



www.ngec.org

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

Section 305 Next Generation Corridor Equipment Pool Committee (NGEC)

Monthly Activities Report: May 31, 2023

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 May 2023, the Executive Board met three times - on the 2nd, 16th and 30th.

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

Balance/Spend Rate Through March 2023

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

Expenses Incurred through March 2023: \$1,161,003.14

Balance remaining: \$89,996.85.

Estimated spend at current rate for balance of the Grant: \$89,307.93

Current Spend Rate per month (as info and used in calculating): \$14,884.66.

Estimated Balance at the end of the Grant Period: **(\$311.07)**

Pending:

As of 5-31-23:

Casamar:\$9,546.30 TLK: \$7,425.00

Casamar/TLK: original estimate \$17,346.30 - updated estimate: \$16,971.30

Path Forward:

On 5-30-23, Tim Ziethen reported that Amtrak is in the process of developing a no-cost extension of the current grant agreement to allow for the expenditure of funds beyond the current grant period ending date of 9-30-23.

While the Treasurer's report notes that the NGEC expenses are landing awfully close to what was expected and could break awfully close to even, the report does not include the remaining expenditures for TLK and Casamar. Tim did state that some of those costs are built in to the historical spend rate so the exact shortfall is not clear yet. but it will be close.

Tim added that "the no-cost extension submittal, if approved by FRA, will allow us to exhaust every bit of the funds."

Tim also noted that Amtrak is planning to submit a request to fund the NGEC as a part of the Annual Operating Plan. He has a meeting scheduled with FRA to discuss what the options are.

Tim added that he has also asked Amtrak Legal "what do we need to change in the NGEC By-Laws to reflect a new funding source" and whether it (the NGEC) "can continue to operate under the same structure and By-Laws (with a possible minor change)."

Tim emphasized that the request to be included in the Amtrak Operating Plan (AOP) still needs to be firmed up. Currently the request is expected to be "a keep the lights on request for about \$200,000 for one year."

The hope is still for the CRISI Grant to be approved, but the request is to be submitted as a fall back. It is subject to approval and there could be changes as well.

The action that is still needed is for the NGEC to come up with/define a Statement of Work (SOW) and estimated costs that should be in the area of \$200-300,000. The SOW needs to be prepared quickly as there is a deadline for Amtrak to complete its AOP and submit it to FRA.

Tim Ziethen also noted that there is internal discussion at Amtrak over whether the NGEC can be capitalized or whether it should be a part of the operating plan. This decision is important as it would change the approach. Tim is taking a conservative approach assuming that it will be placed under Operating. If it is capitalized it would change the process and would require specific FRA approval. Tim will follow-up with accounting on this.

Discussion:

Discussion revolved around what would be included in the SOW – where to start in preparing it, what the estimated costs would be, and what the timeframe was.

Ultimately it was agreed that the starting point would be the SOW that was included in the CRISI grant application with a more granular approach in describing a plan for 12-month "bridge" funding.

The SOW and cost estimates would begin from the current baseline activities and the current monthly run rate of around \$15,000. Added to this would be work on the Charger Locomotive update which would include efforts to incorporate changes to the PRIIA specification made by entities that used the spec. This will take additional work by the technical writer and the document control manager as well as estimating costs for the Review Panel Report that would follow the development and adjudication of DCRs via NGEC Document Management Procedures (305-100).

Acquiring information from the entities that used the PRIIA specs as a baseline will take some time, as will incorporating the changes into DCRs.

Doing a "back of the envelope" estimate – the costs would be \$180,000 for the current baseline activities and at most an additional \$5,000 a month - \$60,000 over 12 months - for the additional work (updating the Charger specification) and somewhere in the vicinity of \$20,000 for paying off the overage in the current grant agreement. Adding these broad estimates together – the total request could be around \$260,000.

Action items:

It was agreed that Tammy Krause will provide a work plan and cost estimates for the additional work on the Charger update and provide it to Steve Hewitt, Ray Hessinger, and Tim Ziethen asap (either the end of this week or early next week), and from there it will go to the Executive Board members for discussion and consideration of approval on 6-13-23.

