

Title: **Support Maryland General Assembly House Bill 0170 State Finance - Prohibited Appropriations - Magnetic Levitation Transportation System**
(Cross-file SB0079)

Testimony by:

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Hearing: Environment and Transportation Committee
Room 251
House Office Building
Annapolis, Maryland 21401

Date: Thursday, February 22, 2024

Time: 1:00 pm

Chair Korman, Vice Chair Boyce, and Members of the Environment and Transportation Committee:

Summary:

As a Board member of the Maryland Coalition for Responsible Transit (MCRT) and member of the Citizens Against the SCMaglev (CATS), we join with Delegate Williams to support this session's House Bill 0170 – "Prohibited Appropriations – Magnetic Levitation Transportation System" which prohibits "the State and certain units and instrumentalities of the State from using any State appropriated funds for the building and operating of a magnetic levitation transportation system in Maryland; providing that the prohibition "does not apply to expenditures for the salaries of personnel assigned to review permits or other forms of approval for a magnetic levitation transportation system."

Building the SCMaglev train will destroy the last large protected green areas on the east coast and bring irreparable environmental harm to surrounding areas, potentially threatening the health of our residents, and it will require government subsidies to build, maintain, and operate the system. It is very unlikely that revenues generated by ridership will cover the maintenance and operation cost of running this train. MCRT's and other's research have come to this same conclusion. Coupled with the budget reduction in transportation for 2024, Maryland taxpayer funds would be better spent on high-priority transportation infrastructure projects that benefit all Maryland's residents, not just the few wealthy who can afford the cost to ride the SCMaglev. While I, MCRT and CATS oppose the building of the SCMaglev, we strongly support the continued enhancements of existing transportation systems such as MARC and Amtrak, which benefit all Marylanders.

Testimony:

Good afternoon. My name is Daniel E. Woomer, I live in Linthicum Heights which is in the northern portion of Anne Arundel County. I am the past president and a current Board member of the MCRT, as well as longtime member of CATS. I am pleased to provide this written testimony to you today in support of HB 0170.

There are many reasons I, MCRT, CATS, our communities, environmental groups, Baltimore City, Washington D.C., and Anne Arundel and Prince George's Counties, as well as several federal agencies are opposed to building the SCMaglev:

- (1) The train will not serve all Marylanders, yet it will destroy communities and green spaces and its emissions will damage human health.
- (2) There are unanswered questions about the actual safety of the train itself.
- (3) It will generate insufficient revenue, therefore requiring government subsidies.
- (4) It will follow previous world experiences with such systems, many of which have failed or are being maintained with large government subsidies.
- (5) The Northeast Maglev (TNEM) and Baltimore-Washington Rapid Rail (BWRR) have made many claims about jobs and revenues but have yet to share their analyses supporting these claims.
- (6) The need for far more high-value and equitable transportation infrastructure improvements, such as MARC and Amtrak, far outweigh expending excessive funds on building and operating the SCMaglev.

(1) SCMaglev Does Not Serve Marylanders, Yet Destroys Our Communities and Green Spaces.

The SCMaglev project will result in:

- Detrimental impacts on swaths of homes, businesses, historic sights, streams, waterways, rivers, and the Chesapeake Bay, as well as greenspaces throughout Prince George's County with the erection of the elevated sections of the SCMaglev.
- The destruction and/or disruption of the U.S. Department of Agriculture's Beltsville Agricultural Research Center (BARC), NASA's Optic Research Center, and the Patuxent Research Reserve (PRR), while bringing industrial level of pollution to the local streams, wetlands, the Patuxent River, and the Chesapeake Bay.

Note: In a letter dated December 22, 2023, the Maryland Department of the Environment (MDE) has received and reviewed BWRR's Water Quality Certification (WQC) and announced MDE intended to deny BWRR's WQC.¹ Subsequently, BWRR withdrew their WQC request.

– AND –

¹ To read the MDE letter, go to: https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/faf63c_9f3ca64e47ba489aba224e4473bf2d2a.pdf

On August 26, 2021 the Federal Railroad Administration (FRA) paused their review of BWRR's SCMaglev Draft Environmental Impact Statement (DEIS) for the second time. The review is still on pause.

- The potential disruption of the Anne Arundel County aquifer.
- The potential release of toxins, carcinogens, and radon gas collected in the SCMaglev tunneled sections into our communities through their surface ventilation facilities.
- Concerns about our schools' structures, personnel, and students associated with the impact of a high-speed, oscillating magnetic field train running under them.

