



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: December 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 December 2022, the Executive Board met twice – on the 13th and the 27th.

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

- Treasurer's Report and Finance and Administrative Sub-committee as of 12-31-22:

Balance and Spend Rate:

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

Expenses Incurred through OCTOBER 2022: \$1,060,656.68

Balance remaining: \$ 189,343.42

Current Spend Rate per month (as info and used in calculating): \$14,524.33

Estimated Balance at the end of the Extension Period (Contingency): around \$29,000.00

- Status – Website Refresh

The website refresh is complete and the new site ngec.org has been deployed. It will officially go live by the end of December 2022.

- Status – CRISI Grant application:

The Amtrak – NGECC 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 NGECC two-pager:

The suggested changes to the two pager for its 2023 version were sent to MODOT Graphic Arts in the last week of December 2022 and will be addressed during the first week of January. Consideration of approval will likely be on 1-10-23 during the NGECC Executive Board meeting.

- Annual By-Law Review/Update:

On 12-13-22, the NGECC Executive Board adopted the By-Laws Revisions as proposed by the Finance and Administrative Subcommittee. The changes were finalized by Steve Hewitt and distributed to the Executive Board and to AASHTO for posting to the new website.

- Multi-State Rail Car Procurement (provided by Caltrans) as of 12-13-22:

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 tentative for December.

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.

On 12-13-22, John Oimoen, IDOT, added that a Café car is on its way to the climate testing chamber in Canada.

- Metro-North Dual Mode Locomotive Equipment as of 12-27-22:

Metro-North and Siemens continue with FDR and anticipate vehicle production to begin in January 2023.

- Amtrak Equipment Procurement Update – as of 12-13-22:

On the new Acelas:

They continue to work on qualification and testing.

On the Charger Locomotives (ALC 42):

They are progressing well. Twenty units have been shipped and 16 units are in service.

On the Intercity Trains (ICT):

They continue to progress well and are continuing in the Final Design Review (FDR) Phase and are on-track.

On the G38 yard locomotives:

Two have shipped and two are on their way.

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 12-31-22:

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 December 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 NGECC website and distributed to all NGECC members.

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

- Document Control Progress Report – 12-27-22:

On 12-27-22, Tammy Krause reported that she would provide Steve Hewitt with the Summary of Changes later in the day for distribution to the full Technical subcommittee.

On 1-5-23 during the technical subcommittee call Tammy will review the changes and take questions.

On 1-19-23, during the subcommittee call, the intention would be to consider approval of the summary of changes for submittal to the Executive Board.

On 1-24-23, During the Executive Board call, the Chair will formally reconvene the Bi-Level car specification Review Panel and authorize Larry Salci to prepare a Review Panel Report.

At the Annual Meeting of the NGECC (2-3-23), as a part of her progress report for the year, Tammy will give a status on this specification update with the plan being for the Board to consider its adoption later that month.

- NGECC 2023 Annual Meeting as of 12-31-22:

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).

A final DRAFT agenda has been approved pending speaker confirmations.

On 12-27-22, Steve Hewitt reminded all members to let him know if they are attending and, if so, in-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

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Status of 2022 Priorities as of 12-31-22:

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 12-27-22: Bi-Level Car Specification Review/Update is still with the technical working groups. The technical subcommittee review is expected to take place on 1-5-23 and the intent to have the Revision D updates adopted and signed by the Chair during the Annual Meeting – 2-3-22.

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 12-27-22: The Carbody Materials Working Group has about completed its work and will submit its recommendations to the Technical subcommittee in January 2023.

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 12-27-22: A presentation during the NEC Annual Meeting by Stadler Rail on Hydrogen Fuel Cell Multiple Unit Trains will be requested. Kyle Grading, Caltrans will make the request.

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 12-27-22 -This is included in the DCM action Plan and will follow the Bi-Level Car Specification update or may begin simultaneously with making updates to that specification. 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 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 12-27-22: 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.

Action: This activity will be carried over into 2023.

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 December 2022, due to the Holiday season the NGEC Technical Subcommittee met once – on the 8th.

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

- Backgrounder educational document:

The 2022 NGEC 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 2023 version is being formatted by MODOT Graphic Arts using proposed changes and approved photos as provided by the FASC.

- Document Control Update as of 12-27-22:

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.

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 in January 2023.

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 December 2022, the Finance and Administrative Subcommittee met on the 7th

Key decisions and action item updates from the month of December 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 – NGEC CRISI Grant Application was submitted to FRA on time – 11-30-22.

- Conveying the message as of 12-31-22:

The 2022 NGEC two-pager is available as reported in the Executive Board section of this report and 655 copies have been distributed.

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.

The website refresh is completed. The new website www.ngec.org has been deployed.

- 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.

Quarterly updates attached to this report will be incorporated into the report to FRA.

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

The recommended changes were adopted by the Executive Board on 12-13-22 and have been provided to AASHTO for posting to the new website.

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 December 2022. Larry Salci has received the DCRs approved by the technical working groups and will formally prepare a Review Panel Report with Recommendations once the technical subcommittee has approved the changes and the Executive Board Chair re-convenes the Bi-Level Rail Car Specification Review Panel.