Tim Ziethen will follow-up with Steve Hewitt and the Executive Board on what he learns from Legal on what would need to be changed in the By-Laws if there is a new funding source. (Steve Hewitt reminded Tim that any changes to the NGEN By-Laws need to be in the hands of Board members in writing for 30 days before a vote can be taken.)

Tim will also follow-up on the issue of capitalizing the NGEN or funding it from the AOP.

- 2023 NGEN two-pager:

The NGEN 2023 backgrounder/educational document was released in January and formally introduced during the Annual Meeting. To date 333 copies have been distributed (hard and soft).

- Multi-State Rail Car Procurement (provided by Caltrans) as of 5-30-23:

The remaining Cab Car FDR submittals are in the final closure stage with nearly all subsystems ready for approval. The Cab Car dynamic framing representative approach has been submitted to FRA, and additional requested simulations are now complete. IDOT Café Car system level FDR reviews are nearly closed.

The Cab Car Collision and Corner Post Appendix F test reports are approved. The Cab Car Complete FAI is tentatively scheduled for June or July, to be followed by the FRA Sample Car Inspection.

129 cars are in production or have been produced at Siemens Sacramento Facility. IDOT coaches are currently in revenue service and Caltrans is targeting revenue start in first half of 2023 once all necessary agreements are in place.

- Metro-North Dual Mode Locomotive Equipment as of 5-16-23:

Siemens and Metro-North have closed all Final Design Review items and are performing FAIs on various components such as brakes, air compressors, and roofs. Car shells are scheduled to be done in the May-June timeframe.

Car Shells 301 and 302 are ready for blasting and are way ahead of schedule.

Ray also noted that they have identified the fact that Pueblo has no under running third rail so they cannot test third rail there. They are looking at options for testing the locomotive in third rail mode.

- Amtrak Equipment Procurement Update – as of 5-30-23:

On the new Acela:

Work continues on testing and modeling for submittal for acceptance.

On the Charger Locomotives:

They are progressing well with thirty units delivered. They are waiting on documentation and should be able to expand to run them on additional service routes. They are currently running on the City of New Orleans, the Empire Builder, Coast Starlight.

On the Airo trainset:

They are progressing well, with the first car shell is nearly completed. Final Design Review (FDR) is finishing up. Overall, the Procurement is on track.

- Connecticut DOT Rail Car Procurement as of 5-31-23:

This procurement continues to be in the “cone of silence” phase.

Nothing new was reported in May 2023.

- VIA Rail Equipment Procurements:

A detailed update presentation was provided to the NGEN during the Annual Meeting on 2-3-23. The presentation is posted in the Meetings section of the website at www.ngec.org

Next Update: 2024 NGEN Annual Meeting

- Document Control Progress Report – 5-30-23:

As reported by Document Control Manager Tammy Krause on 5-30-23:

The Bi-Level specification update is still on track to be completed this month. The cover sheet was signed by Mr. Hessinger (NGEC Executive Board Chair). I will send the specification to Steve Hewitt and have the revision listed on the website as soon as I receive it from the Technical Writer.

At the last Executive Board meeting (5-16-23), I brought up the topic of evaluating EN Aluminum welding standards. The Materials Working Group felt they needed to evaluate these standards. After discussing this with the Executive Board, the decision was made to let the Technical Subcommittee decide.

Michael Gill, leader of the Materials Working Group, joined the Technical Subcommittee meeting of May 25 to discuss this and answer questions. The points made were:

- The use of EN standards will apply to the Car shell/primary structure only. Intention is that the EN standards will not apply to reservoirs and bolt on components.
- The Working Group requested to evaluate the standards only and will look at how they relate to testing and identify any issues.

The Technical Subcommittee agreed that the Materials Working Group should perform this evaluation and they are going to report back to the Technical Subcommittee at the June 22 meeting.