Note: the Anne Arundel Board of Education noted their written objection to building and operating the SCMaglev on November 1, 2017.

- Increased vehicle traffic with the construction and operation of the SCMaglev facilities and track maintenance equipment on I-95 and the Baltimore-Washington Parkway.
- With only one stop in Anne Arundel County and no stops in Prince George's County, the SCMaglev provides little to no benefit to the residents and businesses in our counties, yet these counties will face the greatest burden of the disruption and destruction.

(2) Unanswered Questions About the Actual Safety of the Train Itself Remain.

- Past proposals to build maglev systems in Florida, Pennsylvania, and Maryland using the German system were not approved for good reason.
- Despite certification by the German government that their maglev system was safe, on September 22, 2006, 70 percent of the passengers were killed and the rest injured in a maglev accident in Lathen, Germany.
- The Japanese government seeks to assure us of the safety of their SCMaglev. However, the number of passengers carried to date on their test track far less than the typical number carried by the Washington Metro (pre-COVID-19) in a single day.

Note: Japanese success with their wheel-rail trains does not automatically transfer to maglev technology.

- Justifications for the ongoing building of their SCMaglev are being questioned in Japan. The planned 2027 date for starting the first operation of the Tokyo to Nagoya line is unlikely to be met. This would make the United States the first place where the safety of SCMaglev technology would be tested in a high-frequency commercial operation.
- The Japanese SCMaglev has many unresolved safety issues that need to be addressed. Safety Rules of Particular Applicability (RPA) need to be developed by the FRA before the project is authorized.
- The crashworthiness of the vehicles must be assessed for the safety of the passengers if something goes wrong. The SCMaglev should not evade the safety rules now required for Amtrak, MARC, or any train system operating in the United States. Promoters of the SCMaglev argue that the computer systems will prevent a crash, but so did the German government before that fateful day when 70 percent of passengers were killed in the Lathen maglev accident.

- The risk of the levitated SCMaglev train rising out of the guideway must be evaluated. What would happen should the train hit a small object that momentarily lifts the front end while travelling at over 300 miles-per-hour? Currently there are no physical restraints to prevent the train from rising out of the guideway.
- Below 93 miles per hour, the train will ride on retractable rubber tires. This raises many safety issues. If there is a power interruption, the rubber wheels may need to immediately support the train travelling at over 300 miles-per-hour before it comes to a stop, which is twice the speed of a commercial aircraft during landing.
- The dangers from the electromagnetic radiation need to be addressed. The BWRR Alternatives Report (November 2018) stated that people underneath the guideway “. . . need to maintain a minimum distance of 20 feet below the magnets . . .”

(3) SCMaglev Will Generate Insufficient Revenue Requiring Government Subsidies.

Having followed the SCMaglev project since its initial announcement, it is very difficult to see how this system will generate the revenues needed to operate and maintain itself without the need for government subsidies. We all have received mixed signals for the TNEM and BWRR leadership, who at one time state that all the funds needed for maintenance and operation (M&O) will be generated by ridership, and at another that any system such as the one proposed requires private and public support, as in the use of tax dollars to provide financial support. Independent research by Dr. Owen Kelly, of George Washington University, seriously challenges BWRR ridership statements.

Dr. Owen’s published research, *Ridership Revisited: The Official Ridership Forecast for the Proposed Baltimore-Washington Maglev Is a Factor of Ten Too High*², provides a “deep dive” employing transparent methodology and the use of published Census data to project the likely SCMaglev ridership for the Baltimore to Washington, D.C. segment. His findings reinforce the report prepared by Ms. Carol Park³ of the Center for Business and Economic Competitiveness at the Maryland Public Policy Institute which discussed the demographics of Baltimore City. She argues the economic basis to support the SCMaglev does not exist as it does in Japan. In addition, Randal O’Toole of the Cato Institute states: “Clearly, the main users of the maglev line will be bureaucrats and lobbyists who will have someone else (mainly taxpayers) pay their way. What is less clear is why ordinary taxpayers should pay to build a line that they won’t ever use . . .”⁴

² Kelly PhD, Owen. Ridership Revisited: The Official Ridership Forecast for the Proposed Baltimore-Washington Maglev Is a Factor of Ten Too High. 2021. <https://www.greenbeltonline.org/wp-content/uploads/2021/08/kelley202108.magrider.pdf>

³ Park, Carol. Report from the Center for Business and Economic Competitiveness at the Maryland Public Policy Institute - Lessons from Asia for the Northeast SCMaglev. Originally published in the Daily Record. December 7, 2018. Copy provided attached to this testimony.

