiner, Troy Johnson, Mike Murray, Sean Mehrvarzi, Tarek Omar, Dave "PowerPoint" Warner, Tammy Krause, Michael Burshtin, George Hull, Joseph Paul, Adam Otsuka, Harry Garforth, Byron Comati, Tim Wells, Max Johnson, Guest Presenters: Joe McHugh, Devin Rouse, Ray Ginnell, Mario Bergeron, Robert Becker, Dave Ward Industry members/guests: Joe Moore, Gil Denton, Tom Lamano, Miranda Cross, Josh Coran, Joe Gagliardino, Joe Kenas, Norman Forde, Walt Stringer, Herbert Buchholz, Jon Mullin, Armin Kick, Jim Coston, Steve Morrison, Thomas Pedcock, Rodney McGhee, Paul Arnone, Jack Madden, Craig McKeen, Steve Ojalvo, Kevin Myles, Martin Bloedt, Michael Latour, Martin Schroeder, Ronald Bartels, Rick Harnish, Jeff Batchen, Terry Soesbee, Joe Di Liello,</p>
ABSENTEES	Board Members: Ray Hessinger, John Rosacker, Amanda Martin, Kyle Gradinger

DECISIONS MADE

1. Convene Annual Meeting: Eric Curtit, Missouri DOT, NGENC Chair

After receiving a security briefing provided by the Hyatt Regency Hotel, NGENC Chairman Eric Curtit called the 9th NGENC Annual Meeting to order.

Self- Introductions

Attendees were called upon to introduce themselves and what organization they were representing. (At least 70 attendees)

2. Roll Call –Steve Hewitt, Manager, S305 NGENC Program Manager:

Chairman Curtit asked Steve Hewitt to call the roll of voting members of the NGENC and to confirm the presence of a quorum.

After completing the roll call, Steve Hewitt confirmed that, in accordance with the NGENC By-Laws, the presence of a quorum was confirmed with all Board members represented in person, or by proxy or designee, except one – Oklahoma DOT.

3. Review Meeting Agenda and contents of the meeting packets– Steve Hewitt:

Chairman Curtit reviewed the day’s agenda and pledged to keep the meeting moving along in order to finish on time or even a bit sooner in deference to travel schedules.

Steve Hewitt reviewed the meeting packet contents and reminded those in attendance to sign the sign-in sheet making its way around the room.

4. Approval of the Minutes from February 12, 2019 – Eric Curtit:

On a motion by Allan Paul, NCDOT, and a second by Ron Pate, WSDOT, the minutes from the February 12, 2019, Executive Board conference call meeting were approved without exception.

**5.
Chairman's Report – Eric Curtit:**

Eric Curtit read the following Chairman's report and provided it for inclusion in the meeting minutes:

Thanks for joining us here today on our 9th annual meeting. I am delighted to see familiar faces and to see some new ones today. The NGEC to me is just about the coolest thing I have ever worked in, and I enjoy it every time I get to do NGEC work. If you think back to the basic idea of the NGEC, there has been a lot of collective actions taken by FRA, Amtrak and states to further its cause of providing standardization in development of passenger rail equipment.

The NGEC created these specifications and look at what has happened. From coast to coast we have seen the use of our specifications to implement new equipment into the passenger rail industry. At an approximate value of \$2M per specification, these specifications are the result of countless hours of volunteer time. This time, moreover, INVESTMENT is starting to show dividends in future anticipated costs related to maintenance and operations. With more and more entities using our specs as a basis, we can see the results being delivered throughout the United States.

Even more unique and complimentary of our standardization work is to see Canada join the standardization bandwagon. Even further, the United Kingdom has even asked questions about our little group here and wants to learn from our successes. This is a testament to all our members and to the industry who works side by side with us to develop and MAINTAIN NGEC specifications. Let's hear a round of applause for the industry members and to our neighbors to the north for their work to use our specifications which ultimately help all of us.

Standardization is a word like "coordination" of transit assets in a large metropolitan area. Try defining coordination or standardization. It's nearly impossible. What is standardization? Standardization is not an exact set of plans, it is not carving into stone one set of DMU plans to be used for eternity. Clearly the NGEC has shown this is not a rigid organization, blind to the realities of passenger rail manufacturing. I say all this because one of the finest actions I believe the NGEC has done is to keep design within a good box, if you will, but not prescribing the exact point in the good box to be. You can be within the good box anywhere and still meet our mission – standardization.

Standardization has had made an impact in the market, but I believe the best is yet to come. I believe the NGEC's mission is powerful and will continue into the future. And I will add another editorial comment to this – the key to this has been our involvement of industry in our endeavors. Having the very industry involved has and will continue to be a key to NGEC success, which is measured not in specs or grant expenditures, but the positive impacts on the rail manufacturing industry. There is much to do regarding standardization. There is much we can contribute beyond even what we are contributing now. I am humbled to serve this fine organization and humbled to be your leader. I believe the NGEC is quite the excellent organization and this is only possible because of the excellent folks working quietly to further its cause.

Thanks for coming today and for your time and attention.

**6.
Update from the Federal Railroad Administration: Michael Lestingi and Devin Rouse, FRA:**

Michael Lestingi, FRA, focused his remarks on the Federal State of Good Repair Grant program (SOGR).

This grant program will fund capital projects – repair, rehabilitate and replacement for Amtrak or public owned assets as well as rolling stock.

Eligible applicants include states, groups of states, localities, Amtrak and any combination of these.

Non-eligible entities can be a partner with the applicant(s).

The federal/state match is 50% or less.

Congress has now passed FY2019 appropriations and has included \$400 million for SOGR. The Notice of Funding Opportunity (NOFO) for the FY19 grant must go out by 3-15-19.

Devin Rouse, FRA, gave a presentation on FRA Passenger Rail Safety Initiatives and Regulatory Activities. The presentation is available on the NGEC website www.nqec305.org and will be distributed to NGEC members along with the meeting minutes.

Some of the highlights/focus points of the presentation included recent passenger rail equipment rulemaking, proposed rulemaking and future rulemaking efforts under development.

**7.
Update from Amtrak Government Affairs: Joe McHugh, Amtrak:**

Joe McHugh, Amtrak, provided an overview the challenges that lie ahead in the new Congress with new members and new staff getting into place as well as a presidential election season taking shape.

There will be a new budget plan for Congress as well as potential new sequestration.

The FAST Act Programs for Rail which were a landmark for passenger rail in the enactment of the FAST Act, must be continued and must be funded. It is critical that the pipeline does not dry up – the funds are needed to continue to flow.

One of the most crucial factors is that there is a new set of players on the critical committees related to transportation (and rail, in particular) and with the new members comes new staff. Educational efforts are of utmost importance – the material/information that states, Amtrak and the industry bring to congressional staffs will need to be high quality work – this is vital.

There remain some seasoned staff, and those relationships need to be re-enforced, but “breaking in” new staff is critical.

Joe noted that, getting authorization done in a timely fashion will take a lot of work, adding that in his 25 years at Amtrak he has seen the company be without an authorization more than he has seen it with an authorization. In the last 25 years Amtrak was authorized on time at the beginning of the federal fiscal year only twice.

Congress faces the challenge of reauthorizing the Transportation Infrastructure Program (the FAST Act). Can they do it?

For Amtrak there are two key headlines for reauthorizing the FAST:

The first is maintaining the three critical rail grant programs created in the FAST Act and the second is making sure they are adequately funded.

It was critical in the FAST Act (and historical) that Amtrak was put into the surface transportation program and became a part of the que, and it is important that those gains not be lost in any reauthorization effort.

Looking ahead, Joe noted that the Amtrak budget request for the coming fiscal year will come out later in March 2019 – after the Administration’s budget request is released – somewhere around March 11th or 18th.

Joe noted that there is a tremendous amount of information that Amtrak needs to provide Congress along with its request:

Each service line must produce a report.

Each asset line must produce a report.

These reports must get Amtrak Board approval and then can proceed to the Hill. The reports will all be submitted to the Board on time.

Joe recommended that NGEN members read the testimony provided to the T&I Committee in the House by Amtrak President and CEO, Richard Anderson on February 7, 2019. There is a huge section of the testimony on equipment.

On the State front, Joe reported, there has been “lots of activity”.

Joe highlighted some of the State growth plans/hopes and desires:

Maine has exciting growth plans; Massachusetts is looking to extend service; Virginia is adding frequencies, as is North Carolina and Wisconsin. Minnesota has new service opportunities and Illinois, with a new government in place also has new opportunities for service extension.

Joe also noted growth and growth opportunities in California, Washington and Oregon. He emphasized that States have bright futures and have strong needs for equipment, and with that come the need for a strong advocacy effort. “Help us make the case”.

Eric Curtit asked Joe his views on the possibility of a formula program for rail.

Joe commented that formula funding is difficult, it is probably better to focus on outcome based rather than a formula-based program.

