



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: July 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 July 2022, the Executive Board met once - on the 12th.

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

- Treasurer's Report and Finance and Administrative Sub-committee as of 7-31-22:

Balance/ Spend Rate:

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

Expenses Incurred through May 2022: \$971,410.38

Balance remaining: \$ 278,589.52

Current Spend Rate per month (as info and used in calculating): \$14,285

Estimated Balance at the end of the Extension Period (Contingency): \$50,000

- Status – Website Refresh

The RFP for a website refresh was put out by AASHTO. There was one response proposal received. The documents were distributed to the Executive Board members and on 7-12-22, the Chair called for an electronic vote to consider accepting the proposal submitted by iEngineering. Votes were to be submitted to Ray Hessinger and Steve Hewitt by COB on 7-19-22. The result was that the proposal was accepted by the Executive Board with 12 of 14 votes received and all cast in the affirmative.

On 7-20-22, Steve Hewitt sent an email to Strat Cavros, AASHTO, on behalf of the NGEC Executive Board Chair, Ray Hessinger, NYSDOT and Tim Ziethen, Amtrak – the NGEC Treasurer, stating that the Executive Board had accepted its proposal (Cost and Technical).

AASHTO informed iEngineering and provided them with a draft agreement for their review. The intent is to have the performance period begin on August 1st with a completion date of December 31, 2022.

On 7-20-22, Strat Cavros reported that Shayne Gill will be the AASHTO point of contact.

- Status – Seeking new funding for the NGEC:

NGEC Treasurer and Chair of the FASC has returned to work after being out several months. On 7-20-22, the FASC met and Tim reported that he has resumed working with Amtrak Grants to begin the process of applying for a CRISI grant.

Tim is also exploring with Amtrak Grants other potential funding options.

The effort put forth by the States for Passenger Rail Coalition (SPRC) to request an appropriation for the NGEC has thus far been unsuccessful.

- 2022 NGEC two-pager:

The 2022 NGEC two-page educational document was released in January and distribution has begun. To date 455 electronic copies and 125 hard copies have been distributed.

- Annual By-Law Review/Update:

The 2022 Annual review of the By-Laws is beginning at the FASC, and along with the general review, there are two items to be considered initially.

1. Language to describe additional permissible activities that will increase the NGEC's visibility.
2. Potential language developed to ensure that there is a second Amtrak representative named to the FASC subcommittee, at least as an alternate for the Chair.

On 7-20-22, after some discussion, the FASC determined that the answer to the issue of Amtrak representation may be to simply have the chair name an Amtrak representative who can serve as an alternate if the chair is not available. This is similar to the way it works with state representatives. Some of them have named individuals as their alternates in their absence. This would not necessarily require a By-Laws change.

Steve Hewitt and John Oimoen, IDOT will begin the initial review and provide recommendations to the FASC.

- Update – Multi-State Rail Car Procurement (provided by Caltrans) as of 7-21-22:

The Cab Carshell final design has been approved and the cab cars are in production. Remaining Cab Car FDRs are in the final submittal and review stage. Cab Car Safety Appliance documents have been sent to the FRA for review, and the Cab Car Clearance information has been approved by Amtrak. IDOT Café Car system level FDRs have been approved except for Galley Refrigeration and Freezer Modules.

The Cab Car Collision and Corner Post Appendix F testing is complete, and the Rev B test report has been submitted for review. FRA comments to the Appendix F and Compression Test reports have been addressed. The Final FAI Cab Carshell Report is in review.

113 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 7-31-22:

Metro-North and Siemens have closed the Preliminary Design Review (PDR) stage, and have moved to Final Design Review (FDR). Siemens has started the process of submitting FDR documents to Metro-North and they are under review.

- Amtrak Equipment Procurement Update – as of 7-12-22:

On the Charger Locomotive:

Progress continues. Amtrak continues to take delivery. 8 units are now in service.

