



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: October 31, 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 October 2022, the Executive Board met twice – on the 4th and the 18th.

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

- Treasurer's Report and Finance and Administrative Sub-committee as of 10-18-22:

Balance/ Spend Rate:

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

Expenses Incurred through August 2022: \$1,029,098.11

Balance remaining: \$ 215,629.76

Current Spend Rate per month (as info and used in calculating): \$14,568.59

Estimated Balance at the end of the Extension Period (Contingency): \$26,238.03

The estimated balance will be where the costs for the website refresh will be derived.

- Status – Website Refresh

On 10-18-22, Chairman, Ray Hessinger, shared his screen and to provide an overview of the website refresh mock-up web design.

All Board members were asked to review the mock-up web design and provide comments by COB 10-26 - 22 to Steve Hewitt and Ray.

Steve Hewitt reviewed the list of items the vendor wanted feedback on and noted that the FASC had reviewed them and felt that it agreed with the recommendation in item 2 that all documents be converted to PDFs for security reasons.

The FASC also felt that the response to item 3 is that the NGEC does not use social media and currently has no plans to do so. Thus, that link can be removed.

Board member agreed.

As part of your approval, please also provide feedback on the following items:

1. *The existing NGEC website does not have webpage text content as the majority of the content is based on downloadable files. We have added text content in the design mockup to make the website provide context to downloadable files. Please review this text content and let us know if any changes are required.*
2. *The downloadable files on the existing NGEC website are in multiple formats including PDF, Word, Excel, and PowerPoint. For website security, we do not recommend including Microsoft Office (Word, Excel, and PowerPoint) file formats as downloadable files. We recommend all downloadable files be converted into PDF format. If you agree, we will convert all files into PDF as part of the data migration task.*
3. *We have included links to social media sites in the website footer. Please let us know if you plan to have social media presence so that we can add appropriate social media links. If yes, please provide us with the URLs of the NGEC social media pages. Else, we will remove the social media links from the website footer.*

On October 28th, Steve Hewitt and Ray Hessinger compiled all comments received from Board members and sent responses to the items iEngineering requested feedback on and provided a redline version of numerous content text changes.

George Hull, Amtrak, will be talking to the marketing team at Amtrak and will provide some pictures of NGEC equipment including exteriors and interiors.

- Status – CRISI Grant application:

On 10-18-22, Tim Ziethen reported that the Grants office at Amtrak has taken the lead in writing the actual grant application. Tim had done a DRAFT narrative which advanced through the Amtrak Leadership Team. This means that the proposed application for an NGEC grant will be a part of Amtrak's grant submittals. Once it advanced through the Leadership team it was sent over to the Grants office. The next step (once the application is completed) would be to submit it to FRA. Tim is in dialogue with Amtrak Legal for clarity as to whether he can share the application with the NGEC Executive Board for review and comment prior to its submittal to FRA.

As the application is submitted, letters of support from the industry and from individual states will be critical. Steve Hewitt agreed to provide Tim Ziethen with the email addresses of the NGEC industry participants and of the NGEC and SPRC state members.

The deadline for submitting the application is December 1, 2022.

- 2022 NGEC two-pager:

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

The FASC has begun the process of updating the two-pager for its 2-23 version. Missouri DOT has, once again, agreed to provide the graphic arts service to format the 2-23 version and to print the hard copies.

Steve Hewitt and John Oimoen will provide recommended changes/updates to the FASC on 11-9-22.

- 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.

- Multi-State Rail Car Procurement (provided by Caltrans) as of 10-18-22:

The remaining Cab Car FDRs are in the final review 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 approved, and the Complete Car FAI is scheduled for October 26th.

- The Cab Car Collision and Corner Post Appendix F testing is complete, and the Rev B test report has been approved and the emergency egress demonstration is scheduled for October 25. The Cab Car Sample Car Inspection for cab car is tentative for early 2023.
- 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 necessary agreements are in place.
- Metro-North Dual Mode Locomotive Equipment as of 10-18-22:

All Final Design Review (FDR) documents have been submitted by Siemens to Metro-North. The documents are now in the review, comment, and comment resolution stages.