8. Treasurer's Report and NGEF Finance and Administrative subcommittee Progress Report – Tim Ziethen, Amtrak:

Tim Ziethen provided a progress report on the Finance and Administrative subcommittee's (FASC) activities and accomplishments for 2018 and provided the NGEF Treasurer's Report. The Treasurer's Report is included below:

The full FASC update will be included with the distribution of the minutes.

Treasurer's Report

- New Grant executed effective 10-1-16 and we are tracking against the SOW
- Spending is lower than planned
- Document Control Position moved to AASHTO Services
- 514 Subcommittee work moved to SAIPRC Equipment Working Group
- Grant Agreement performance period extended through 9-30-2020

Prior Grant - Spending Through 9/30/2016

	Executive Board	Technical Sub-committee	Finance & Admin. Sub-committee	"514" Equipment Capital Sub-committee	AASHTO Support Services	TOTAL
Labor		\$515,710	\$193,001		\$449,411	\$1,158,122
Meetings					\$69,572	\$69,572
Travel			\$6,547		\$130,197	\$136,744
Professional Services		\$198,406			\$1,359,320	\$1,557,726
Financial Review						\$0
Conference Calls					\$1,218	\$1,218
Webinar					\$79	\$79
Reserve (Contingency)						\$0
Web Site					\$0	\$0
TOTAL	\$0	\$714,117	\$199,547	\$0	\$2,009,797	\$2,923,461

Budget (New Grant Statement of Work 10/1/2016)

	Executive Board	Technical Sub-committee	Finance & Admin Sub-committee	"514" Equipment Capital Sub-committee	AASHTO Support Services	TOTAL
Labor		\$72,000	\$90,000		\$100,000	\$262,000
Meetings					\$90,000	\$90,000
Travel	\$0		\$10,000	\$0	\$90,000	\$100,000
Professional Services	\$0				\$682,000	\$682,000
Financial Review			\$100,000			\$100,000
Conference Calls					\$12,000	\$12,000
Webinar					\$3,000	\$3,000
Web Site					\$1,000	\$1,000
Other						\$0
TOTAL	\$0	\$72,000	\$200,000	\$0	\$978,000	\$1,250,000

Treasurer's Report - Summary Spending from Inception of Grant

NGEC 305 Grant Reporting

(Costs through February 2019)

WBS C.CF.100674 Technical Subcommittee	\$ -
WBS C.CF.100674 AASHTO/Services	\$ 352,498.23
WBS C.CF.100674 Administrative Task Force	\$ 4,478.84
WBS C.CF.100674 Executive Board	\$ 793.67
Total Grant Spending (Accrued costs through Dec. 2018)	\$ 357,770.74
Grant Total	\$ 1,250,000.00
Remaining Funds included accrued expenses - Balance	\$ 892,229.26

Spending from Inception of Grant Details

NGEC 305 Grant Reporting

(Costs through February 2019)

<u>Amtrak Purchase Order Posting Through February 6, 2019</u>	\$ 398,203.35
AASHTO (Adjustment for Prior Invoice from Prior Grant Period)	\$ (45,705.12)
AASHTO Net Charges for Services Under Grant	\$ 352,498.23
WBS C.CF.100674.0001 Technical Subcommittee	\$ -
WBS C.CF.100674.0002 AASHTO/Services	\$ 352,498.23
WBS C.CF.100674.0003 Administrative Task Force	\$ 4,478.84
WBS C.CF.100674.0004 Executive Board	\$ 793.67
<u>Total Grant Spending (Accrued costs through Dec. 2018)</u>	\$ 357,770.74

Details: Invoices Processed Against AASHTO Purchase Order

# 28	\$ 31,274.41
# 29	\$ 33,598.06
# 30	\$ 55,106.09
# 31	\$ 22,451.90
# 32	\$ 42,529.26
# 33	\$ 40,957.40
# 34	\$ 56,822.00
# 35	\$ 37,256.84

Total Reimbursement Requested Under Grant **\$ 319,995.96**

Accrued Reimbursement Requests - (Next Quarter Request)

# 36 (Oct. 2018-Monthly)	\$ 11,016.25
# 37 (Nov. 2018-Monthly)	\$ 11,086.01
# 38 (Dec. 2018-Monthly)	\$ 10,400.01
Total Accrued	\$ 32,502.27

Total Incurred for AASHTO/Services **\$ 352,498.23**

All Other **\$ 5,272.51**

Total Incurred for all WBS Line Items **\$ 357,770.74**

Grant Total **\$ 1,250,000.00**

Remaining Funds included accrued expenses - Balance **\$ 892,229.26**

- New grant from FRA began 10/1/2016.
- FRA-AMT-0010-17-01-00
- Grant performance period extended in 2018 for an additional 12 months
- Funds are now available through 9/30/2020
- Average Monthly Spend is running at approximately \$13k or approximately \$160k per year
- Prior Grant ran through 9/30/16
- (Initial Specifications Development) – Spend Rate was approximately \$36K month or \$432K per year

Future Funding Discussion

Continue to evaluate NGEN spending as we get closer to FY 2020 and end of grant period. Apply for a new grant to fund the on-going activities and mission of the NGEN and/or explore an additional extension if the remaining balance supports that course of action.

Activities would include: The ongoing review and updating of PRIIA vehicle technical specifications; educational outreach to build awareness and highlight results; monitoring multi-state vehicle procurements; identifying lessons learned and developing best practices.

9.

Consideration of Acceptance of the Treasurer's report – Eric Curtit:

Following the conclusion of the presentation of the NGEC Treasurer's Report, Chairman Curtit entertained a motion to accept the report as presented.

On a motion offered by Michael Lestingi, FRA, and seconded by Arun Rao, Wisconsin DOT, and with no objections or exceptions forthcoming, Chairman Curtit determined that consensus was achieved, and the motion to accept the Treasurer's Report, as presented was approved.

10.

Progress Report: NGEC Technical subcommittee – Charlie King, Amtrak:

Charlie King provided a summary presentation on the activities of the NGEC Technical subcommittee over the past year (2018):

Presentation Summary

- PRIIA 305
- Technical Subcommittee
- TSC Overview
- 2018 Highlights
- 2019 Projects
- How Can We Improve?

PRIIA 305 Technical Subcommittee

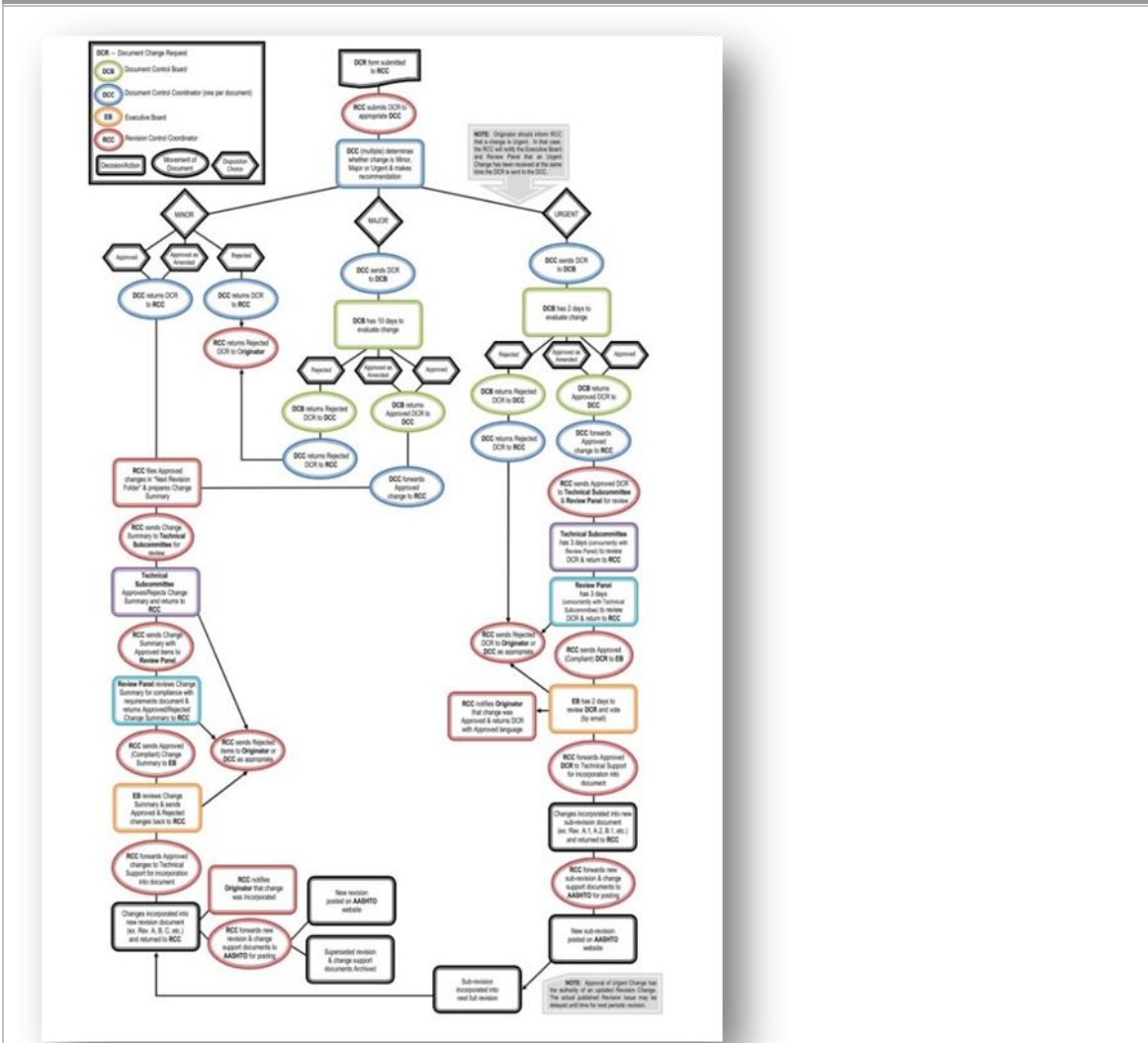
- Will develop specifications as requested by the Executive Board.
- Each specification is assigned a Lead to coordinate the process.
- Majority of spec writing done by members of the 6 permanent working groups with support from a technical writer.