- NGEN 2024 Annual Meeting:

The NGEN Annual meeting for 2024 is scheduled for 2-2-24 at the Hyatt Regency Hotel Capitol Hill, Washington, DC.

More details to follow.

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 May 2023, the subcommittee met on the 11th and the 25th:

Key decisions and action item updates from the month of May 2023, included:

- Backgrounder educational document:

The 2023 NGEN two-page educational document/handout was released in January and distributed widely during the Annual Meeting on 2-3-23.

It remains available in electronic or hard copy versions. Requests should be sent to Steve Hewitt at shewitt109@aol.com

To date 333 copies have been distributed.

- Document Control Update as of 5-30-23:

Please go to the Executive Board section of this report for the update as provided to the Executive Board on 5-30-23.

- Communications on Rail Cars working group – status as of 4-13-23:

On 4-13-23, Ken Martin, Sharma and Associates and team leader for the Communications on Rail Cars Working Group, reported that they are working on writing a DTL specification to include in the single level Rail car specification once completed and approved.

Ken is working on the first draft and will distribute it to the working group members in advance of their next meetin (a week or week and a half from now). It will be a few months down the line before it will be ready for review outside of the Working Group. Ken noted that this spec may well be applicable to some of the other PRIIA specs. There are similarities but also some differences. Ken noted that he was able to get the updated Amtrak specification and is including it.

Additionally, Ken noted that there have been some requests that the Working Group also look at developing a CCTV specification. Ken would welcome input from leadership on whether this is something that the Working Group should do.

Joe Paul commented that he believes a CCTV specification is a good idea. Amtrak is working on video surveillance for the Venture cars and it is clear that there is a need for standardization.

Ken asked if this should be a “global spec”?

Joe responded that there will need to be further discussion to determine how to approach this. He invited input form subcommittee members - “feel free to reach out”.

Multi-State Car Procurement - Caltrans (Lead State) update as of 4-27-23:

Nothing new was reported in May 2023. The Document Control Manager will contact Ken Martin and report back to the subcommittee on 6-8-23.

- On 5-25-23, Jodi Lehmkuhl, Caltrans, provided the following update:

The remaining Cab Car FDR submittals are in the final closure stage with nearly all subsystems ready for approval. The Cab Car dynamic framing representative approach has been submitted to FRA, and additional requested simulations are now complete. IDOT Café Car system level FDR reviews are nearly closed.

The Cab Car Collision and Corner Post Appendix F test reports are approved. The Cab Car Complete FAI is tentatively scheduled for June or July, to be followed by the FRA Sample Car Inspection.

129 cars are in production or have been produced at Siemens Sacramento Facility. IDOT coaches are currently in revenue service and Caltrans is targeting revenue start in first half of 2023 once all necessary agreements are in place.

- Metro North Dual Mode Locomotive Procurement as of 5-16-23:

On 5-16-23, Ray Hessinger, NYSDOT provided the following update:

Siemens and Metro-North have closed all Final Design Review items and are performing FAIs on various components such as brakes, air compressors, and roofs. Car Shells are scheduled to be done in the May-June timeframe.

Car Shells 301 and 302 are ready for blasting and are way ahead of schedule.

On 5-16-23, Ray also noted that they have identified the fact that Pueblo has no under running third rail so they cannot test third rail there. They are looking at options for testing the locomotive in third rail mode.

- Amtrak Equipment Procurement Updates as of 5-25-23 reported by George Hull, Amtrak:

On the new Acela:

Work continues on testing and modeling for submittal for acceptance.

On the Charger Locomotives:

ATC issues have been cleared. They are waiting on documentation and should be able to add the locomotives to more routes. They are currently running on the City of New Orleans, the Empire Builder, Coast Starlight and should be able to "head East soon."

On the Airo trainset:

They are progressing well, with the first car shell is nearly completed. Final Design Review (FDR) is finished. Overall, the Procurement is on track.

On the Long Distance Trains:

Submittals have been received and the preliminary process is being worked on.

