AMTRAK - Next Generation Acela

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The Baltimore-Washington Rapid Rail (BWRR) (the project developer) and the Northeast MagLev (TNEM) (the promotional entity) have the short-term goal of obtaining Federal Railroad Administration (FRA) approval to build a magnetic levitation (maglev) train between Baltimore and Washington, DC, with the long-term goal of extending the train operation to New York City by way of Philadelphia. Japan's Superconducting Magnetic Levitation (SCMagLev) train is the high-speed, ground-based transportation system TNEM is promoting to build in the northeast corridor of the United States.

Information about the SCMagLev and BWRR's plans to build and operate the system have raised many questions and concerns. This is one of a series of articles that identifies and discusses some the many questions and concerns citizens and communities have identified with moving forward in building and operating the SCMagLev.

Abstract

The SCMagLev is in the imagination stage, while Amtrak is building and testing its next-generation Acela, scheduled to start operation in 2021. The new Acela trains will be faster and safer, accommodate more passengers and commuters, and provide a better travel experience. The SCMagLev, a highly-expensive, likely tax-dollar subsidized transportation system for the elite, well-heeled traveler is on BWRR's drawing board, while Amtrak's Acela has already received FRA approval to be built and will soon deploy a functional high-speed train system to enhance Amtrak's array of passenger and commuter services in the Northeast Corridor.

About Amtrak

Amtrak currently provides intercity passenger rail service with over 21,000 route-miles of track across 46 states, including the District of Columbia, and Canada. Amtrak's *Acela Express*, *Northeast Regional*, *State Supported*, and *Long-Distance* rail services between Boston, New York, Philadelphia, Baltimore, and Washington, DC, provide an expansive array of services for passengers and commuters. As the majority owner of the Northeast Corridor (NEC), Amtrak provides coordinated passenger and freight rail service planning for the NEC, as well as infrastructure access and operational support to eight commuter rail authorities — including the Maryland Area Regional Commuter (MARC) and the Virginia Railway Express (VRE) — and four freight rail operators. Amtrak's long experience as the U.S. high-speed operator, and the NEC end-to-end user, provides a unique, profound, and expert insight and perspective about the Baltimore-Washington passenger rail transportation network.

Questions & Concerns

(1) While BWRR is still in the early stages of planning for a new train system, where is Amtrak?

- Amtrak plans to replace its popular Acela trains in 2021 with new ones that will hold more people, travel faster, and have improved safety features. The new trains will shave 15-20 minutes off the popular New York City to Washington, DC, route, which

New Acela. WTOP News. Photo Amtrak.

currently takes about three hours. The next-generation Acela will travel at speeds up to 160 miles-per-hour.

- While high-speed rail has struggled to take hold in the United States, Amtrak's new second-generation fast trains are pushing Amtrak toward profitability. CBS News' Kris Van Cleave got a first look at the new Acela being assembled in the United States (as opposed to in Japan for the SCMagLev). Kris Van Cleave traveled to the Hornell factory in western New York, which employs some 800 American employees, to see the new Acela being built and was favorably impressed.[1]

- The future of America's high-speed rail is starting to take shape in the same place where trains have been serviced, built, and rehabbed by American workers since the 1850s. In Mr. Van Cleave's report, he interviews Stanley Hall, a third-generation train builder, who speaks to the pride of building the next generation of Acela here in the United States: "And it's not just my father and grandfather, my brother comes in here and works. I had several cousins that worked here ... when I was first hired, my uncle helped me a lot to get my job here."[2]

- Richard Anderson, the former Delta Airlines CEO who now runs Amtrak, said the new Acela is "incredibly important" to the future of the company. "It really lays out a clear vision for what short haul, inter-city passenger rail transportation can do for this country. And, this country is going to need it in more and more corridors because millennials don't want to drive, and you cannot add enough lane miles for 100 million more people," Anderson said.[3]

- The updated Acela trains will hold about 380 people — 25 percent more passengers than the prior generation — and are designed to tilt as they take turns, allowing them to go faster. Amtrak's most lucrative corridor linking Boston, New York, and Washington, DC, will see a cut in travel time by at least 15 minutes. "We've got to position Amtrak to have a modern product that a millennial wants to get on with high-speed Wi-Fi, craft beers and reliable schedules that beat buses, cars and airplanes," said Mr. Anderson.[4]