Overview

Document Change Request DCR

- The Specification Change Process begins with a single DCR.
- A DCR can be submitted by anyone through the NGEC website.
- When received, the DCR is given a number and sent to the appropriate Technical Subcommittee Working Group
- After approval by the WG, the DCR is submitted to the whole TSC for approval.
- Next the approved DCR is sent to the Executive Board where a Review Panel is called to verify that the DCR meets the requirements document of the associated specification.
- After the approval of the DCR by the EB Review Panel, the EB votes to approve the DCR.
- If it is approved, it will be incorporated in the next revision of the relevant spec and evaluated for possible inclusion in any applicable specifications.

DCR Process



2018 Highlights

- Support Multi-State Car Procurement
- Reissue Bi-Level PRIIA Spec
- Support Current Dual Mode Locomotive Procurement and update the PRIIA Spec
- Revise the Single Level PRIIA Spec

2019 NGE Tech Agenda

- Multi-State Rail Car Procurement
- Metro North Dual Mode Locomotive Procurement
- Amtrak Locomotive Procurement
- Amtrak AmFleet 1 Replacement Procurement
- Working Group Updates to include
 - Electronics on Trains
 - WiFi
 - AAR
 - DEF

How We Can Improve?

- Speed and tracking of the DCR process
- Other?



11. Annual Progress Report – Document Control Management – Tammy Krause:

Tammy Krause provided the following Document Control Management progress report for the past year (2018)

Prefacing her remarks, Tammy noted that Dave Warner initially developed the DCR process and chart shown earlier in the Technical subcommittee presentation. She also noted that she has now developed a DCR tracking system in which the DCR sender receives email notifications as the DCR moves through the process.

Document Control Update/Progress Report 2018:

Single Level Passenger Car 305-003

- Revision B.1 6/5/18
- Revision B.2 2/7/19
- DCRs 003-145 to 003-180

Trainset Passenger Car 305-007

- Revision A 8/2/11
- Revision B In process
- DCRs 007-076 to 007-167 currently with the Working Groups

Dual Mode Locomotive 003-011

- Initial Release 2/2/16
- MNRR used as base for their spec
- Will use to update the PRIIA spec

12. Equipment Procurements:

- **Multi-State Single Level Cars – Momo Tamaoki, Caltrans and Ray Ginnell, Siemens:**

Momo Tamaoki, Caltrans and Ray Ginnell, Siemens, provided a summary overview/status update on the multi-state single level car procurement that is currently underway:

Caltrans/ IDOT New Single-Level Passenger Railcars "CALIDOT"

Approach to PRIIA Compliance 305-003 Rev. A

- Design is PRIIA 305-003 & FRA compliant
- FRA involvement in both AAF/ Brightline and CALIDOT projects
- Collaborative approach across stakeholders
- Updating and improving PRIIA:
 - Several DCRs for Coach cars and Cab car accepted and approved
 - Great collaboration and exchange with NGEC
 - Next: Food Service (Chapter 14) – coffee maker, ADA compliant counter height and other

topics flagged for review as RFCs and possible future DCRs.

Mock-up Phase Completed –Brightline and Virtual Reality





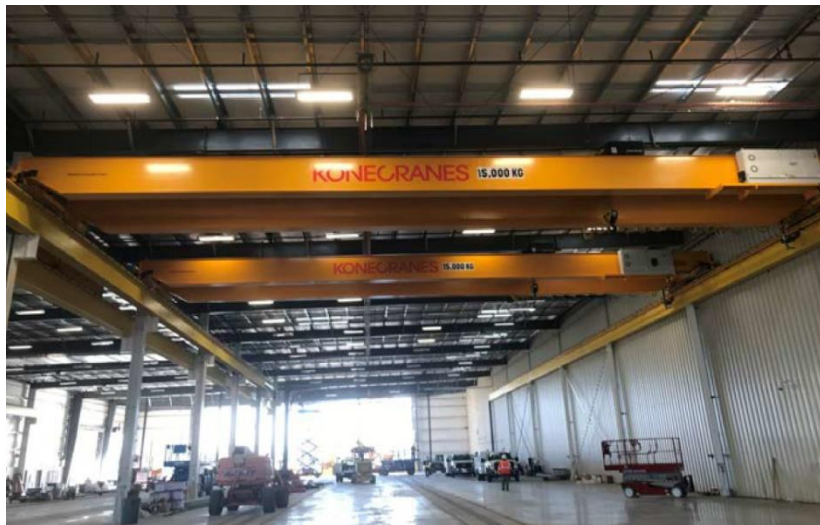
Interior Updates

- Wide, wheelchair accessible aisles throughout the car; roller shades in lieu of curtains
- First Article Inspections ongoing through March/ April 2019
- Currently finalizing Change order for improved seat covers with Synthetic leather and Trevira CS fabric combination for superior wear characteristics
- New Buy America compliant source for Rubber Flooring identified and approved



Production and Expansion Update

- Siemens facility expansion ongoing with new passivation building, final assembly building and warehouse. Increased carshell production capacity by installing a second spot weld gantry to support CALIDOT and other projects.





Sub Assembly and Final Assembly Started and on Track





Key Schedule Milestones 2019

Design Review PDR Café & Cab -April/ May 2019

First CT-1B FAI Car Complete - Summer 2019

Ship Cars 1+2 to TCCI – Winter 2019/20

Ship Car 3 to Climate Room – Winter 2019/20

VTI and High-Speed Testing – Winter 2019/20

Production status as of 1/31/2019:

- 7 Carshells completed
- 2 CT-1B cars in Final Assembly
- First Truck completed, second truck in process
- Majority of coach supplier FAIs completed
- Multiple Systems and Sub Assemblies in production and en route to Sacramento

Overview of Cars – Updated Scope

Customer	Car Type		Description
Caltrans	CT-1A		Mid coach car
Caltrans	CT-1B		End coach car coupled to locomotive, w/ gap filler, level boarding
Caltrans	CT-1C		Mid coach car with wheelchair lifts
Caltrans	CT-1D		Mid coach car w/ gap filler, level boarding
Caltrans	CT-4A		Cab Car
Caltrans	CT-5A		Lounge Car
IDOT	ID-1A		Individual coach car
IDOT	ID-1B		Coach car for business or café married pair
IDOT	ID-3A		Business/ economy car
IDOT	ID-5A		Lounge Car

Next Steps

- Continue and finalize alignment with ADA community and FRA
- Design exterior decals Caltrans/ SJJPA and IDOT/ Amtrak Midwest
- Develop standardized interior and exterior signage concept
- Start Café & Cab Car Design Review phase

- Implement ramp-up plan in production
- Conduct first car complete FAI and FRA sample car inspection

If you have any questions – contact:

Momoko Tamaoki

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 Div. of Rail and Mass Transportation
 California Department of Transportation
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Ray Ginnell

