



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

Section 305 Next Generation Corridor Equipment Pool Committee (NGEC)

Monthly Activities Report: November 30, 2022

Submitted By: Steven J Hewitt, Program Manager, S305 NGEC

Public law 110-432 required Amtrak to:

...establish a Next Generation Corridor Equipment Pool Committee, comprised of representatives of Amtrak, the Federal Railroad Administration, host freight railroad companies, passenger railroad equipment manufacturers, interested States, and as appropriate, other passenger railroad operators.

"The purpose of the Committee shall be to design, develop specifications for, and procure standardized next-generation corridor equipment.

(b) Functions – the Committee may –

- 1) Determine the number of different types of equipment required, considering variations in operational needs and corridor infrastructure.*
- 2) Establish a pool of equipment to be used on corridor routes funded by participating states; and*
- 3) Subject agreements between Amtrak and States, utilize services provided by Amtrak to design, maintain and remanufacture equipment."*

Executive Board

Chair: Ray Hessinger, NYSDOT

Vice Chair: George Hull, Amtrak

Secretary: John Oimoen, IDOT

Treasurer: Tim Ziethen, Amtrak

The Executive Board holds bi-weekly conference calls – Tuesdays at 11:30am Eastern

During the month of November 2022, the Executive Board met twice – on the 1st and the 15th.

Highlights, decisions, and action items from the month of November 2022 include:

- Treasurer's Report and Finance and Administrative Sub-committee as of 11-15-22:

Balance and Spend Rate:

Total Initial Grant Amount: \$1,250,000.

Expenses Incurred through September 2022: \$1,047,175.29

Balance remaining: \$ 202,824.71

Current Spend Rate per month (as info and used in calculating): \$14,544.10

Estimated Balance at the end of the Extension Period (Contingency): \$28,295.49

Note: New web site design is authorized, and the cost will be deducted from ending projection shown. The cost of the website will be approximately \$12,000.00.

- Status – Website Refresh

Ray Hessinger reported that there has not yet been a response or a new web design mock-up since extensive content changes and other comments were provided to the vendor.

Ray thanked George Hull, Amtrak, for providing some great photos of NGEC equipment (7 photos of various looks at Surfliners). George stated that he is also going to provide pictures of Mid-West locomotives as well.

Ray asked Steve Hewitt to send the photos on to iEngineering for inclusion on the website. Steve agreed and noted that he will also send pictures he received from IDOT and Caltrans, as well as any additional pictures he receives.

Steve Hewitt will also request a meeting/call with iEngineering for some time during the first two weeks of December to see where they are on making the changes.

- Status – CRISI Grant application:

The Amtrak – NGEC CRISI Grant Application was submitted on time on November 30, 2022.

The request is for \$2 million over 5 years with Amtrak picking up the requires 20% match (\$400,000) from non-federal funds.

The application package had many letters of support from industry, individual states, consultants, and associations such as AASHTO, RPA and SPRC.

- 2022 NGEC two-pager:

The 2022 NGEC two-page educational document was released in January 2022. To date 625 copies have been distributed.

On 11-15-22, Steve Hewitt provided the Executive Board with an overview of recommendations in concept and updates for the 2023 version of the NGEC two-pager.

Steve noted that changes to the front page would include:

Top left corner change www.305ngec.org to www.ngec.org the new NGEC domain name secured as a part of the web refresh.

On the Timeline (right side of page one): we will update the date for completing the latest Bi-Level update (revision D). We will also update the number of Charger Locomotives and Venture cars currently in service. Today, I received those numbers from IDOT: 82 Chargers and 30 Venture cars.

As for photos: the plan is to try to have 4 new pictures – possibly one interior and 3 exterior including WSDOT, Midwest and Caltrans.

Steve asked that he, Ray, and Tim Ziethen take on the responsibility of working with MODOT graphic arts to select pictures and formatting.

The intent is to get the proposed updates to MODOT by mid-December for formatting.

- Annual By-Law Review/Update:

The FASC approved proposed changes to the By-laws for submittal to the Executive Board.

The changes are meant to address the advice provided by Amtrak Legal when asked if the NGENC could conduct certain additional activities. The advice was that the activities described would be permissible, if included in the By-Laws.

e. The Executive Board may issue news releases communicating activities or accomplishments of the Committee.

f. The Executive Board may authorize Committee member participation at related meetings, conferences, trade shows, or other similar events to communicate the activities of the Committee or to maintain visibility among stakeholders.