On the Intercity Trainset (ICT):

Intermediate Design Review is underway. There is a hard mock taking place with various groups (states, FRA, the Access Board) meeting in Philadelphia each day beginning today (Tuesday 7-12-22).

On the Acela 21:

They expect to get Trainset #4 out of the factory next week. Testing and qualification continues.

- Connecticut DOT Rail Car Procurement as of 7-7-22:

On 7-7-22, Marci Petterson, CtDOT reported that the Pre-proposal meeting was held on 6-10-22 and that the first round of questions were due 7-11-22.

- 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.

- Document Control Progress Report – 7-21-22:

On 7-21-22, Tammy Krause provided the following update:

The Bi-Level Specification proposed update has started receiving DCRs. I have received 173 from and one person is still working on them. I will organize them to send to the appropriate Technical Subcommittee working groups.

I am working with the Technical Writer on the update to the document 305-100, specifically the specification review groups.

The Carbody Materials working group met on 7-21-22. They are continuing to work on Chapter 4 – Carbody, of the Single Level Specification.

The Electronics on Trains working group met on Tuesday July 12 and there will be a separate discussion about their progress.

On the Electronics on Trains working group there are questions about standardizing DTL and other issues. Ultimately, Tammy Krause agreed to go back and look at the history to understand the full picture. The next meeting of the group is August 9th. The group will have a discussion and report back to the Technical Subcommittee on its call on August 18th

- NGEC 2023 Annual Meeting:

- The 2023 NGEN Annual Meeting will be held a bit earlier than in past years. This year it will be held on February 3rd. The location is, once again, the Hyatt Regency Capitol Hill, Washington, DC Capitol Room B. The time for the meeting will likely be the same as last year (8:00am Registration – Meeting 8:30am – Noon Eastern).

Status of 2022 Priorities as of 6-28-22:

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 7-31-22: Bi-Level Car Specification Review/Update is underway. A new DCR form has been adopted and is now being used. As of 7-21-22, 173 DCRs have been received and the process of working group's review has begun. Additional DCRs are anticipated as well.

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

Action as of 7-31-22: The Carbody Materials Working Group has met several times and is working on Chapter 4 – Carbody, of the Single Level Specification.

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 NGEN.

Action as of 7-12-22 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

Priority Area: Review and consider using the Metro-North Dual Mode Locomotive Specification organizational changes to determine if they should be adopted by the NGEN and applied across the board to all NGEN 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 7-31-22 -This is included in the DCM action Plan and will likely follow the Bi-Level Car Specification update.

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

Action as of 7-31-22: 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 July 2022, the NGEN Technical Subcommittee met twice – on the 7th and the 21st.

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

- Backgrounder educational document:

The 2022 NGEN 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 455 electronic copies and 125 hard copies have been distributed.

- Document Control Update as of 7-31-22:

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

- Multi-State Car Procurement - Caltrans (Lead State) update as of 7-31-22:

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

- Metro North Dual Mode Locomotive Procurement as of 7-31-22:

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

- Amtrak Equipment Procurement Updates as of 7-31-22:

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

- Connecticut DOT Rail Car Procurement as of 7-31-22:

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

- University of Nebraska study on High Speed wireless technology as of 7-21-22:

From Hamid Sharif:

- On 7-21-22, Hamid Sharif provided the following update for inclusion in the meeting minutes:

For this project, we have been studying less utilized RF spectrum to ease the scarce RF resources issue. We selected 160 MHz since this band has been mainly used for voice applications. We designed and implemented computer models to explore the properties and capabilities of the 160 MHz RF band, and its suitability for a variety of applications.

We designed both a single-carrier transceiver architecture and an OFDM-based transceiver architecture for 160 MHz, and conducted evaluations of both designs. We also implemented and evaluated different channel models for this band.

This quarter, we designed the network layers for working with the 160MHz channel to evaluate end-to-end applications.