Vice President Commuter, Regional and Passenger Coaches
 Siemens Industry Inc., Mobility
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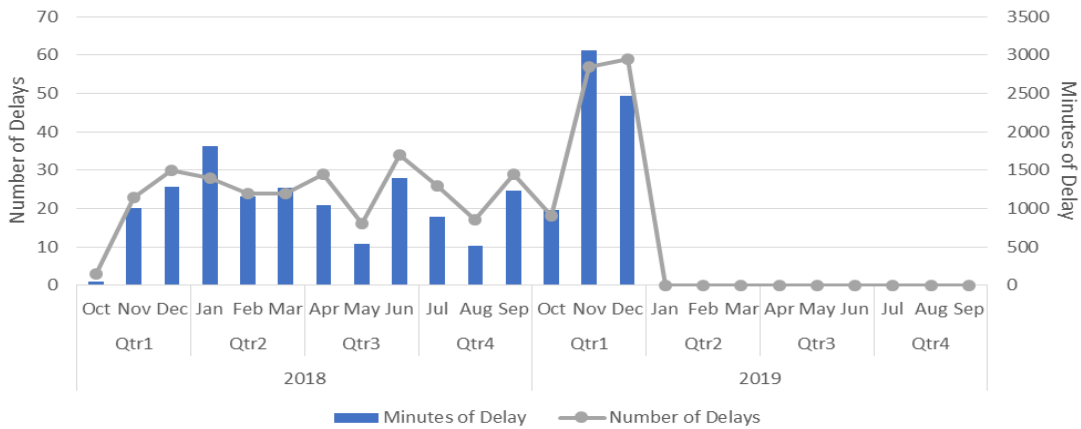
- **Amtrak Equipment Procurements – Charlie King, Amtrak:**

Amtrak Procurement and Program Updates

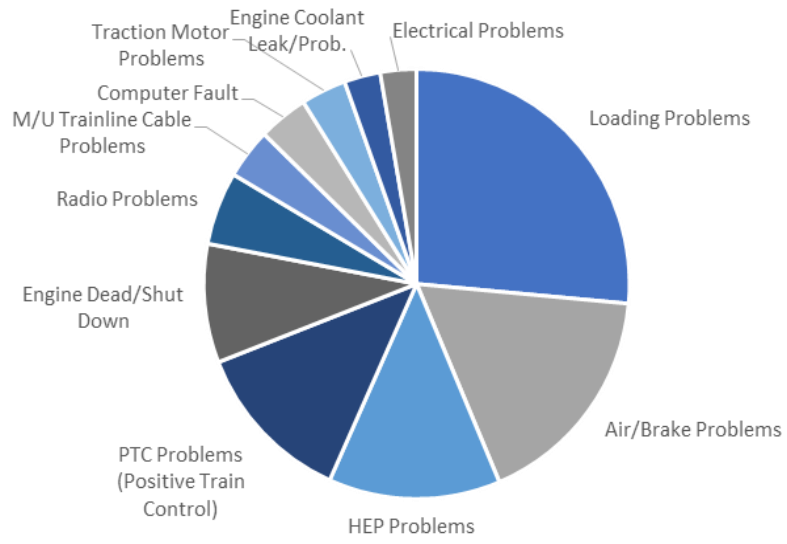
Multi-State SC44 Update



SC44 Fleet Performance
 Monthly Number & Minutes of Delay



FY18 Top 10 Problem Codes



Siemen Chargers (SC-44) Life Cycle Preventative Maintenance Events	Life Expectancy
Trucks	2 Years
Electrical Distribution Aux and Battery	
Power Electronics and Propulsion System	
Main Engine	
HEP System	
Compressed Air Equipment	
Fluid Cooling	3 Years
Fuel System	
Compressed Air Equipment	4 Years
Fluid Cooling	
Primary High Voltage	
Electrical Distribution Aux and Battery	5 Years
Brakes	
Fuel System	
Fluid Cooling	
Carbody	6 Years
Trucks	
Coupler	
Power Electronics and Propulsion System	
HEP System	
Compressed Air Equipment	
Forced Air Cooling	
Fluid Cooling	
Power Electronics and Propulsion System	
Carbody	8 Years
Trucks	
Electrical Distribution Aux and Battery	
Brakes	
Compressed Air Equipment	
Forced Air Cooling	
Fuel System	10 Years
Fluid Cooling	
Primary High Voltage	
Carbody	12 Years
Trucks	
Power Electronics and Propulsion System	
Fuel System	
Fluid Cooling	
Primary High Voltage	15 Years
Fluid Cooling	

Cummins (QSK95) Main Engine Life Cycle Preventative Maintenance Events	Life Expectancy
Supplemental Coolant Additive (SCA)	4,000 Hours
Fuel Pump	6,000 Hours
Aftertreatment Intake NOx Sensor	
Aftertreatment Outlet NOx Sensor	
Cooling System Heater Control Panel	
Cooling System Heater Assembly	
Hydraulic Pump Coupling Drive	8,000 Hours
Fuel Injectors	10,000 Hours
DEF Doser	12,500 Hours
Overhead Set	15,000 Hours
Turbocharger	25,000 Hours
DEF Supply Module	55000 Hours
Vibration Damper, Viscous	
Turbocharger	
Cummins Main Engine	

Owner	Maintenance Base	Quantity in Service [/TOTAL EXPECTED]
Midwest DOTs (IDTX)	CHI	23 [28]
Caltrans (CDTX)	OAK	8
Caltrans (CDTX)	LA	13 [14]
Wash DOT (WDTX)	SEA	7 [8]

EXPEDITED PARTS SUPPLY & 24/7/365 NETWORK TECHNICAL SUPPORT → TSSSA Development

PTC Issues:

All prior survey findings resolved via Siemens FMI or Amtrak commissioning process – all locomotives IETMS commissioned

Monitoring Train Control operations/defects

Locomotive Overspeed Interaction (ATS, ITCS)

Inclement Weather Issues: [Siemens Engineering initially addressing with A8 software release and FMI implementations]

Dynamic Brake Grids susceptible to moisture (from rain and snow as bus bars not insulated, cabinet not sealed correctly, resistance tolerance, fan/air issues)

Crankcase Eductor susceptible to ice buildup

Cottonwood and Debris Ingress

Undercarriage and HEP transformer pumps

Amtrak Multi-State SC44 Impressions

- Good communication and execution among Siemens, Cummins and States
- Modular platform approach to maintenance beneficial.
- Looking to reduce/extend component intervals as platform matures
- Impressed with propulsion system and Cummins QSK95
- Front strike damage not easily repaired and certain areas of undercarriage not robust to debris/weather elements
- Significant amount of PTC launch issues
- Lack full advantage of OTP delay mitigation and predictive analysis without RDA access and 24/7/365 Siemens support
- Extreme Environment Operations are an opportunity to improve
 - Dynamic Brake circuit susceptible to debris and earth fault grounds → multiple issues
 - QSK95 cold oil lockout & fuel gelling issues at low temperatures
 - HEP Transformer

Ongoing and Planned Amfleet Modifications

- Amfleet Refresh/Pit Stop (FY18/19)
 - Interior upgrades to the Amfleet and Cab Cars to improve the customer experience and boost CSI scores.
 - Amfleet I/II Refresh – New cushions, carpets, curtains, flooring, LED lighting, and restroom deodorizers
 - Amfleet I Pit Stop (Refresh Phase II) – New walk off mats, galley trash/recycling, galley counter tops, galley murals, and ongoing LED lighting installs
- ADA Handrails and Tray Tables (FY19)
 - Changeover to new ADA compliant handrails in the vestibules and addition of an ADA compliant tray table.
- Amfleet Bathroom Exhaust (FY18/19)
 - Addition of a cleanout access door on the restroom exhaust duct to allow for periodic cleaning

- to improve restroom air flow and odor control
- Amfleet Battery Box Screen (FY19-22)
 - Installation of a mesh screen in the battery boxes to help prevent leaf ingestion and potential for fires
- Roof Coating (planned FY19)
 - Coating of the Amfleet and Cab Car roofs to prevent roof leaks
- ADA Vestibule Non-Skid Coating (planned FY20)
 - Spray application of an improved, slip-resistant material for the vestibule floors

Ongoing GE P32DM/40/42 Modifications

- Additions to Quarterly and Life Cycle Maintenance [FY19/20]
 - Electrical switchgear/contactors/air compressor inspections and targeted component replacement on failure data
- Improved Components [FY19]
 - New HVACs, Intercooler seals, Turbo Inlet, Ditchlight Controllers, Horn Heaters
- Aggressive Winterization Campaigns [FY19+]
 - 25 item check of prior modifications
 - Radiator cab snow screens
 - Freeze prevention modifications for turbo and cooling system

P-42 Replacement Update



Long Distance Diesel-Electric Locomotive RFP

Vendor will provide all design, development, construction, testing, and long-term services (TSSSA) of a rebuilt AC P42-8 locomotive or a new P42IIA streamlined passenger locomotive for use in long-distance and intercity corridor passenger service.