- To gain the magnetic lift and speed of the SCMagLev, many of the FRA train standards for strength and crash worthiness have been "adjusted" to incorporate lighter materials. These "adjustments" have the real potential to render the SCMagLev less crashworthy, resulting in far more serious injuries if there is an accident. While BWRR claims the SCMagLev is very safe, so did the German government in certifying their maglev train; that is, until it crashed on September 22, 2006, killing 70 percent of the passengers and injuring the rest, most severely injured. This accident, as well as significant cost overruns and serious building/deployment schedule delays, forced the German government to "pull-the-plug" on their maglev plans after having invested millions and millions of taxpayer dollars into their costly, high-tech folly. (Kemp and Smith, 2007)

- The new Acela trainsets will offer passengers faster Wi-Fi, USB charging in each seat, reading lights, and winged headrests (so no one will fall asleep on your shoulder). And, unlike the airlines, Mr. Anderson promises Amtrak will not shrink your seat.[5]

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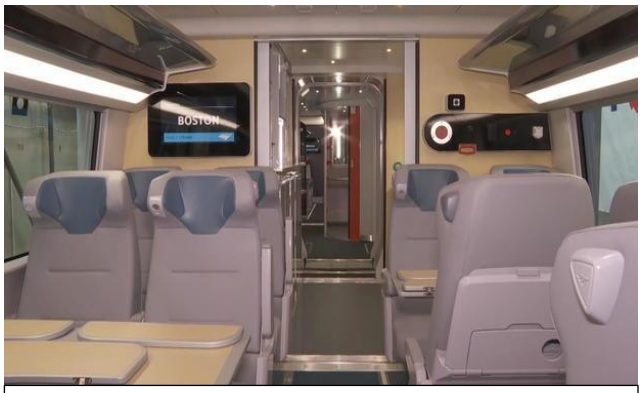
[1] Van Cleave, Kris. "Inside Amtrak's next-generation Acela train: 'Wi-Fi, craft beers and reliable schedules." CBS News. June 11, 2019. www.cbsnews.com/news/amtrak-new-acela-trains-first-look/.
[2] Ibid.
[3] Ibid.
[4] Ibid.
[5] Ibid.

- Amtrak is nearly 50 years old. The railroad predicts it is on track to break even for the first time by 2021 when the new Acela will start racing along the Northeast Corridor. Mr. Hall plans to be one of the first passengers. "It's just going to be, you know, just pride. Because I know somewhere on that train that there will be a plaque that says that this was manufactured in Hornell, New York." Mr. Hall said. An American train system, Amtrak is built and maintained by Americans, whose jobs will continue to implement, build, and maintain the upgrades, tracks, stations, facilities, and more. The Acela (and other passenger train systems, like MARC and VRE) will offer affordable travel while improving passenger comfort and safety.[6]



Interior of the new Acela. Photo by Kris Van Cleave.

- To improve their existing rail system, Amtrak continues to replace and upgrade tracks along the Northeast Corridor to accommodate the next generation of Acela trains. These new tracks have also improved the reliability and ride for the low-cost commuter MARC trains. The MARC system carries more than 8 million passengers and commuters each year, and ridership continues to grow. MARC also implemented an upgrade plan and has significantly rebuilt and improved train stations and parking facilities, as well as completed a series of upgrades to both passenger car and locomotive equipment, replacing older equipment with new, more reliable, and more comfortable trainsets.

- Amtrak currently operates 20 Acela trainsets and has ordered 28 new ones, enabling Amtrak to add more service and start reduced travel time non-stops. There is also an excellent potential that the new Acela model could work in other parts of the United States.

