



Section 305 Next Generation Corridor Equipment Pool Committee (NGEC)

Monthly Activities Report: November 30, 2014

Submitted by: Steven J Hewitt, Manager, S305 NGEC Support Services

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, taking into account 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: Eric Curtit, Missouri DOT

Vice Chair: Mario Bergeron, Amtrak

Secretary: Ray Hessinger, NYSDOT

Treasurer: Darrell Smith, Amtrak

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

During the month of November, 2014, the Executive Board met once via conference call – on the 18th. Key decisions and activities reported for the month of November, 2014 included:

- Mid-West States - Section 6 progress report: An RFP for a Fleet Manager is being finalized, and an RFI for a Fleet Maintainer has recently been released.
- 514 Subcommittee update: The subcommittee is working on the FMCS implementation comments. States who still wish to submit comments should send them to Jeremy Jewkes at jewkesJ@wsdot.wa.gov.
- Host Railroad Blessing of NGEC equipment: Criteria for new equipment has been developed by the locomotive committee. The committee will brief Jim Grady, AAR on the criteria. Following this – a subgroup will be formed to work with the NGEC after the beginning of the new year – 2015.

- D-E Locomotive Specification Revision A.1: The Locomotive Review Panel will meet on November 21, 2014, via conference call, to review the DRAFT report and recommendations in anticipation of considering its approval and subsequent submittal to the Executive Board. The Panel approved the report as submitted, and it will be sent to the Executive Board for consideration on its next call – 12-9-14.
- Scheduling the 2015 NGEN Annual Meeting: The meeting will take place in Washington, DC on February 20, 2015. Logistical information was sent to all Board members on November 26, 2014. The location of the meeting will be the Hyatt Regency Hotel on the Hill, Washington, DC.
- NGEN Future: The Finance and Administrative subcommittee (FASC) has several assignments which are to be the first steps taken towards establishing the NGEN future – short term and long term.

The Finance and Administrative subcommittee will organize itself and set its agenda. The first call was held on November 19, 2014.

The FASC has begun its review of the NGEN by-laws to revise, where necessary, to reflect the changes approved by the Board on October 24, 2014.

The FASC will begin to develop a revised Statement of Work and budget for a no-cost extension of the current grant agreement through September 30, 2017.

The FASC will begin developing a proposal for potential funding options to present to the Board for its consideration by October, 2015.

- Determining the NGEN Future: will remain as a standing agenda item on all future Executive Board calls.
- Status Update: Bi-Level Car procurement

The week before last First Article Inspections (FAI) took place in Willets, Ca. and went well.

Thursday (11-20-14) the FAI of wheelchair lifts was to take place.

Caltrans is working with IDOT and the FRA on the revised schedule, and grant and contract amendments.

On 11-17-14, there was a call with FRA's Office of Safety in regard to CEM alternate analysis. Requests made by the Office of Safety were discussed and clarified and all participants came to an accord on what the requests were and what was to be provided.

Negotiations on an agreement between Amtrak and Caltrans in regard to the On Board Information System (OBIS) have stalled and Stan noted some concern.

In January and February, 2015, FAIs will continue on a variety of systems.

- Status update: Diesel Electric Locomotive procurement:

Final intermediate design review (IDR) took place last week.

In three weeks members of the team will be in Munich, Germany at the Reality Lab to view the engine mock up.

The engineering plan and schedule is progressing – overall the effort is about a month or month and a half ahead of schedule.

Technical Subcommittee:

Chair: Mario Bergeron, Amtrak

Vice Chair: Dale Engelhardt, Amtrak

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

During the month of November, 2014, the Technical subcommittee met once – on the 6th and the 20th. Some of the key decisions and activities of the Technical subcommittee during the month of November 2014 included:

- Status/Discussion: Dual Mode Locomotive Requirements Document revisions -Technical explanation – 110 mph maximum speed rationale DM Locomotive:

On November 6th, 2014, Jack Madden, NYSDOT, was asked to provide a technical explanation for the rationale behind a change being proposed in the requirements document to call for a maximum speed requirement of 110mph as opposed to the current requirement of 125mph.