Basic Characteristics	
Speed	110+ MPH
Weight	< 340,000 lbs
Length	< 85 ft
Clearance	AMTK D-05-1355 Rev E
Tractive Effort	65,000 lbs

Tractive Horsepower	800+ Trailing Tons
Head End Power	3-phase 480V, 60Hz, 1000kW
Cant deficiency	< 6 in.
Fuel Tank	≥ 2200 US gal
Tier	4
Service Life	30 years
Maintenance Interval	184 Day

- All North American Environments
- Push-pull, MU (w/Electric) Operation with DTL
- Blended Automatic Braking with ECP
- Desktop Control
- S-580 or CEM Crashworthiness
- PTC: 9 Aspect ACSES, IETMS, Provisional ITCS + ATS
- Options for catenary power or DC 3rd Rail power draw

Locomotive TSSSA RFP

Amtrak Level 1 & Level 2 Depot Locations



- Proven structure based on prior Amtrak-OEM service agreements
- Commence after Locomotive Warranty Period
- Service Depots – Level 1,2,3
- All Scheduled Maintenance & Overhaul Material [kits]

- Material Storage on Amtrak property
- Technical Support – Hours differ per Depot
- Electronic Manuals & Documentation Control
- Staffed Remote Service Desk
- Locomotive Diagnostic System and Predictive Analysis

Long Distance Diesel Replacement Procurement

- Diesel RFI 2017 & Specification Development
- Diesel RFP Issued June 1, 2018
- Service Agreement (TSSSA) SOW Issued June 22, 2018
- Proposals Received August 23, 2018
- Scoring Complete November 1, 2018
- Award Announced December 21, 2018

Amtrak’s Selection Decision is



Amtrak Long-distance Charger (ALC42)

Item	Data
Locomotive type	High-speed passenger locomotive with full width locomotive carbody
Power type	AC Diesel-electric
Crashworthiness	Incorporated CEM and AAR-S-580 Crashworthiness
Gauge	4 ft 8 1/2 in.
Wheel diameter (new/worn)	Up to 44" / down to 41" (3 inch maximum wear)
Minimum curve radius	250'
Wheel base	118 1/8 in.
Wheel arrangement	Bo'Bo'
Length over coupler	71 ft. 10 in.
Width	10 ft. 2 in.
Height	14 ft. 7 in.
Clearance/Envelop	AMTRAK Clearance diagram D-05-1355
Locomotive design weight	267,000 lbs. (depending on optional equipment)
Top speed	125 mph
Engine	Cummins QSK 95 (16 cylinder – 4 stroke locomotive Tier 4 Diesel engine)
Power output	4,200 hp continuous
Emission standard	US EPA Tier 4 line-haul locomotive
Engine speed range	600 rpm – 1,800 rpm
Fuel tank volume	2,200 gallons
Tractive effort	65,000 lbs. (290 kN) (starting)
Head end power (HEP)	1,000 kW available with 10% over load capacity, 3-phase 480 V / 60 Hz at low temperatures

Modifications in a nutshell SMI and SMO



Systems

- **HEP 1,000 kW continuous + 10% overload** – incl. new HEP transformer and changes of HEP rack and cabling
- **PTC/ATC:** new combination ACSES/I-ETMS/Cab Signaling, ITCS and IITS provision (=space and cabling) incl. truck/carbody/MR/cab/cabling/roof modifications
- **Battery charger** redundancy
- **Software changes:** diagnostics, Trainlines, ACS, Overspeed selection switch – adjustability
- **Winterization package:** heated sand nozzles, Kim Hotstart with coolant/oil heater, brake resistor improvements, compressor oil heating, incl. truck/carbody/MR/cab/cabling/roof modifications
- **184 day maintenance interval:** fuel filtration (doubling filtration capacity), lube oil volume with external tank&pump incl. truck/carbody/MR/cab/cabling/roof modifications
- **Brake System** Adaptation needed for Amtrak operation / PTP module
- **Head of Train Device:** Integration of provisions – "Plug and Play" -ready
- **Cab console:** additional control elements
- **Cab radio:** Ritron clean cab radio
- **ECP brake provisions:** as ACS-64 prototype
- Additional **74 V DC receptacles** outside for battery charging
- Additional **AC receptacles** inside machine room
- Additional **EFCO** control element in the rear E-compartment
- **RAMS** Plan and Demonstration

Mechanical

- Amtrak **paint scheme** and decals
- Several car body modifications (SMI and SMO)
- **Front nose:** replace welded design with bolt-on solution
- PTC/ATC antenna interfaces carbody and support
- **Larger front plow** with 3rd rail cutout
- 2,200 gallons fuel tank plus strainer for fill pipe
- Increased sand boxes (5 cf. – 6.5 cf.)
- electronic device lockbox in cab
- foam head bump blocks
- Cab FRP lining changes for PTC/ATC provisions
- **Compatibility study** for coupler and cables incl. clearance (dyn. and static)

Revision -

Date 02/11/2019

Document Number: NA

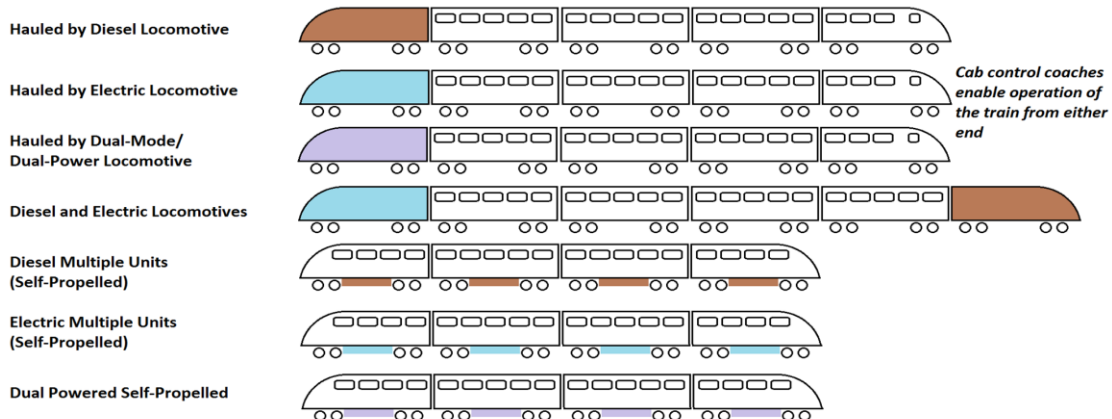
Page 2

Amfleet I Replacement Trainset Procurement

- Trainset RFP Issued 1/18/19
- Service Agreement (TSSSA) SOW issued 2/8/19
- Pre-Proposal Meeting Scheduled for 2/26/19
- Exhibits N & O due 3/15/19 (Exec summary of Equipment, Maintenance & Facility Requirements)
- Proposals due 5/1/19
- Evaluation during the summer of 2019

Potential Integrated Trainset Configurations for a Train with Four Passenger Cars

Can use **diesel**, **electric** or **dual-powered** propulsion



Acela 21

2018 Review
2019 Plan

2018:

- First power car and nine passenger vehicles arrived at Alstom's facility in Hornell.

-
- Completed passenger vehicle compression tests.
 - Completed majority of Final Design Reviews.
 - Completed 15:45 First Article Inspections.

2019:

- Completed Power Car Compression Tests
 - (January 2019)
- Completed Final Design Reviews
 - (January 2019)
- Preliminary Maintenance Plan
 - (~ April 2019)
- Complete First Article Inspections
 - (~ May 2019)
- Complete Trainset 1 testing at Hornell
 - (~ August 2019)
- Commence Trainset 1 testing at TTCi/Pueblo
 - (~ September 2019)
- Commence Trainset 2 testing on the NEC
 - (~ December 2019)

13.

The Charger Locomotives deployment experience:

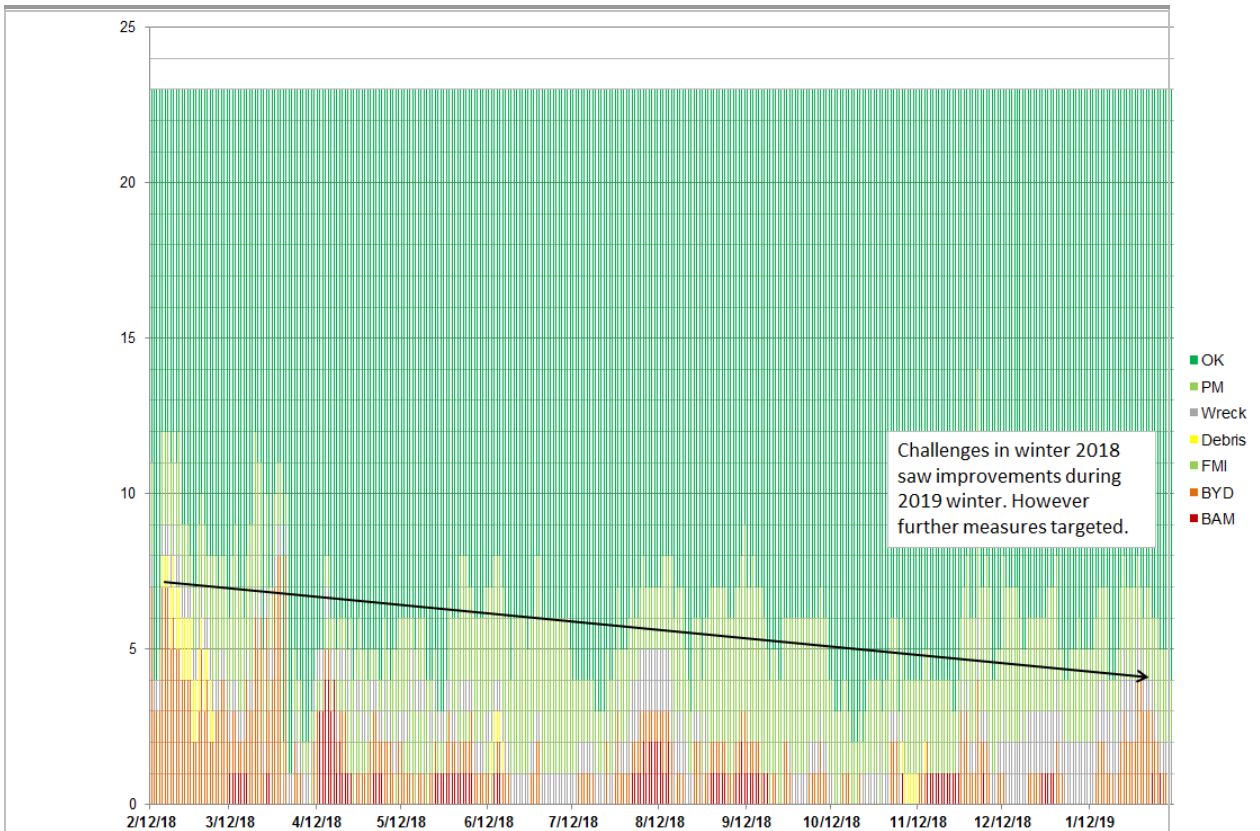
a. Mid-West States Experience – John Oimoen, IDOT:

Midwest Charger Locomotive Update

22 Charger Locomotives are in Daily Service on the Midwest Hub Network

- Experience with extreme cold, snow, ice, heat and humidity
- In revenue service for over a year
- Running in lead service on six of the eight routes
- Siemens, IDOT and Amtrak continue to work through implementation issues

IDOT Fleet – Chicago



Current Status of Locomotives

- Although the new locomotives were delivered with all PTC systems included, much testing needs to take place.
- PTC readiness survey completed in December 2018
- 5 MI units will be moving from Pueblo to Chicago in the next few weeks.
- Charger 238.111(a) testing on the Pontiac and Port Huron routes in the next month
- FRA and Midwest states exploring lease options for 5 locos that temporarily available

Midwest Network has Unique PTC Requirements

- The Michigan corridor requires ITCS version of PTC and all others require I-ETMS. The new locomotives have both systems on-board and the testing needs to include both.
- I-ETMS commissioned on all locos in Chicago
- Twelve Chargers ready for ITCS commissioning, pending software updates
- For the new locomotives, the implementation of the PTC tests has been scheduled secondary to Amtrak's current fleet.



Midwest PTC Implementation Continues

- Michigan Line 110 mph operations to begin in Spring 2019
X-ITCS (grade crossing start) commissioning on Chicago-St. Louis will start in Spring 2019



Effective Implementation Partnership – Crucial to Program Success

- Midwest States continue to work closely together
- Midwest states continue to work with Amtrak as the operator
- Amtrak and the Midwest states worked effectively to implement DEF distribution in Chicago and at all outlying Network terminals
- Supply chain improvements by Siemens were required and necessitated extra effort by the stakeholders
- Joint failure review boards and warrantee meetings continue to be held that include all agencies that operate Chargers

Lessons-Learned

- Operator/Maintainer needs to be involved from specification phase through implementation
- Continuous coordination with all Operator/Maintainer Departments is essential

- Siemens training for crew training and maintenance training was effective. Learned not to schedule too far in advance of equipment arriving.
- Lesson learned sessions have been documented to be use for future procurements

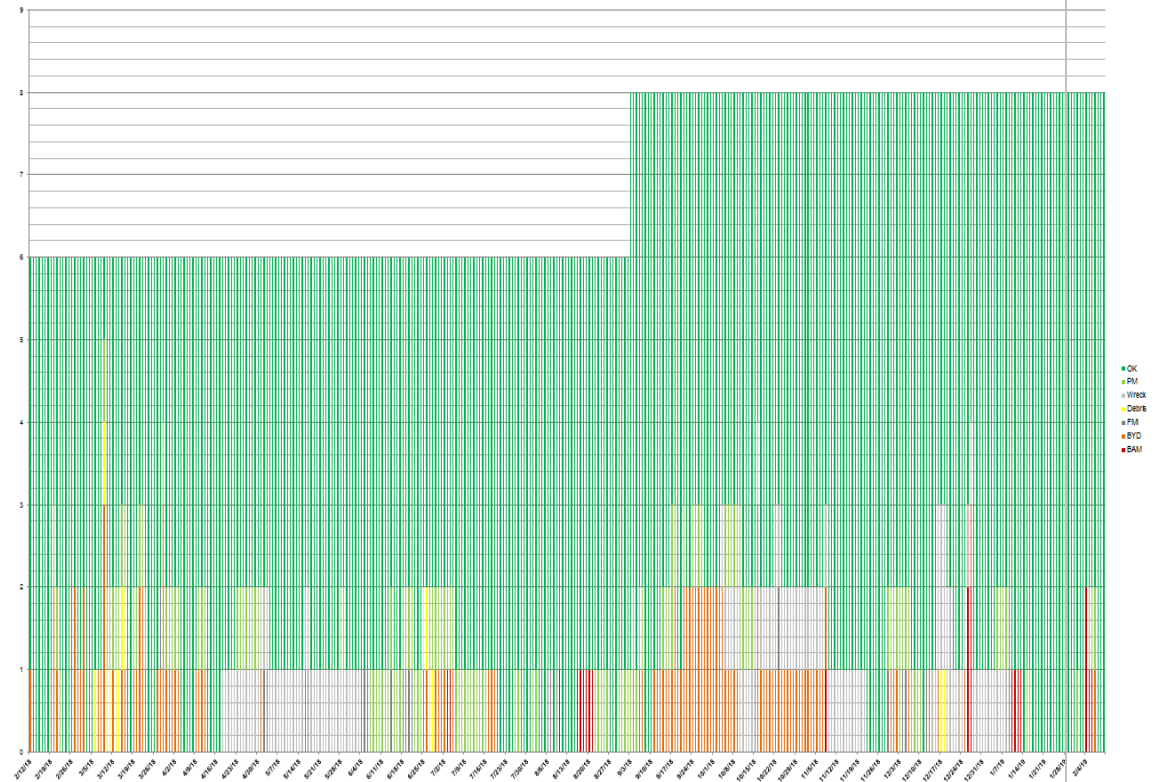
Looking Forward

- Revenue service Michigan
- Maintenance plan
 - TSSSA?
 - Future overhauls
 - Long term fleet planning
- Marrying the locomotives to incoming new cars.

b. California Experience – Momo Tamaoki – Caltrans:

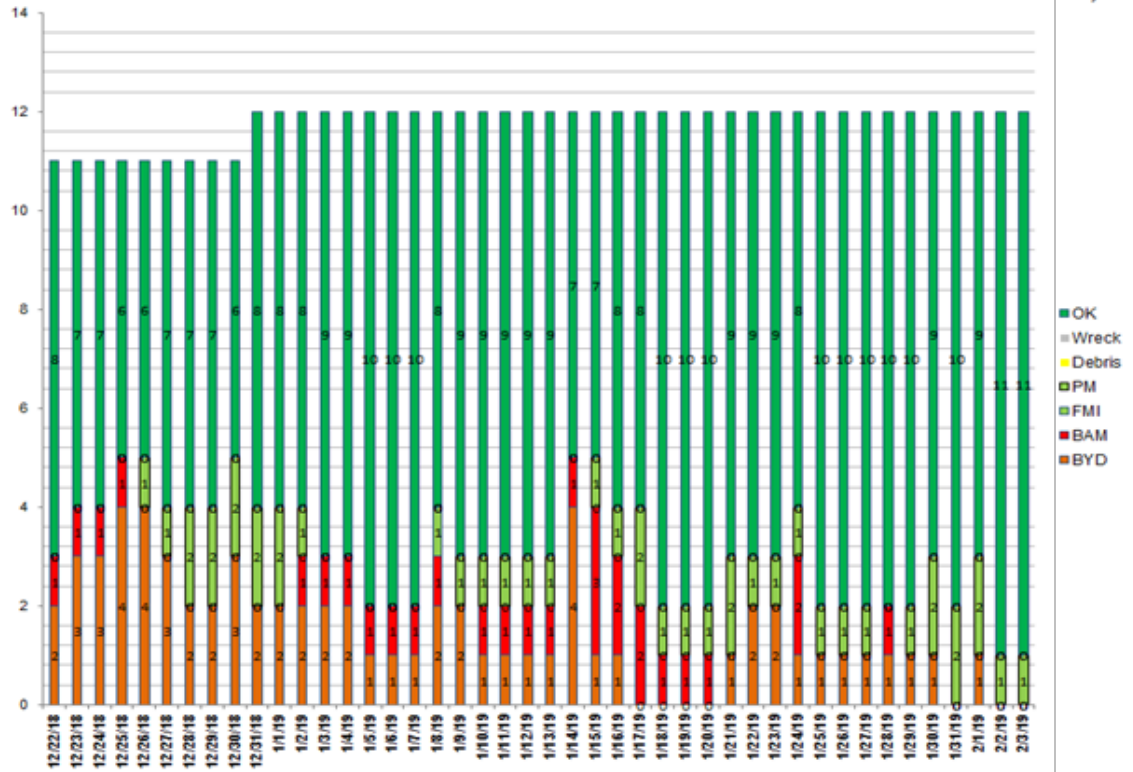
Charger Locomotive Deployment - The California Experience

Fleet Performance – Oakland



- Close collaboration with Amtrak on-site team.
- Consistent performance since record keeping started.