The By-laws changes cannot be brought to the Board for a vote until each Board member has had them in writing for 30 days. Since they were sent to all Board members on 10-13-22, the Board cannot take them up for consideration until the meeting of 11-15-22.

The Executive Board intends to take up consideration of adoption of the proposed By-Laws changes on 12-13-22.

- Multi-State Rail Car Procurement (provided by Caltrans) as of 11-15-22:

The remaining Cab Car FDRs are in the final review and closure stage and the Cab Car dynamic framing representative approach has been submitted to FRA for review. IDOT Café Car system level FDR reviews are nearly closed.

The Cab Car Collision and Corner Post Appendix F testing is complete, and the Rev B test report has been approved. The Cab Car emergency egress demo occurred on Tuesday, October 25 with Amtrak, and FRA in attendance. The Cab Car Coupler FAI is scheduled for December 12th.

117 cars are in production or have been produced at Siemens Sacramento Facility. Revenue Service relevant FMIs are in progress and open items related to Conditional Acceptance are being addressed. IDOT coaches are currently in revenue service and Caltrans is planning revenue start once all necessary agreements are in place.

- Metro-North Dual Mode Locomotive Equipment as of 11-15-22:

On 11-1-22, Ray Hessinger, NYSDOT, reported that the timing of his updates based on when he receives them from Metro-North are about a month old. He expects to get the next update soon.

By the beginning of October, Siemens had submitted all FDR documents to Metro-North. There were 33 documents submitted. Of those, 14 topics are closed with 19 under review. A series of meetings were scheduled throughout the month of October to continue the review of the 19 open topics.

- Amtrak Equipment Procurement Update – as of 11-15-22:

On the Charger Long Distance Service (ALC-42) Locomotive:

They are progressing well with an outstanding cab signal issue being worked out. There are 16 units in service and more shipments are planned once the cab signal issue is resolved.

The locomotives in service are being run on the City of New Orleans, California Zephyr, and on the Empire Builder. All-in-all it is going well.

On the new Acela:

They continue to progress qualifications with the FRA and are doing testing to support modeling. Service is anticipated for late 2023 or early 2024.

On the Intercity Trainset (ICT):

Final Design Review (FDR) is progressing well. Amtrak is looking at facilities to support the ICT's as well.

- Connecticut DOT Rail Car Procurement as of 11-15-22:

On 10-12-22, Marci Petterson reported that they have just finished answering the second round of questions and are now going into the third round. The request for proposals deadline has been extended until January 2023.

Nothing new was reported in November 2022.

- VIA Rail Equipment Procurements:

On 2-25-22 at the Annual Meeting a comprehensive overview/update of the VIA Rail procurement was presented. The presentation has been posted to the NGEC website and distributed to all NGEC members.

VIA Rail has accepted an invitation to present an update during the NGEC 2023 Annual Meeting on 2-3-22. They will present virtually.

- Document Control Progress Report – 11-15-22:

The minor updates and formatting changes to the Bi-Level Specification are under way. The technical working groups are still reviewing their DCRs, and I am going to ask for their comments back by 11/23/22.

I am also proposing to send the entire list of changes to the entire technical subcommittee for their comments on 11/28/22. I have not put together an entire timeline yet. The goal will be to complete the specification update by the end of the year so it can be signed at the annual meeting.

I have provided some requested information to two working groups and one PRIIA member in the past week, and I also continue to meet with the Technical Writer weekly.

- NGEC 2023 Annual Meeting as of 11-15-22:

The meeting will be held earlier than usual this year it will be held on February 3rd. The location is, once again, the Hyatt Regency Capitol Hill, Washington, DC Capitol Room A/B. The time for the meeting will likely be the same as last year (8:00am Registration – Meeting 8:30am – Noon Eastern).

Steve Hewitt and Ray Hessinger reviewed the DRAFT NGEC Annual Meeting agenda and requested input from Board members.

No changes were recommended. The key now will be to fill out the speakers. Steve will provide a clean version of the agenda now to members for use in requesting travel approval.

Mike Murray, FRA, will let Steve Hewitt know who will give the FRA update.

Tim Ziethen and George Hull will let Steve Hewitt know who will provide the Amtrak update.

Kyle Gradinger will reach out to Stadler Rail for a representative to give a presentation on Hydrogen Fuel Cell Multiple Unit Train.

The relevant states who will be presenting will let Steve know who will give the presentation and whether or not the manufacturer will be a part of the presentation.

Steve Hewitt will reach out to VIA Rail to invite them to give an update on their vehicle procurements.