⁴ O’Toole, Randal. Maglev to Destroy Habitat, Climate. April 6, 2021. <https://www.cato.org/blog/maglev-destroy-habitat-climate>.

To date, no major public rail system in the world operates without government subsidy. Amtrak is one of the best (pre-COVID), generating revenues that covered most of its annual M&O costs, and has shown improvement over the past decade, requiring a smaller percentage of M&O to be subsidized. While Amtrak openly provides its cost versus revenue analyses and projections, we have yet to see such projections and analyses from TNEM and BWRR to justify their revenue statements.

In their Maryland Department of the Environment (MDE) Water Quality Certification (WQC) submission, BWRR stated the projected annual ridership between Baltimore and Washington, D.C., would be between 11 and 12 million passengers. Really? MARC operates three lines in Maryland. The Brunswick line starts in western Maryland, and includes passengers living in West Virginia, with the terminus at Union Station in Washington, D.C. The Penn line starts on Maryland's northern border with Pennsylvania (Perryville) and has passengers living in Delaware and Pennsylvania, runs through Baltimore City terminating at Union Station Washington, D.C. The Camden line runs from Camden Yard station in Baltimore City terminating at Union Station Washington, D.C. The pre-Covid ridership high for all three lines totaled approximately 8.2 million passengers. Add the high pre-Covid Amtrak ridership from Baltimore City to Washington, D.C., the total number of passengers comes to approximately 9 million. When compared to MARC and Amtrak actual ridership numbers, BWRR's 11 to 12 million passenger projection lacks validity. BWRR's ridership numbers are simply unbelievable.

One of the primary analyses as part of the \$27 million federal grant to study the feasibility of the system (a requirement for any business) is to determine if sufficient revenues can be generated to cover the M&O costs. Since the majority (approximately 80 percent) of the research to produce the Draft Environmental Impact Statement (DEIS) was funded by tax dollars, you as legislators and we as taxpayers have the right to know if the analyses on SCMaglev income and income sources versus costs for building, loan management, maintenance, and operation are financially sound. We all, you as legislators and we as the impacted public, should have a clear picture of the level of subsidies needed to keep the SCMaglev system financially afloat before we make the decision to approve it being built. It is long past time that this information is made available to you and for our review.

While Amtrak openly provides its cost versus revenue analyses and projections, we have yet to see such projections and analyses from the TNEM and BWRR to justify their revenue statements.

SCMaglev will likely pull ridership from Amtrak, its rival and competitor in the high-speed train arena, which will require Amtrak subsidies to be increased. In effect, taxpayers, most of whom would not be able to afford a ticket to ride the SCMaglev, will be forced to subsidize two competing systems. Such funds will enrich the private SCMaglev investors, negatively impact existing transportation systems, and pull funding from other needed, more critical transportation infrastructure projects.

Let us remember our own prior experience in looking at a maglev system in Maryland. The Maryland Department of Transportation (MDOT) began to devote funding to the

development and evaluation of a Maglev system in FY2001. At that time, the Federal Railroad Administration (FRA) and the Maryland Department of Transportation (MDOT) commenced the Environmental Impact Study (EIS) for the project as required by the National Environmental Policy Act (NEPA). The final EIS was never published because 2003 and 2004 state-enacted legislation prohibited the funding of the project as the result of the final report of the Task Force to Evaluate the Development and Construction of a Magnetic Levitation Transportation System. In its final report, issued in 2003, the task force noted:

that, among other challenges, a significant amount of funding would be required to implement a Maglev system in Maryland.

It is very likely the SCMaglev will also require such taxpayer funds, and likely far more funding than the previous legislative advisory task force considered excessive in its prior finding.

And two additional issues to call your attention to. First, **High-end Earners are Leaving** as reported in *The Daily Record* on August 7, 2023:

“As the number of Americans filing tax returns with earnings over \$200,000 grows, these earnings are coupled with migration trends that are influencing states’ finances, according to a new report from SmartAsset.⁵ High earners are leaving states such as California and New York, instead choosing to move to states such as Florida and Texas.”⁶

“Maryland was the state with the sixth-largest net outflows of high-earning households, trailing California, New York, Illinois, Massachusetts, New Jersey and Virginia . . . High earners are leaving Washington D.C. The nation’s capital lost a net total of 2,009 high-earning households between 2020 and 2021. As a percentage of all filers, high earners left D.C. at a faster rate than any state.” As reported by WTOP News on September 21, 2023, “High earners left Washington, D.C., costing the District in “\$3 billion in taxable personal income.”⁷

Second, another factor further reducing the SCMaglev’s potential ridership pool is **Baltimore City’s continued population decline**. At its peak, Baltimore City had a population of approximately 1.2 million. Just since 2010, when TNEM started talking about building and operating the SCMaglev, Baltimore City’s population has declined by 8.2%, as seen in Table 1.