Fleet Performance - LA



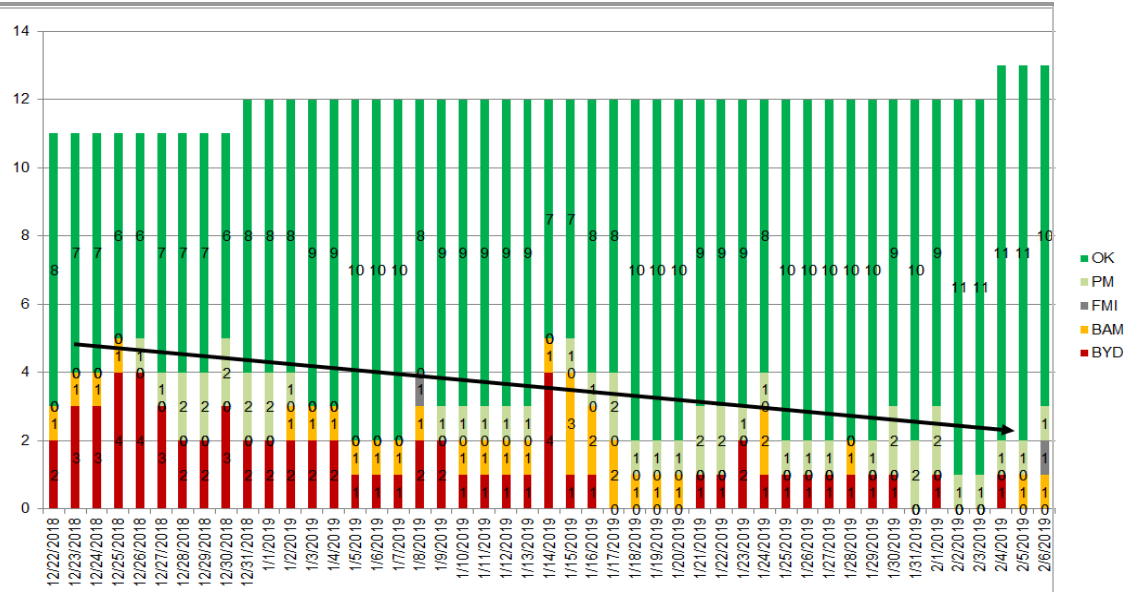
- 13 of 14 locomotives delivered
- 13 locomotives in service
- Collaboration resolving ramp up challenges of new fleet and PTC

Team Effort

- Coordination between Caltrans, Siemens, Amtrak, JPAs, and JPEs (IDOT/WSDOT) through:
 - Bi-Weekly Project Management call (JPEs/Siemens)
 - Bi-Weekly Warranty call
 - Failure Review Board meetings
 - Weekly Charger Status Update (Amtrak, Caltrans, JPAs, and Siemens)
 - Weekly FMI call (Amtrak, Caltrans, JPAs, and Siemens)

Warranty Spare Parts Issues

Concerns with lack of Warranty spare parts to support Option locomotives



New Larger Snow Plow

Current Design



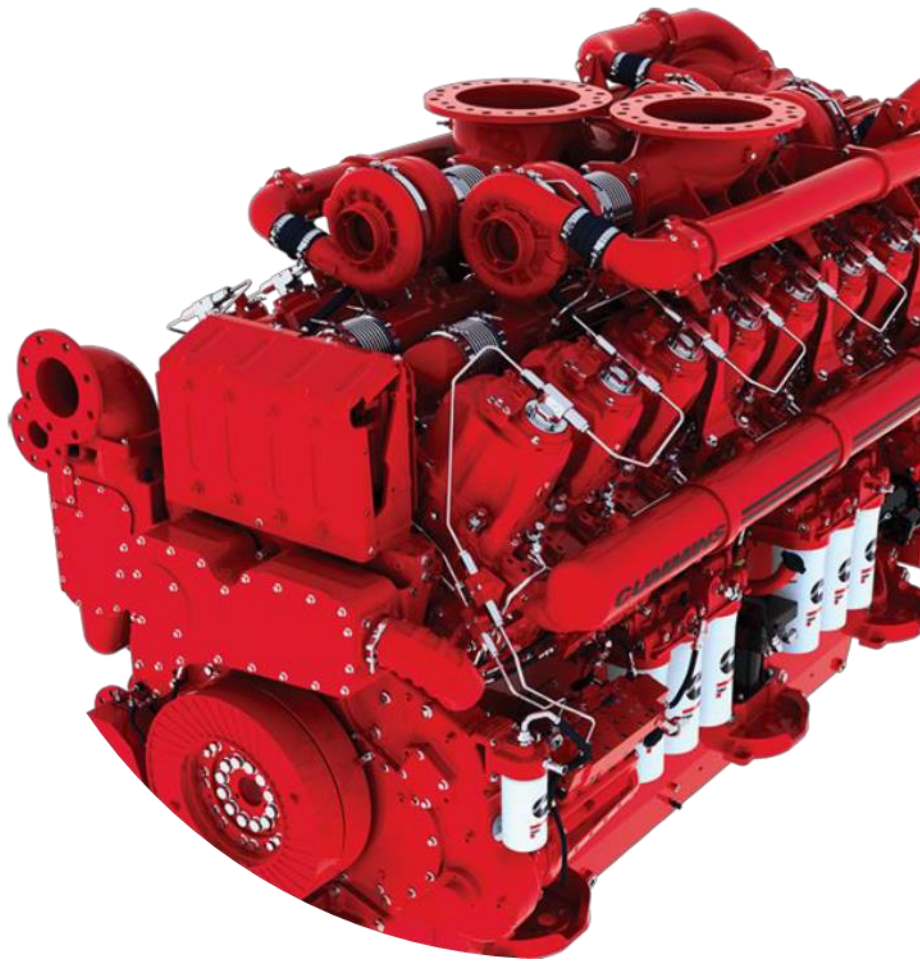
New Caltrans Design

Worked with Amtrak to ensure proper clearances can be maintained.



Renewable Diesel Project

- Caltrans and Capital Corridor partner to achieve reduced GHG through Renewable Diesel.
- Cummins and Siemens Supporting Testing of the RD Fuel in new Tier IV locomotive.
- Test Planning underway for Long term durability of engine running RD fuel.



Renewable Diesel Advantages

12% reduction in system out NOx emissions on EPA emissions test
50% (approximate) reduction of particulate matter (cause of black smoke)
Initial tests at Cummins are positive, next phase is field long term testing
Preliminary Data provided by Cummins

c. Washington State Experience – Ron Pate, WSDOT:

Ron Pate, WSDOT reported that WSDOT had received its initial order (8 locomotives – one was destroyed in a derailment will be replaced in 2020).

Overall, the Charger is performing well – they were on an aggressive timeline and experienced great collaboration and aggressive project management.

Ron emphasized the collaboration among the States, Amtrak, FRA and Siemens as being critical to the success that has been experienced.

He also noted that costs have improved (maintenance)

Valuable lessons have been learned, and WSDOT is very happy with the Charger locomotives.

d. Amtrak Experience – Charlie King, Amtrak:

Charlie King elaborated a bit more on what he had reported earlier – specific to the Amtrak experience:

Amtrak Multi-State SC44 Impressions

- Good communication and execution among Siemens, Cummins and States
- Modular platform approach to maintenance beneficial.
- Looking to reduce/extend component intervals as platform matures
- Impressed with propulsion system and Cummins QSK95
- Front strike damage not easily repaired and certain areas of undercarriage not robust to debris/weather elements
- Significant amount of PTC launch issues
- Lack full advantage of OTP delay mitigation and predictive analysis without RDA access and 24/7/365 Siemens support
- Extreme Environment Operations are an opportunity to improve
 - Dynamic Brake circuit susceptible to debris and earth fault grounds → multiple issues
 - QSK95 cold oil lockout & fuel gelling issues at low temperatures
 - HEP Transformer

14.