- Amtrak Equipment Procurement Update – as of 10-4-22:

On the Charger Locomotives:

The new locomotives continue to be commissioned. There 3 currently at Wilmington numbers 15, 16 1n3 17 with the balance in service.

On the Acela:

Amtrak continues to work with Alstom on issues with simulation and within the plant.

On the GPR Locomotives:

The first one is in Wilmington and should be commissioned either late this week or early next week.

- Connecticut DOT Rail Car Procurement as of 10-12-22:

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.

- 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 NGENC website and distributed to all NGENC members.

- Document Control Progress Report – 10-18-22:

On 10-18-22, Document Control Manager, Tammy Krause reported that all Bi-Level Specification document change requests (DCRs) are with the appropriate technical working group team leaders. The October 15th deadline for completing the working group review has been extended until October 31, 2022.

Tammy Krause and the Technical Writer, Camren Cordell have gone through the Metro-North Dual Mode locomotive specification format and have compared it to the PRIIA format. They are now in the process of 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.

- NGENC 2023 Annual Meeting as of 10-18-22:

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 has also sent out the hotel room reservation link for the AASHTO rate. It is reprinted below.

Ray Hessinger confirmed that, once again, the meeting will be hybrid, offering virtual meeting capabilities along with in-person attendance. This worked well last year and enabled the meeting to have the largest attendance in many years with over 100 participating.

Steve Hewitt will send a notice to all those who plan to attend to send him an email stating that they are attending and signifying in-person or virtual. This way AASHTO can have an appropriate head count and plan accordingly and can have the appropriate name badges and tent cards printed in advance. Steve would like to have the general attendance (in-person or virtual) registration completed by January 15, 2023. Board members should notify Steve Hewitt and Ray Hessinger of their intention to participate asap so that we can be assured of a quorum.

In the meantime, Steve Hewitt and Ray Hessinger will begin working on a draft agenda to present to the Executive Board.

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 10-18-22:

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 10-18-22: Bi-Level Car Specification Review/Update is underway. A new DCR form has been adopted and is now being used. As of 8-31-22, 173 DCRs have been received and the process of working group's review has begun. The date for completion of the working group reviews was set for 10-15-22. On 10-18-22, Tammy Krause reported that the deadline was extended to 10-31-22

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 10-18-22: The Carbody Materials Working Group has about completed its work and will submit its recommendations to the Technical subcommittee in November.

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 10-18-22 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.

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 10-18-22 -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. On 10-18-22, Tammy Krause reported that she and the Technical Writer, Camren Cordell, have gone through the Metro-North Dual Mode locomotive specification format and have compared it to the PRIIA format. They are now in the process of 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 10-18-22: 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.

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 October 2022, the NGEC Technical Subcommittee met twice – on the 13th and the 27th.

Key decisions and action item updates from the month of October 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.

The FASC will be reviewing possible updates for the 2023 version

- Document Control Update as of 10-30--22:

On 10-27-22, Tammy Krause reported that all Bi-Level Specification document change requests (DCRs) are with the appropriate technical working group team leaders. The October 15th deadline for completing the working group review has been extended until October 31, 2022.

Tammy Krause and the Technical Writer, Camren Cordell have gone through the Metro-North Dual Mode locomotive specification format and have compared it to the PRIIA format. They are now in the process of 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.

- 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 sunseting 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?

- 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.

- Working Group on Specification Weight Issues:

Jeff Gordon reported that the last meeting of the working group was held on 8-19-22.

The document is nearly complete. Jeff has some work to do on it before sending back out to the working group members.

The document is turning out a bit differently than expected. Jeff said he is not sure exactly how the Technical subcommittee will use it.

He noted that the group has uncovered things that need to be changed in the spec. None of these are controversial. Some are simply updates to the references and some are corrections to equations that have changed. Jeff will handle these through the DCR process that is ongoing now on the Bi-Level specification update.

Jeff expects the work to be complete by November with working group meetings to be held in September and October 2022 and will provide an update during the December 8th meeting of the Technical subcommittee.

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 October 2022, the Finance and Administrative Subcommittee met on the 12th

Key decisions and action item updates from the month of October 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.

- Conveying the message as of 10-30-22:

The 2022 NGEC 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 NGEC 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 NGEC 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 NGEC 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 October 2022.