On November 20, 2014, Mr. Madden provided the following update for inclusion in the minutes of November 20th:

“On the last Technical Subcommittee call, the FRA requested that the Technical Subcommittee defer voting upon the Revised Dual Mode (DC 3rd Rail) Locomotive Requirements Document, and requested that the Locomotive Working Group provide a technical explanation for the requested revision of the maximum speed to 110 MPH vs. the 125 MPH as contained in the original issue of the Requirements Document.

I will update the Committee on the progress of that response as well as raise some issues concerning Standardization and the Empire Corridor Tier I Draft Environmental Impact Statement, on which I spoke briefly on the last call. I have provided two documents to Steve containing some back up information on these latter two issues for him to send out to the members.

Technical Explanation: The Locomotive Working Group met by conference call on Thursday 11/13 and discussed the request made by the FRA. The four major locomotive manufacturers went back to their technical people to address the consequences of the addition of the 3rd Rail gear and electronics as well as the on-board energy storage capability, to the Diesel-Electric locomotive platform. Siemens has already responded; Bombardier will meet with NYSDOT, CTDOT and MNR in NYC tomorrow morning; and MPI/GE and EMD/Progress Rail are working on their responses.

Siemens advises that, using the 272,000 pound P_{RIIA} Charger D-E locomotive as a base platform, the addition of the 3rd Rail DC gear and associated electronics will add weight as well as 3 feet of length to the locomotive. The resulting DM locomotive would weight approximately 291,500 pounds, which is a little over our 286,000 pound target for the NYC legacy infrastructure; at 291,500 pounds, the locomotive would be below the P_{RIIA} P2 force limit at 110 MPH, however, it would exceed the P_{RIIA} P2 force limit at 125 MPH. The addition of the on-board energy storage system will add about 15,000 pounds, and would require either more locomotive length and weight or a reduction in other items such as fuel tank size or a smaller engine. (This is how GE modified the Genesis P40/P42 to develop the P32AC-DM, reducing the fuel tank from 2,200 to 1,800 gallons and reducing the engine size from 4,000/4,200 HP to 3,200 HP.)

We anticipate that we will have a similar technical explanation from the other 3 locomotive manufactures by the next Technical Subcommittee call.

I have provided Steve with a background paper which discusses the Standardization issue, as well as the Empire Corridor DEIS to which I referred last call.

Standardization: Although the Bi-Level car and the Diesel-Electric Locomotive meet the 125 MPH maximum speed, they are not truly nationally “standard” vehicles as they cannot be used north of Washington DC either due to vertical clearances and high-level platforms (Bi-Level), or the prohibition of internal combustion engines in the NYC Tunnels and Stations. (Diesel-Electric Locomotive) In addition, the Diesel Multiple Unit specification was approved with a maximum top speed of 110 MPH, although the DMU could be used nationally.

Empire Corridor Tier I Draft Environmental Impact Statement: The FRA is the Lead Agency for the Empire Corridor Tier I DEIS. The DEIS advances four speed alternatives: 79 MPH, 90 MPH, 110 MPH and 125

MPH. The 79 MPH, 90 MPH, and 110 MPH alternatives west of Albany/Rensselaer would operate with locomotives in Diesel Mode. The 125 MPH alternative west of Albany/Rensselaer would operate under AC Catenary, using a Dual Mode (AC Catenary) Locomotive, similar to the Bombardier ALP-45DP. Accordingly, as per the FRA's status, as Lead Agency, there are no plans to operate locomotives in diesel mode at 125 MPH in the State of New York.

- At the conclusion of the November 20, 2014 call, it was agreed that consideration of the revised Dual Mode requirements document (DC 3rd rail) will take place when Mr. Madden has received the additional technical explanation from the other RFI responders and has prepared a summary explanation that can be appended to the requirements document. This is expected to occur on the next Technical subcommittee call – 12-4-14.
- ECP update: On the November 20th conference call - Paul Jamieson provided the following update for inclusion in the minutes:

"The 4 cars continue to operate in emulation in the Keystone service (Harrisburg to New York). One ECP portion developed a leak which was determined to be an aluminum chip from machining across a valve seat. This fault is not attributed to the ECP design but is a quality issue. A second ECP portion fault has been reported and is under investigation. A relay valve was found to be leaking and was attributed to debris in the piping and not the valve operation.