Progress Report – NGEC Equipment Acquisition and Ownership Best Practices and Lessons Learned Working Group – Eric Curtit:

Eric Curtit described the formation of the NGEC Equipment Acquisition Ownership Best Practices and Lessons Learned Working Group and asked each section leader to provide a brief update on progress made on each section of the report. Eric added that once the report has been developed (all sections) it will be distributed for review and input by NGEC members – including the industry participants. It will be considered a living document and is meant to serve as a guide for future procurements.

a. Implementation – Momo Tamaoki, Caltrans

Momo Tamaoki reported that she had parsed out the various segments of the Implementation section and had developed the outline and format for this section of the report. She had assigned the areas to be developed and set deadlines. She is now in the process of reviewing those submittals and compiling the segments into a DRAFT of the Implementation section.

b. Planning – John Oimoen, IDOT

John Oimoen complimented Jennifer Bastian, IDOT for the work she has done on this section of the report and provided a brief overview of the topics contained therein such as Fleet Planning; Fleet management and maintenance facilities.

c. Revenue Service – Dick Bruss – Industry member:

Dick Bruss was unavailable for today’s meeting – Dick had completed a great deal of work on the Revenue Service section of the report, and it has been circulated among working group members.

d. Long Term Operation Maintenance – Jason Biggs, WSDOT

Jason Biggs reported that WSDOT has “onboarded Atkins” to develop the Long-Term Operations Maintenance section of the report.

A draft outline has been completed and draft data has been developed.

The target for distribution of a draft of the section to the working group team is late March 2019.

15.

Presentation from VIA Rail – Equipment Procurement – Mario Bergeron and Robert Becker, VIA Rail and Dave Ward, Siemens:

Mario Bergeron and Robert Becker, VIA Rail, and Dave Ward, Siemens provided a presentation on VIA Rail’s current procurement of equipment, as well as a general overview of VIA Rail.

Mario Bergeron prefaced the presentation with some general thoughts and background as the original Vice Chair of the NGEC and the original chair of the NGEC Technical subcommittee during his time as CMO of Amtrak. After Mario went to VIA Rail, he continued to watch the progress of the NGEC from afar, and, time permitting, has listened in on subcommittee calls an industry member. Mario believes that the NGEC is “healthy” and that there is

"lots of engagement and intensity...you have made it your own."

Mario added that the VIA Rail equipment procurement "has taken its roots from the product (specification) of the NGEC" and, he added, that "it is a part of the evolution and progression (of the NGEC) that your neighbor to the north (Canada) is involved with the NGEC products."

The full presentation will be posted on line on the NGEC website (www.ngec305.org) and will be distributed along with the other presentations given at the Annual meeting.

Following the presentation, FRA asked the VIA rail representatives if its procurement document was very open, similar to the way Amtrak's procurement document has been.

The response from Robert Becker was "yes it was a very open process" and was broken down into three teams – a financial evaluation team; a technical evaluation team and a deliverability evaluation team. Each team conducted its review independently – not talking to each other until the end – when they all came together.

Asked why a trainset rather than separate cars – Mr. Becker answered that they felt there were too many problems that could arise from separate cars, even though it would be "nice for marketing" purposes because you could add on cars as increased ridership occurred, but, the overall assessment was that for their situation it was better that the train be a fixed consist.

Asked if the procurement will result in facility changes – Mr. Becker again responded in the affirmative noting that the team looked at changes to facilities for all trainsets.

Asked how they have measured deliverability – the response was that they looked at such things as scheduling and production capacity.

Asked who did the exterior design showed as a rendering in the presentation, Mario Bergeron and Robert Becker noted that the design is not yet final, but the one used in the presentation was done by a local Montreal design company. They also noted that yellow is the corporate VIA Rail colors.

**16.
Questions/Comments/Other Issues – All:**

Chairman Curtit opened the floor for comments/questions. Hearing none, Chairman Curtit proceeded with closing comments thanking everyone for coming and for their commitment and dedication to the NGEC.

**17.
Closing Comments/Adjourn – Eric Curtit:**

With no further business to come before the committee today (2-22-19), Chairman Curtit adjourned the NGEC's 9th Annual Meeting at 12:22pm Eastern.

Next NGEC Executive Board call – 3-12-19

Next NGEC Annual Meeting – February 2020

Decisions and Action Items

The Executive Board approved the minutes from the last Executive Board conference call held on 2-12-19.

The Executive Board unanimously accepted the Treasurer's Report as presented.

Housekeeping items/actions:

All presentations will be distributed to the NGEC email list, providing they are not too large for transmittal, and will be posted on the NGEC website at www.ngec305.org

All state members of the NGEC who have traveled to this meeting are asked to submit their expense reimbursement forms to Strat Cavros, AASHTO, at scavros@aaashto.org. Please submit these expense forms as soon as possible.

All industry members are asked to review the industry participants roster and provide any corrections, additions, deletions to Steve Hewitt as soon as possible. The list is only as good as the information provided.

The Executive Board call originally scheduled for Tuesday, 2-26-19, is canceled. The next meeting of the NGEC Executive Board will take place on 3-12-19, resuming its regular schedule.

The NGEC Technical subcommittee will stay on its normal bi-weekly schedule (every other Thursday) with the next call taking place on 3-7-19.

The NGEC Finance and Administrative subcommittee will also stay on schedule and will meet on 3-6-19.

The new NGEC two-pager educational document was distributed to all in attendance. These are now available in hard copy by request through Steve Hewitt at shewitt109@aol.com Please let Steve know how many and where to send them. They will also be available electronically upon request (from Steve) or through the NGEC website.

Attachment



Our Vision: The NGEC will provide national leadership in standardization, acquisition, and management of passenger rail equipment.

**PRIIA Section 305 Next Generation Corridor Equipment Pool Committee (NGEC)
9th Annual Meeting
February 22, 2019
8:00 am – 12:45 pm EST
Hyatt Regency, Capitol Hill, Washington, DC**

8:00 - 8:25 am	Registration
8:25 – 8:30 am	Hotel Safety Briefing – Hotel Staff
8:30 – 8:35 am	Convene Annual Meeting: Eric Curtit, Missouri DOT, NGEC Chair
8:35 - 8:40 am	Self introductions
8:40 – 8:45 am	Roll call – establish the presence of a quorum: Steve Hewitt, NGEC Program Manager
8:45 – 8:50 am	Review Meeting Agenda: Eric Curtit Review Meeting Packets: Steve Hewitt
8:50 – 8:55 am	Approval of the Minutes from the February 12, 2019 Executive Board conference call
8:55 – 9:10 am	Chairman’s Report - Eric Curtit, Chair, NGEC Executive Board
9:10 - 9:25 am	Update from The Federal Railroad Administration - Michael Lestingi, and Devin Rouse, FRA (Tier III Rulemaking – Devin Rouse)
9:25 – 9:40 am	Update from Amtrak Government Affairs – Joe McHugh, Amtrak
9:40 - 9:50 am	Treasurer’s Report & Finance & Administrative Subcommittee update - Tim Ziethen, Amtrak
9:50 – 9:55 am	Consideration of Acceptance of the Treasurer’s Report – Eric Curtit
9:55 - 10:15 am	Progress Report: Technical Subcommittee - Charlie King, Amtrak
10:15- 10:25 am	Annual Progress Report: Document Control Management – Tammy Krause
10:25 – 10:40 am	Break
10:40 – 11:00 am	Equipment Procurements <ol style="list-style-type: none">Multi-State Single Level Cars – Momo Tamaoki, Caltrans – Ray Ginnell, SiemensAmtrak Equipment Procurements – Charlie King, Amtrak

11:00 – 11:25 am	<p>The Charger Locomotives deployment – status reports from the states and Amtrak</p> <ul style="list-style-type: none"> a. Mid-West States Experience – John Oimoen, IDOT b. California experience – Momo Tamaoki, Caltrans c. Washington State Experience – Ron Pate, WSDOT d. Amtrak Experience – Charlie King, Amtrak
11:25 – 11:45am	<p>Progress Report – Equipment Acquisition and Ownership Best Practices Working Group – Eric Curtit</p> <p>Reports from Section Leaders:</p> <ul style="list-style-type: none"> Implementation – Team Leader: Caltrans - Momo Tamaoki Planning – Team Leader: IDOT - John Oimoen Revenue Service: Team Leader: Industry - Dick Bruss Long Term Operation Maintenance – Team Leader: WSDOT Jason Biggs
11:45 - 12:15 pm	<p>Presentation: VIA Rail Equipment Procurement - Mario Bergeron, Robert Becker, VIA Rail, & Dave Ward, Siemens</p>
12:15 – 12:45 pm	<p>Questions/Comments/Other Issues - All Attendees</p>
12:45 pm	<p>Closing Comments/Adjourn – Eric Curtit</p>