- Connecticut DOT Rail Car Procurement:

This procurement has advanced to the "cone of silence" phase.

- University of Nebraska study on High Speed wireless technology as of 4-13-23:

- On 4-13-23, Hamid Sharif provided the following update:

Our work at the University of Nebraska-Lincoln has been in the area of better utilization of RF resources for the rail industry. In short, it is becoming harder and harder to locate available spectrum resources for rail industry applications. Our work has been to concentrate on better utilization of 160 MHz. So, we have designed and built a computer simulation model for the 160 MHz. We have verified this model and have done a number of application tests in the lab.

Currently, we are transitioning our transceiver design into a prototype implementation using a software radio platform, in preparation for extensive field testing to evaluate the accuracy of our prediction models and the reliability of our design. It also provides the basis for the exploration of cognitive radio principles in the pursuit of a unified communications architecture for the rail industry. We continue our work on the transceiver implementation, by evaluating and refining our receiver synchronization capabilities to be more robust against phase, frequency, and timing offsets. We also have begun our work to implement the higher-layer functionalities of our protocol stack. These are all ahead of our field tests next month.

For any questions, please contact Hamid Sharif at:

hsharif@UNL.edu

Hamid was asked if there were interim reports that have been published. He responded that interim reports went to FRA in August (2022) He will check with FRA and provide to anyone in the subcommittee who is interested. He added that two papers were published last year.

Next Update: 6-22-23

- Working Group on Specification Weight Issues as of 4-30-23:

On 3-30-23, Jeff Gordon, FRA, and the working group team leader, reported that he intends to update the document based on working group feedback rather than schedule a meeting. He will then ask for input from the members via email. His issue is that he has been called for Jury duty and if enpaneled could be serving for 3 months and he would not be able to hold a working group meeting. If he is not enpaneled, this may change, but for now he intends to begin updating the document based on feedback received to date.

Steve Hewitt asked Jeff to let him know when he is ready to present an update to the technical subcommittee and he will add it to the agenda at that time.

No change in May 2023

- Status: NGEN Funding – CRISI Grant Timeline – potential next steps:

See Executive Board section of this report for current status of this item.

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 May 2023, the Finance and Administrative Subcommittee met on the 24th.

Key decisions and action item updates from the month of May 2023 included:

- Treasurer's Update as of 5-24-23:

Balance/Spend Rate Through March 2023

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

Expenses Incurred through March 2023: \$1,161,003.14

Balance remaining: \$89,996.85.

Estimated spend at current rate for balance of the Grant: \$89,307.93

Current Spend Rate per month (as info and used in calculating): \$14,884.66.

Estimated Balance at the end of the Grant Period: **(\$311.07)**

Pending:

Steve Hewitt updated these numbers slightly based on an updated estimate from Tammy Krause (TLK) on anticipated invoice to be submitted for Document Control activities. The estimate for the two pending items is slightly less, but awfully close to the previous estimates.

As of 5-25-23:

Casamar:\$9,546.30 TLK: \$7,425.00

Casamar/TLK: original estimate \$17,346.30 - updated estimate: \$16,971.30

Tim Ziethen noted that the base line spend estimates do not include the Casamar/TLK expenditures, and "it could push us over" but it depends on the next few months of spending – while the average spend rate is around \$15,000, it often comes in lower.

- NGENC funding issues/potential interim solutions - Tim Ziethen:

Tim reported that he is creating a no-cost extension to facilitate expenditures beyond the end of the federal fiscal year. It is to be the mechanism to take care of any ongoing expenses that we may have as the grant agreement ends.

Tim also reported that he has a verbal commitment from the Amtrak Grants office to cover the gap funding if the expenses go over the remaining funds.

Additionally, Tim reported that he is putting together a line-item project in a budget request for the next fiscal year. The one caveat is that it is still subject of approval in the final budget process that will take place over the summer.

There are still questions to be answered/resolved regarding resources – should it be tied to the Amtrak Annual Grant from FRA or as a line-item in the Amtrak budget. The grants office is looking into this.