⁵ Villanova, Patrick. “Where High Earners Are Moving – 2023 Study.” July 26, 2023. <https://smartasset.com/data-studies/where-high-earners-moving-2023>.

⁶ Kales, Eli. “Report: Maryland among states with highest loss of high-earning residents.” *The Daily Record*. August 7, 2023. <https://thedailyrecord.com/2023/08/07/report-maryland-among-states-with-highest-loss-of-high-earning-residents/>.

⁷ Cooper, Kyle. “High earners who left DC during pandemic cost city \$3 billion in tax revenue, data reveals.” September 21, 2023. WTOP News. <https://wtop.com/dc/2023/09/high-earners-who-left-dc-during-pandemic-cost-city-3-billion-in-tax-revenue-data-reveals/>.

Year	Population	Year	Population
2010	620,942	2016	616,542
2011	620,493	2017	610,853
2012	623,035	2018	603,241
2013	622,591	2019	594,601
2014	623,833	2020	583,132
2015	622,831	2021	576,498
2016	616,542	2022	569,931

Table 1. Baltimore City’s Population by Year for 2010 through 2022 (estimate as of July 1, 2022)

This fact leads to many questions such as:

- What are the ridership projections considering the impact of the increasing use of teleworking?
- How have the ridership projects changed as a result of agencies and support contractor experiences with maintaining ongoing operations during COVID-19 “lock downs”?
- How much have the ridership projections decreased as a result of the increasing use of telework and the pool of potential riders leaving Baltimore and Washington, D.C.?
- What level of taxpayer subsidy will now be needed to maintain and operate the SCMaglev? What is the projected increase in subsidies?
- What is the projected impact on Amtrak and MARC ridership and their respective subsidy requirements?
- SCMaglev’s funding is reportedly a loan from a Japanese bank; how has COVID-19 loss of potential ridership affected that pledge? With loss of the population pool of potential riders, is Japan as willing to make a \$5 billion loan? If the SCMaglev operation fails, will the United States and we as its taxpayers become accountable for the loan repayments?

(4) SCMaglev Will Follow Previous World Experiences with Such Systems, Many of Which Have Failed or are Being Maintained with Large Government Subsidies.

I again call your attention to a report by Ms. Carol Park, an analyst at the Center for Business and Economic Competitiveness at the Maryland Public Policy Institute entitled: “Lessons from Asia for the Northeast SCMaglev.”⁸ *(A copy is attached for your convenience)*

To quote Ms. Park:

“SCMaglev enthusiasts have been pushing the project despite warnings of significant risks, just like the supporters of the bullet train did in Asia. For instance, the South Korean government built the Seoul-Incheon line despite consistent warnings of inadequate demand. The project was politically, rather than commercially, driven as Korean officials wanted to present a futuristic version of Korea to the international community as part

⁸ Park, Carol. “Transportation Lessons from Asia for the Northeast Maglev.” The Maryland Public Policy Institute. December 7, 2018. www.mdpolicy.org/research/detail/lessons-from-asia-for-the-northeast-maglev?fbclid=IwAR2C1sAfojicOFJ7J6jXCqvtGmKADrtVAopQpP7XRZnc38V25p8G5wWp2s4.

of the 2018 PyeongChang Winter Olympics.”

The line was closed in 2018 because 77 percent of seats continually were unoccupied.

Germany experimented with building a Maglev train. Following several years of development and building, with large and growing annual government subsidies, the lack of ridership, and a horrific crash that killed 70 percent of the passengers and injured the rest, on a system Germany certified as safe, the project was abandoned, the damage to communities and the environment can still be seen today.

For a current example of overpromise and underperformance, look no further than California’s experience with its high-speed rail system, which has become a financial nightmare. With massive overruns, building delays, and homes, businesses, and private properties taken, there is still no working system. The governor finally “pulled the plug” and the initial project, which now has been significantly downsized. However, destruction of farms, vineyards, and personal property has occurred with no value returned to the California community. The severely downsized system is still experiencing massive cost overruns and building delays.

Ms. Park states:

“Supporters of SCMaglev dismiss these concerns. They argue that the success of bullet trains in Japan demonstrate that these hurdles can be overcome. That’s exactly what officials in China, Taiwan and South Korea thought, only to discover that the situation in Japan is unique. Most of Japan’s 128 million inhabitants live in a few densely populated cities. Many of those residents are rich enough to afford expensive train tickets.”