Milestones – Quarterly update (October 31, 2022 through December 31, 2022)

Bi-weekly meetings:

Throughout the quarter, the NGEC Executive Board and the Technical subcommittee held bi-weekly conference calls with exceptions as noted due to schedule conflicts. All business of the Board, the Technical subcommittee and the Finance and Administration subcommittee continued to progress throughout the quarter.

Monthly meetings:

During the quarter, the Finance and Administrative Subcommittee (FASC) met three times (October, November, December).

Dissemination of educational/informational pieces:

The 2022 two-page educational/backgrounder was released in February 2022. To date, around 655 hard and soft versions have been distributed to NGEC members and various associations.

The website refresh was completed, and the new website was deployed during the last week of December 2022 in its new domain www.ngec.org.

NGEC Annual Meeting:

The (12th) Annual Meeting took place virtually on 2-22-22 and was the NGEC's first Hybrid (in-person and virtual) meeting. The meeting was attended by approximately 114 members.

The NGEC's 2023 Annual Meeting (the 13th) will take place on February 3, 2023 at the Hyatt Regency Hotel on the Hill, Washington, DC.

An agenda has been drafted and is final pending confirmation of speakers. Registration for the meeting which is to be held both in-person and virtually, is ongoing.

Annual Review of NGEC By-Laws and Operating Procedures:

The 2022 By-Laws review has been conducted. On 12-13-22, the NGEC Executive Board adopted revisions recommended by the Finance and Administrative subcommittee.

Grant reporting:

As required by the Grant Agreement, Amtrak will submit a quarterly report to the FRA. Information provided in the monthly NGEC Activities reports for the quarter, prepared by the NGEC Manager, will be utilized as a basis for the Quarterly Reports to the FRA.

All quarterly reports to date have been submitted on time to FRA.

The second FFY 2022 quarterly progress report to FRA was submitted on time on 4-28-22.

The third quarterly report for the period covering 4-1-22 to 6-30-22 was submitted on time on 7-30-22.

The fourth quarterly report for the period covering 7-1-22 through 9-30-22 was submitted to FRA by 10-31-22.

The first quarterly report for FFY 2023 for the period covering 10-2-22 through 12-31-22 is due to FRA by 1-31-23.

Fiscal and contractual actions:

During the April 1 to June 30, 2017, quarter, the Finance and Administrative subcommittee, and, subsequently, the Executive Board, adopted a motion that expressed the intent to extend the contracts of AASHTO and the subcontracts coordinated with the Grant Agreement and consistent with the budget and SOW. Currently, Amtrak and AASHTO are in the process of developing their contract extension and, following its execution, AASHTO has been directed to do the same with the sub-contracts identified in the SOW and noted in the adopted motion inserted below.

“As was intended in past NGEC budget approvals and to ensure compliance with the Audit of Grant Agreement of March 27, 2013, and the NGEC’s updated Procedure of Establishing Contract Support adopted August 6, 2013, the NGEC authorizes Amtrak to contract with AASHTO for administrative support services as well as subsequent sub-contracts per the statement of work for entities such as; with Hewitt Consulting for Manager of Support Services, and with SalciConsult for Specification Consultant services. In addition, with the Federal Railroad Administration’s June 8th, 2015, approval of the NGEC’s Supplemental Statement of Work and related budget extension through September 30, 2017, and its subsequent approval of the Statement of Work and Budget included in the Grant Agreement executed on October 26, 2016 for the period beginning October 1, 2016 through September 30, 2019, Amtrak is authorized to extend its agreement with AASHTO and AASHTO’s sub-consultants in accordance with the Statement of Work.”

Adopted by the NGEC Executive Board on 6-6-17.

On 9-26-17, AASHTO and Amtrak executed a contract extension for NGEC Support services to continue from 10-1-17 through 9-30-19. On 9-27-17 AASHTO executed a contract modification with Hewitt Consulting – (Steve Hewitt) extending the NGEC Manager’s contract for the period 10-1-17 through 9-30-19.

In the fourth quarter, 2017 – AASHTO and Amtrak executed a contract extension for technical support (spec writing) with Casamar – extending the contract through 9-30-19.

During the fourth quarter, NGEC Revision Control Coordinator (RCC), Tammy Krause, Amtrak, accepted the separation agreement and announced her departure to the NGEC Executive Board – effective 12-31-17. To fill the void created by this change, Amtrak has temporarily assigned these responsibilities to Michael Burshtin, Amtrak, and has begun taking steps needed to potentially subcontract this work similarly to how the other NGEC support services are provided. The SOW was revised by the NGEC Executive Board during this quarter to provide the flexibility to have the duties of the RCC conducted in house – Amtrak – or be subcontracted to a consultant. The Amtrak and FRA grants offices are reviewing the proposed change and, if approved, a sole source contract will be executed per NGEC Contract Management procedures.