Steve reminded all members to let him know if they are attending and, if so, bin-person or virtual.

Hotel reservation link:

Attendees can begin booking sleeping rooms here - <https://www.hyatt.com/en-US/group-booking/WASRW/G-RA1L>. Rooms must be booked by Monday, January 9th. Room Rate is \$188 per night plus 14.95% tax.

Thank you and let me know if you have any questions.

Kamasha

Kamasha Hendrickson, CMP, CGMP

Senior Meeting Planner

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Status of 2022 Priorities as of 11-15-22:

Priority Area: Review/Update the Bi-level specification currently in Revision C.4. With Amtrak looking at using some of the funding from the new IIJA for its western fleet, it makes sense for the NGEC to review and update the Bi-Level car specification.

Action as of 11-15-22: Bi-Level Car Specification Review/Update is underway. The date for completion of the working group reviews was extended until 11-23-22. The intent is to complete the review by the end of the year for adoption at the Annual meeting.

Priority Area: Review the car body materials issue from a broader perspective for all NGEC equipment not only DMUs. Ray would like to take a look at developing a consistent approach for all of the NGEC vehicle specifications.

Action as of 11-15-22: The Carbody Materials Working Group has about completed its work and will submit its recommendations to the Technical subcommittee in November.

The carbody materials working group is scheduled to provide an update to the Technical subcommittee on 12-8-22.

Priority Area: Review "emerging technologies": On the technical subcommittee call of 12-9-21 the topic of emerging technologies for propulsion was raised. Ray Hessinger believed that the technical subcommittee should conduct a scan of the industry regarding emerging technologies for propulsion and how they relate to the NGEC.

Action as of 11-15-22 Dave Warner initially gave a zero emissions presentation during the Annual Meeting and followed that up with a presentation to the Executive Board on APTA's effort to develop Alternate Fuel Safety Standards. Dave continues to monitor these activities and will present updates as appropriate.

Stadler Rail has been invited to give a presentation on Hydrogen Fuel Cell Multi Unit Train during the NGEC Annual Meeting.

Priority Area: Review and consider using the Metro-North Dual Mode Locomotive Specification organizational changes to determine if they should be adopted by the NGEC and applied across the board to all NGEC specifications. This would be an administrative change not impacting technical content of any of the specifications and could be resolved by the Executive Board.

Action as of 11-15-22 -This is included in the DCM action Plan and will likely follow the Bi-Level Car Specification update or may begin simultaneously with making updates to that specification.

Tammy Krause and Technical Writer, Cameron Cordell are incorporating the Metro-North Dual Mode Specification's administrative/format changes into the Bi-Level Specification and will do the same for each of the PRIIA specifications as they are updated.

Priority Area: Review/update NGEC Reference and Drawings series 305-900 and 305-800.

Action as of 11-15-22: This item is on the DCM action plan for 2022 – no activity on reviewing the reference documents per se, but Tammy Krause, Document Control Manager will be working with Jeff Gordon to create a new reference specification to address the Volpe Center information on CEM.

No change to this status.

Technical subcommittee

Chair: George Hull, Amtrak

Vice Chair: Joe Paul, Amtrak

The Technical subcommittee holds bi-weekly conference calls on Thursdays at 3:00pm Eastern

During the month of November 2022, due to Thanksgiving Holiday (11-24=22), the NGENC Technical Subcommittee met once – on the 10th.

Key decisions and action item updates from the month of November 2022, included:

- Backgrounder educational document:

The 2022 NGENC two-page educational document/handout is now available in electronic or hard copy versions. Requests should be sent to Steve Hewitt at shewitt109@aol.com

To date 625 copies have been distributed.

See update in the Executive Board section of this report.

- Document Control Update as of 11-30-22:

See update in the Executive Board section of this report.

- A new Communications Working Group that has been formed from the Electronics on Trains Working Group. If anyone has an interest in joining this Working Group, please let me know. The focus will be on-car communications. The sunsetting of the Digital Hardware Specification and stopping work on the Software specification was approved by the Executive Board on 8-23-22. The working group has begun to meet.

Ken Martin – team leader – provided the following update and questions which were forwarded to Tammy Krause:

Update following 10-18-22 working group meeting:

We continue to meet roughly every four weeks with our previous meeting having been Oct. 18 and our next scheduled for Nov. 15. I have updated the group regarding the decision to halt work on the 305-919 and 305-920 specifications in favor of working directly with the trainline communications sections of the existing car specifications. According to Tammy, there were no Bi-level DCRs related to trainline communications for the group to review.