Findings/Conclusion

(1) Amtrak's *NEC Future*-related Environmental Impact Statement was the result of a costly four-year study. Regional, state, and federal stakeholders approved Amtrak's recommendations and financial plans to proceed with the enhancement of existing right-of-way, equipment, and facilities.[7]

(2) In contrast with BWRR's expensive drawing-board concept, Amtrak has moved past the planning process, successfully completing the environmental clearance and initial engineering stages, and begun to implement upgrades and start the building, and soon deployment, of the new Acela. Financial commitments, including a $2.5 billion loan from the FRA, are being used to build and deploy the next generation of high-speed trains today, and construct the infrastructure needed to improve high-speed train travel along the Northeast Corridor.[8]

Continued development and support of Amtrak is a far better solution than moving forward with building the SCMagLev transportation system. Amtrak and its options provide a reliable and technically and financially-proven system at a reasonable cost for near- and long-distance rail transportation that accommodates commuters and passengers. After four years of study by the FRA, which involved the significant use of financial

[6] Ibid.
[7] U.S. Department of Transportation and Federal Railroad Administration. *NEC Future: A Rail Invest Plan for the Northeast Corridor*. *Record of Decision*. July 2017. https://www.fra.dot.gov/necfuture/pdfs/rod/rod.pdf. Referred to throughout this white paper.
[8] Ibid.

and human resources, and extensive engagement with stakeholders—the federal government, states, cities, the railroads, and the public—the already-completed, approved, and published *NEC Future* lays out a sound plan and investment approach to address the NEC's current and future needs. This approved plan should remain the blueprint for the future of passenger rail transportation between Baltimore and Washington, DC, as well as for the Northeast Corridor.

The competitive SCMagLev transportation system, by comparison, is inordinately expensive, commercially unproven, and potentially damaging to communities and the environment. There are many unanswered safety issues and large government subsidies (tax dollars) will be required to build and maintain its operation. This transportation system for the elite and well-heeled traveler is not justified and should not be approved.

Want to Help?
(1) Share this information with your family, friends, neighbors, and community.
(2) Join our Facebook page: www.facebook.com/groups/CitizensAgainstSCMaglev.
(3) Contact your elected officials to express your opposition to building the SCMagLev, go to: myreps.datamade.us.
(4) Submit multiple public comments often at www.bwmaglev.info/index.php/contact-us. State your objection(s), and always end by saying you support the "No Build Alternative."
(4) Learn more about the concerns and impacts the SCMagLev will have on our communities, see: www.stopthistrain.org/.
(5) Make a contribution to support Citizens Against the SCMagLev (CATS) and Maryland Coalition for Responsible Transit (MCRT) at mcrt-action.org. Your donation, in any amount, is appreciated. Thanks for your support!

About the Author
Daniel E. Woomer is a community activist and technical expert. He retired after a long career that included positions with Westinghouse Defense Center, Johns Hopkins University's Applied Physics Laboratory, and the U.S. Department of Energy (DOE). During his career with the DOE, he worked in various positions with the Energy Information Administration and the Office of Congressional and Intergovernmental Affairs, and he helped set up the Office of Technology Transitions. He also served for several years as an adjunct faculty member with the University of Maryland University College, where he developed and taught mathematics, supervisory and leadership classes.

Sources
(1) Kemp, R., and R. Smith. *Technical issues raised by the proposal to introduce a 500 km/h magnetically-levitated transport system in the UK*. Lancaster University (R. Kemp) and Imperial College London (R. Smith). Report prepared for the Department of Transport. June 17, 2007. https://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/about/strategy/whitepapers/whitepapercm7176/railwhitepapersupportingdocs/railwhitepapermaglevreport.pdf. [*Note*: 500 kilometers-per-hour is 311 miles-per-hour.]
(2) Woomer, Dan. "First Look at the Next Generation of Amtrak's Acela." June 13, 2019.

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Citizens Against the SCMagLev (CATS) is a confederation of scientists, engineers, experts, community organizations and citizens in support of transportation infrastructure improvements that benefit our communities, state, and nation. CATS opposes the construction of an expensive transportation system serving a small minority of the wealthy at the cost of taxpayer funds far better used to maintain and improve the transportation infrastructure needed and used daily by all citizens, businesses, and commerce. For up-to-date information on the SCMagLev opposition, see our Facebook page at: https://www.facebook.com/groups/CitizensAgainstSCMaglev.