The next car inspection will occur in January in Philadelphia.

One operational concern has been determined through the emulation testing. If the car is set out, the ECP battery can be drained and the brakes will not probably function when connected to a locomotive without connecting the HEP trainline. The manufacturers are working on a solution to this concern.

Work is progressing on the full ECP test for hardware acquisition, installation and development of the dynamic test plan. An ACS64 Locomotive will be equipped with NYAB ECP equipment which will be interfaced with the CCBII equipment. A cab car will be modified with the Wabtec FastBrake and ECP equipment. Final schedule is being developed.

The safety analysis work continues and a final review with the contractor is scheduled for December 18th at APTA in Washington, DC. The two manufacturers, APTA, FRA and the contractor will be in attendance."

- Diesel-Electric Locomotive Procurement update as of November 20, 2014:
 - a) The last two Milestone 'A' CDRLs (#10 & #11) are being processed.
 - b) Intermediate design review (IDR) week #3 was held last week in Chicago. All of the review meetings for IDR are complete and follow-up action items to close IDR are underway.
 - c) Mock-up reviews for the diesel engine room are planned to be conducted at Siemens' 3-D reality-lab in Munich week of December 8th.
 - d) Long-range planning for Final Design review (FDR) is underway for February and March 2015. The location for FDR has been confirmed for Seattle by WSDOT.
 - e) A few more draft DCRs are being generated after the completion of IDR. We understand that Tammy Krause will be the NGEC contact for the document control for the PRIIA specifications. Rich Stegner will contact Tammy to advise status.
- Bi-Level Car Procurement update as of November 20, 2014:

The week before last First Article Inspections (FAI) took place in Willets, Ca.

Thursday (11-20-14) the FAI of wheelchair lifts was to take place.

Caltrans is working with IDOT and the FRA on the revised schedule and grant and contract amendments.

On 11-17-14 there was a call with FRA's Office of Safety in regard to CEM alternate analysis. Requests made by the Office of Safety were discussed and clarified and all participants came to an accord on what the requests were and what was to be provided.

Negotiations on an agreement between Amtrak and Caltrans in regard to the On Board Information System (OBIS) have stalled and Stan noted some concern.

In January and February, 2015, FAs will continue on a variety of systems.

On October 24, 2014, the Executive Board combined the activities of the Finance subcommittee and the Administrative Task Force under one subcommittee – the Finance and Administrative Subcommittee (FASC).

The Finance and Administrative Subcommittee (FASC) held its first conference call on November 19th, 2014 and organized itself.

Chair: Darrell Smith, Amtrak CFO

Vice Chair: Brent Thompson, Washington State DOT

Vice Chair: Ray Hessinger, New York State DOT

The Finance and Administrative subcommittee holds a conference call every four weeks on Wednesdays at 3:00pm Eastern.

Voting Members:

- *Darrell Smith, Amtrak - Chair – darrell.smith@amtrak.com
- *Brent Thompson, Washington State DOT – Vice Chair - thompbr@wsdot.wa.gov
- *Ray Hessinger - Chair – New York State DOT – Vice Chair - raymond.hessinger@dot.ny.gov
- *Eric Curtit, Missouri DOT eric.curtit@modot.mo.gov
- *Arun Rao Wisconsin DOT – arun.rao@dot.wi.gov
- *Tim Hoeffner, Michigan DOT -Hoeffner@michigan.gov
- *Brian Beeler II, NNEPRA for Maine DOT - brian@nnepra.com
- *Tammy Nicholson, Iowa DOT – tamara.nicholson@dot.iowa.gov
- *Michael Lestingi, FRA – Michael.lesting@dot.gov

Support:

- Nikki Rudnick, Amtrak (alternate for Darrell Smith) Nicole.rudnick@amtrak.com
- Jeff Gordon, FRA – Jeffrey.gordon@dot.gov
- Sal DeAngelo, FRA – Salvatore.deangelo@dot.gov
- Vincent Brotski, Amtrak Legal– Vincent.brotski@amtrak.com
- Martha Gebbie, Washington State DOT – (alternate) gebbieM@wsdot.wa.gov
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- Shayne Gill, AASHTO – sgill@aaashto.org
- Steve Hewitt, Consultant/Manager, S305 NGENC Support Services – shewitt109@aol.com
- Larry Salci, Consultant – larry@salciconsult.com
- Strat Cavros, AASHTO – scavros@aaashto.org

Action items and decisions resulting from the first FASC meeting held on November 19, 2014 included:

- Chairman Smith appointed Ray Hessinger, NYSDOT, and Brent Thompson, WSDOT, as vice chairs of the newly formed Finance and Administrative Subcommittee.
- It was agreed that the Finance and Administrative Subcommittee will meet every four weeks on Wednesday's at 3:00pm Eastern. The next call will take place on December 17th, 2014. Steve Hewitt previously had sent calendar appointment to all members to reflect this anticipated frequency.
- Chairman Smith established a working group for the purpose of review and revise the by-laws to reflect the changes made by the Board on October 24, 2014.

Members of the working group are:

Ray Hessinger, NYSDOT – Chair
 Eric Curtit, MODOT
 Brent Thompson, WSDOT
 Jeff Gordon, FRA
 Steve Hewitt, NGEC Support Manager

The working group is asked to prepare a DRAFT for discussion (and possibly consideration of approval) on the December 17th FASC conference call. The intent is to have a recommendation ready for Board consideration in advance of the 2015 NGEC Annual Meeting (2-20-15).

- Darrell Smith will draft a Scope of Work Change document for review and discussion on the FASC call December 17, 2014.

The intent is to have Board approval of the revised SOW and grant agreement extension through September 30, 2017 by February 20, 2015 (The NGEC Annual Meeting). If approved formally by the Board it will then be submitted to the FRA for approval through the grants office and ultimate execution by Amtrak and the FRA prior to the end of the current agreement – June 30, 2015.

- The Finance and Administrative subcommittee will begin developing a proposal for potential funding options to present to the Board for its consideration by October, 2015.

The intent is to complete this effort, as directed by the Board, by October, 2015 in order to allow time for implementation prior to the end of the anticipated grant agreement extension through September 30, 2017.

- The FASC will continue its exploration of potential funding and financing options begun early 2014. On November 19, 2014 the FASC heard from Robert Pee, Amtrak, Director, Pricing Strategy, on **Surcharge or Facility Charge Functionality**.
- Darrell Smith will continue to reach out to WMATA about a possible presentation from a multi-state organizational perspective. Other Finance subcommittee members who may have a contact at WMATA are asked to reach out or provide that contact information to Darrell Smith.

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 particular specification is re-convened by the Executive Board chair.

In November, 2014, the Diesel-electric Locomotive Review Panel met (November 21, 2014) to consider approval of specification Rev A.1. The Panel unanimously approved Rev A.1 and has recommended its adoption by the Executive Board on its next call – December 9, 2014.

Special note:

On behalf of the members of the NGEC, I would like to express our appreciation to Kevin Kesler, FRA, for his dedication and hard work on behalf of the Committee since its inception in January of 2010. This month, Kevin announced that he would no longer be an active participant on the various NGEC subcommittees and task forces due to the demands of his “day job” at FRA as Director of Research and Development.

Kevin noted that he will continue to monitor and support the efforts of the NGEC as it continues its work.

Thank you Kevin – you will be missed!

Steve

Note: Jeff Gordon, FRA, has taken Kevin’s place on the Technical subcommittee as the FRA’s voting member; and Michael Lestingi, FRA, has stepped in as the FRA’s voting member on the Finance and Administrative subcommittee. We thank you both for taking on the additional work load and we greatly appreciate your continued commitment to the NGEC!