Questions:

During our previous meeting, discussions were held regarding trainline communications specifications for the single-level Amtrak cars that are being ordered. I reiterated that the trainline communications section of the single-level specification would be the governing reference.

It was asked if the section was going to be reviewed and also, in the event of problems, how we would go about ensuring the cars would be constructed appropriately related to trainline communications. We can definitely add reviewing the section to our tasks, but I'm unsure how to proceed in the event problems are identified and/or changes requested.

Are there plans to perform a formal review of the single-level specification in the near future, or has it already been completed recently? Are there procedures in place for making changes/amending the specifications outside of the periodic review cycle?

There was no response to these questions on 11-10-22. It is anticipated that Tammy will connect with Ken Martin prior to 12-8-22 Technical subcommittee.

- Multi-State Car Procurement - Caltrans (Lead State) update:

See the update provided in the Executive Board section of this report.

- Metro North Dual Mode Locomotive Procurement:

See the update provided in the Executive Board section of this report.

- Amtrak Equipment Procurement Updates:

See the update provided in the Executive Board section of this report.

- Connecticut DOT Rail Car Procurement:

- See the update provided in the Executive Board section of this report.

- University of Nebraska study on High Speed wireless technology as of 10-13-22:

Hamid Sharif Report 10/13/2022:

During the previous phase of this project, which was completed in August, our team systematically explored the reusability of underutilized RF resources such as the 160MHz RF band. In this work, we studied the distinct capabilities - and limitations - of the 160 MHz RF frequency bands through our theoretical and computer models to design an RF communications solution to maximize achievable performance, reliability, and security for rail applications.

In the new phase, which started in September, we aim to research the transition from the developed model to a full prototype and conduct extensive field testing utilizing the rail facility to demonstrate our model capabilities. This phase also includes collections of a variety of performance metrics. We also aim to leverage these to accelerate research into a universal and modular cognitive radio solution for the rail industry that intelligently adapts to any usable RF band, for any rail wireless application.

I hope in the next report, provide more details about our plan for field testing. Please contact me (hsharif@UNL.edu) for any questions. Thank you.

Hamid Sharif is on the Annual meeting agenda to give a presentation on this study.

- Working Group on Specification Weight Issues:

Jeff Gordon is scheduled to give an update to the Technical subcommittee on 12-8-22.

The Finance and Administrative Subcommittee

Chair: Tim Ziethen, Amtrak

Vice Chair: Brian Beeler II, NNEPRA for Maine DOT

Second Vice Chair: John Oimoen, Illinois DOT

The Finance and Administrative subcommittee (FASC) will hold a conference call every four weeks on Wednesdays at 3:00pm Eastern.

During the Month of November 2022, the Finance and Administrative Subcommittee met on the 9th

Key decisions and action item updates from the month of November 2022, included:

- Treasurer's Report and Finance and Administrative Sub-committee:

Balance/ Spend Rate:

See Executive Board section of this report for the most current balance and spend rate.

- Exploring Funding Options

See update provided in the Executive Board section of this activities report.

The Amtrak – NGEN CRISI Grant Application was been submitted to FRA on time – 11-30-22.

- Conveying the message as of 11-30--22:

The 2022 NGEN two-pager is available as reported in the Executive Board section of this report and 625 copies have been distributed.

Along with the two-pager, the website refresh will look at ways to increase NGEN visibility. Details on the status of the website refresh can be found in the Executive Board section of this month's report.

Details on the status of updating the two-pager for the 2023 version are also reported in the Executive Board section of this activities report

- Quarterly Grant Agreement Progress Report to FRA

All reports this year have been submitted on time. The report for the period ending 9-30-22 was submitted to FRA by the due date of 10-31-22.

The next report will be due to FRA by 1-31-23.

- By-laws changes to allow activities that will increase public awareness:

See the Executive Board section of this month's report for details on the By-Laws update.

NGEC Specification Review Panel(s):

For each PRIIA NGEN specification a Review Panel has been established to compare the specification (as developed by the technical subcommittee) against a Requirements document previously adopted by the Executive Board. As the Review Panel completes its work, it prepares a report with recommendations. This report is submitted to the Executive Board for its consideration. Once accepted by the Board, the specification is subsequently formally adopted by the Executive Board. As part of the Document Control process, any proposed revisions to a PRIIA NGEN specification must go through the Review Panel process as well. At such times, the Review Panel, previously established for a specification, is re-convened by the Executive Board chair.

NGEC Specification Review Panels did not meet during the month of November 2022.