We are in the process of collecting computer simulation results for end-to-end applications. The plan for the next phase is to perform field tests to verify our 160 MHz model and its performance.

- Working Group on Specification Weight Issues as of 7-21-22:

The NGEC Vehicle weight Working Group had its last meeting on May 11 at 11am ET.

There were 9 members in attendance.

The group discussed ways to reconcile how P2 forces are characterized in the various NGEC specifications.

Two versions of the P2 formula are in general use. The NGEC specifications do not use a common formula, nor do they use common values for certain of the input parameters related to track stiffness and damping.

On the last call, the group requested that a sensitivity study be performed to assess the impact of these parameters on the calculated P2 forces.

This was done and we learned that some of the parameters have very little influence on the result and the parameter affecting P2 the most is the value chosen for the rail dip angle.

Additional work will be done on this, and the draft write-up being prepared by the group will be revised based on these discussions.

Members also suggested that the procedures described in the APTA Recommended Practice (RP) on Truck Design be referenced in the NGEC Specifications as it includes comprehensive guidance on how to calculate the unsprung mass term used in the equation.

The APTA RP also identifies the British Rail version of the P2 formula as the current best practice. The Working Group will recommend this version as the standard for use in the NGEC Specifications.

The next meeting of the Working Group will be during the week of June 6. A poll has been distributed to the members to assist in selecting the meeting date and time.

The scheduled Working Group meeting for 6-9-22 was canceled due to a schedule conflict. Jeff Gordon is looking at dates for the next meeting.

The next meeting is expected to take place the first or second week of August.

If interested in participating on this working group, contact Jeff Gordon at Jeffrey.gordon@dot.gov or Steve Hewitt at shewitt109@aol.com

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 July 2022, the Finance and Administrative Subcommittee met on the 20th

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

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

Balance/ Spend Rate:

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

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- Exploring Funding Options

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

- Conveying the message as of 7-31-22:

The 2022 NGEC two-pager is available as reported in the Executive Board section of this report and 455 electronic or "soft" copies have been distributed. 125 hard copies have also been distributed.

Along with the two-pager, the website refresh will look at ways to increase NGEC visibility. The website RFP response proposal was accepted by The NGEC Executive Board on 7/19/22 and AASHTO informed iEngineering Corp. that they had been selected and sent an agreement for their review.

- Quarterly Grant Agreement Progress Report to FRA

All reports this year have been submitted on time. The report for the period ending 6-30-22 was submitted to FRA by 7-29-22.

The next report will be due to FRA by 11-30-22.

- Follow ups on further plans to increase NGENC awareness as of 7-31-22:

The web site refresh is moving forward.

iEngineering Corp has been selected to refresh the NGENC website.

As reported in the Executive Board section of this report, A review of the By-Laws will begin with a focus on adding additional allowable activities as suggested below and with a look at possibly revising the FASC structure to ensure adequate Amtrak representation.

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

Tim Ziethen had several discussions with Michael Alexis, Amtrak Deputy General Counsel, and an exchange of emails with him.

Michael has been assigned to the NGENC for any legal questions or related issues.

Michael provided Tim Ziethen with guidance on issues related to the NGENC's ability to take steps to increase awareness of the Committee and the work that it does.

In general, the guidance is that posting factual information on the website is permitted providing that the Committee follows Amtrak contractor promotion policies which the Committee has been following. For posting on social media, again, the NGENC would be permitted to do it as long as it follows the Amtrak policies. None of this is new, the NGENC has always lived up to these policies.

Issuing Press releases would also be permissible as long as it transmits simply factual information.

Using paid advertising or attending trade shows would require By-Law changes and there would be an issue of spending funds for these activities as they would need to be paid outside the grant.

As noted previously, the NGENC should not proactively communicate with Congress due to "lobbying" issues but can respond with factual information in compliance with Amtrak contractor promotion policy upon request.

NGEC Specification Review Panel(s):

For each PRIIA NGENC 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 NGENC 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 July 2022.