Tim commented that he still needs to talk to FRA (Mike Murray and Jeff Gordon) about various particulars.

He asked if they had anything to add today. Mike Murray responded that he had nothing additional today.

Tim commented further that the accounting folks at Amtrak are considering treatment in the budget process – basically the concept is going through the Amtrak internal process. He expects it will be a “July-ish” timeframe.

Tim added that George Hull (Amtrak CMO) is onboard with the proposed interim solution and believes the NGENC should continue. (This is also true throughout Amtrak senior management).

Tim’s recommendation is to continue the work at a minimal level – “do not pull the plug -we are steadying the ship and continue to be hopeful for a CRISI grant award.

The line-item project budget proposal would need a new NBS and there would need to be a change in the By-laws which currently reference the grant.

Steve Hewitt asked Tim how long the proposed interim agreement was to be for.

Tim responded – “12 months”.

Steve asked what the amount of funding was that is being considered – as the current spend-rate is around \$15,000 a month and that would equal about \$180,000?

Tim answered that he has preliminarily asked for \$200,000 to provide a cushion.

Steve noted that there is new work that is being planned – if the NGENC is funded that would add some costs. The work being considered would entail obtaining final specs as changed by entities that have used the NGENC specs as a base line. This will take some work and some time. The specs would be reviewed and changes made would need to be itemized and sent through the NGENC DCR process. The additional costs would be related to Larry Salci -Review Panel Consultant, Camren Cordell (Casamar) - Technical Writing, and Tammy Krause (TLK) for additional Document Control activities.

Tim agreed and added that there is some time to provide Amtrak Finance with a better estimate of anticipated costs than the back of the envelope amount he was using. He noted that it should be an amount that goes no further than \$300,000.

Steve Hewitt commented that this should be discussed on next week’s Executive Board call and likely an SOW and budget should be provided. There has only been peripheral discussions about what the NGENC will do beyond 9-30-23, but not knowing if there would be continued funding – the Board has simply asked that the activities be outlined and that document control and technical writing be ready to go if new funding is provided.

Tim agreed – and will plan to report to the Board next week and have this discussion. He also asked for time with Mike Murray and Jeff Gordon at a convenient time. Mike responded that he should be able to get together with Tim sometime next week.

Tim would like to confirm with FRA the mechanics and on what approvals Amtrak will need from FRA – especially if it is a line item in the Amtrak budget.

Tim also added that there is also the issue of whether the NGEC would be a capital project but not "capitalizable" or if it would be considered an operating cost project.

The NGEC actually does have assets – specifications. There are details to be worked out, but the NGEC is considered to be something that Amtrak believes should continue.

- Conveying the message as of 5-31-23:

The NGEC 2023 background/educational document was released in January and distributed widely during the 2-3-23 NGEC Annual Meeting. It can be requested in hard or soft copy by contacting Steve Hewitt at shewitt109@aol.com

To date 333 copies have been distributed.

The new website is up and running at: www.ngec.org.

- Quarterly Grant Agreement Progress Report to FRA

All reports have been submitted on time. The report for the period ending 3-31-23 was submitted to FRA by the due date of 4-30-23.

The next report will be due to FRA by 7-31-23.

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

The By-Laws were updated in December 2022 and will again be reviewed in the Fall of 2023.

Note: It is possible that a By-Law change may be required sooner than the Fall if needed for the proposed new (interim) funding source.

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.

The NGEC Bi-Level Rail Car Specification Review Panel was convened by the Chair in January and on February 14th the Panel went through the DRAFT Review Panel Report and Recommendations prepared by technical consultant Larry Salci. The Panel recommended approximately 20 additional revisions and on February 17th approved the Report and its Recommendations as revised by Mr. Salci in an electronic vote. On 2-21-23, the Report and its Recommendations were adopted by the Executive Board and the changes that will comprise 305-001 Revision D were sent to the technical writer for incorporation into the spec.

The NGEC Review Panels did not meet in May 2023.