As of 3-31-18, and as noted previously in this quarterly report, the NGEC Grant Agreement SOW revisions have been submitted to FRA and are under review. It is anticipated that the revisions will be approved and executed in April 2018. Simultaneously, the actions necessary to execute a contract for the Document Control Manager (DCM) have progressed with a revised SOW and budget having been submitted by the prospective sole source contractor for

review and approval of the NGEC Treasurer and the Technical Subcommittee Chair who will be responsible for managing the work of the DCM.

During the quarter ending June 30, 2018, per the NGEC process, AASHTO executed a contract with TLK Associates, LLC (Tammy Krause) to perform the Document Control Management responsibilities, as identified in the SOW and budget, and as previously approved by the NGEC Executive Board.

During the quarter ending September 30, 2018, the FRA and Amtrak executed a no-cost 12-month extension (as approved by the NGEC Executive Board and formally requested by Amtrak) of the NGEC Grant Agreement. This extends the grant performance period to 9-30-2020.

Subsequently, on 5-8-19 AASHTO executed contract modification #2 with Hewitt Consulting – (Steve Hewitt) extending the NGEC Manager's contract for the period 10-1-19 through 9-30-20.

In December, the Executive Board Chairman approved a contract modification extending the document control manager's contract through 9-30-20.

During the quarter ending June 30, 2019, the NGEC Finance and Administrative subcommittee, through its chair, (the NGEC Treasurer) clarified with Amtrak Grants and FRA Grants that the NGEC would be eligible for a further no-cost extension beyond the current grant period end date of 9-30-2020.

In the quarter ending December 31, 2019, the FRA confirmed that a no-cost NGEC grant agreement extension can be for multiple years and has recommended that Amtrak (and the NGEC) make the formal request by July ,2019 to fit within the window for extension requests (July -September). The NGEC Executive Board agreed with the FASC recommendation that the grant agreement extension be for a 36-month period (10-1-2020 through 9-30-2023) and will formalized its request in January 2020.

In January 2020, Amtrak submitted the formal request (GARF) for a 36-month no-cost extension. It is currently in the review process at FRA with the intent being to approve/execute the agreement extension sometime in May 2020.

As of 6-30-20 – the FRA is reviewing the grant extension request with consideration of approval anticipated to occur soon.

As of this quarter, (ending 6-30-20) all NGEC subcontractor/consultant contracts are current.

On 9-16-20, the FASC Chairman announced that the FRA and Amtrak had approved and executed a 36 month – no cost NGEC grant agreement extension. This would extend the NGEC grant agreement through September 30, 2023. The scope and activities identified in the grant agreement remain the same and the work of the committee will continue as described there-in.

As of 9-30-20 – the subcontractor/consultant contracts are current. As of the end of business on 9-30-20, they will need to be extended coordinated with the 36-month extension. The first step in this process is for Amtrak and AASHTO to extend the AASHTO contract for the 36-month period. AASHTO would, in turn, extend the subcontractors contracts for the same period as per the motion adopted by the NGEC Executive Board on 6-6-2017 and per Chairman Ray Hessinger's instructions during the Executive Board web conference held on 9-22-20.

In October 2020, all contract extensions (Amtrak/AASHTO) and AASHTO/Hewitt, AASHTO/Krause and AASHTO/Casamar) were executed and will run through 9-30-23.

As of 9-30-21, all contracts are up to date and active.

As of 12-31-21 all contracts are up to date and active.

As of 3-31-22 all contracts are up to date and active.

As of 6-30-22 all contracts are up to date and active.

As of 9-30-22 all contracts are up to date and active.

As of 12-31-22, all contracts are up to date and active.

Review/Update of NGEC Specifications (Document Control):

This activity is ongoing:

Activities specific to this quarter:

During this quarter, Document Control Manager Tammy Krause has continued the review of the Bi-Level specification and is using the updated the Document Change Request form. The technical working groups have completed their review of the DCRs and the summaries of DCR adjudication have been sent to the Technical subcommittee and the technical consultant. It is anticipated that the subcommittee will complete its review of the DCRs and submit those approved to the Executive Board by the end of January with adoption anticipated in February 2023.

The carbody materials working group has about completed its work and is expected to provide its recommendations to the Technical subcommittee in January 2023.

The Communications on Rail Cars working group began its work in this quarter.

The By-Law Revisions proposed by the Finance and Administrative subcommittee were adopted by the Executive Board and posted to the website.

The website refresh has been completed by the vendor (iEngineering) and accepted by the NGEN Executive Board. The new website was deployed at www.ngec.org during the last week of December and is now live.

A CRISI grant application (Amtrak as the applicant) for new funding for the NGEN was submitted to the FRA prior to the due date of 11-30-22 and has been uploaded by FRA. The application was submitted with enthusiasm expressed by states, Amtrak, associations including AASHTO, States for Passenger Rail Coalition, (SPRC), the Rail Passengers Association (RPA) and the manufacturing and supply industry through letters of support.

Status of 2022 Chairman's Priorities as of 12-31-22:

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 NGEN to review and update the Bi-Level car specification.

Action as of 12-27-22: Bi-Level Car Specification Review/Update is still with the technical working groups. The technical subcommittee review is expected to take place on 1-5-23 and the intent to have the Revision D updates adopted and signed by the Chair during the Annual Meeting – 2-3-22.

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