Note: SCMaglev officials have repeatedly stated that ticket prices will be similar to Amtrak’s Acela.

“Compared to Japan, the situation is the polar opposite in Baltimore, where many of the residents who depend on public transit are low-income workers. If these residents are to commute between Baltimore and D.C., they would need an option that is affordable and easily accessible from their homes.” The SCMaglev is neither, whereas MARC provides a reliable and cost-effective transportation system, moving well over 8 million passengers (pre-COVID) into and out of Washington, D.C., annually.”

(5) TNEM and BWRR Have Made Many Claims About Jobs and Revenues But Have Yet to Share the Analyses Supporting These Claims.

- The promoters of high-speed and maglev trains promise lots of jobs. In 2017 it was 75,000, now the number is reported to be 200,000 - **These job numbers are misleading or appear flawed.** The underlying analyses, which has been funded by a federal grant of public tax dollars, needs to be made available for public review.
- Since 2017, we have asked to see the basis of this claim, the work breakdown projections,

and information to substantiate their statements - **We have not seen anything to substantiate BWRR's jobs projection, have you?**

- Jobs created to build the SCMaglev will be short term. Once the system is built between Baltimore and Washington, D.C., the construction jobs in Maryland will end. These jobs will then move north if BWRR gains approval to extend the system to New York and Boston - **Maryland will lose these jobs, and likely many of the laborers, and the related tax revenues as the construction moves to Pennsylvania and New York. In addition, there will be an increase in unemployed support costs until the displaced workers who stay in Maryland find work.**
- If the operation of Beltsville Agricultural Research Center, Patuxent Research Refuge, and the National Aeronautics and Space Administration's Optics Centers are curtailed or shut down, the career, high-paying jobs will be lost from Anne Arundel and Prince George's Counties and the state of Maryland - **The long-term net effect is that Maryland will lose many career, high-paying jobs and their related tax revenue.**
- Many high-speed and maglev train projects across the world have cost far more than promised by the promoters. In some cases (e.g., California's high-speed train fiasco), there has been an increase of many times the original projected cost (to date and growing), requiring increasing amounts of government (i.e., tax dollar) subsidies. - **When the cost is far more than projected, larger tax-dollar subsidies are required and forced on governments.**
- As high-speed and maglev train projects across the world experienced building delays - **Many have experienced protracted schedule overruns and far longer periods of disruption to impacted communities.**
- The tax dollars needed for moving forward with equitable, high-priority transportation infrastructure projects will likely be further downsized or cancelled as funds are used to subsidize the building and operation of the SCMaglev. After the SCMaglev is built, the construction jobs are finished, subsidies will likely be needed to maintain the operation of the system. These tax dollars should be used to expand and enhance public transportation systems, as well as to maintain, repair, or enhance existing bridges, roads, and tunnels used by the vast majority of drivers and riders to commute and travel and as used by commerce (e.g., trucking and delivery) vehicles, which is the financial lifeblood of Maryland - **Tax dollars are better spent to help all residents, not the wealthy SCMaglev system owners and their "well heeled" riders.**
- The SCMaglev will take ridership from Amtrak and Acela, requiring increased subsidies to maintain the existing East Coast rail system - **Tax dollars will be used to subsidize two competing train systems.**
- BWRR states that large numbers of vehicles will be taken off the road – **Where is the analysis to support this claim?** The SCMaglev DEIS⁹ refutes this statement in multiple places¹⁰, and with the annual growth of traffic in Maryland, whatever savings BWRR states will be made would likely be overcome by the annual pre-COVID-19 vehicle usage growth. Again, SCMaglev ridership will likely come from Acela or air flights, not cars commuting to and from Washington, D.C.
- COVID-19 has created a significant wrinkle for BWRR's SCMaglev project and all mass transit ridership projections and revenues. Many agencies and support businesses have proven their knowledge workers can work remotely. The cost of office space in Washington,

⁹ DEIS – SCMagLev Draft Environmental Impact Statement

¹⁰ See "SCMagLev DEIS Comments, Concerns, and Questions" section XXIX "Unsubstantiated Claims" pages 91 to 116, and 141 to 149. May 20, 2021. https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_12074e36746044e08fccd7a57f081409.pdf.

D.C. is very high, and agencies and businesses are already looking at downsizing their office footprint and invest the rent savings back into mission-related work – **How does the massive growth in remote working impact BWRR’s claims? Where is/are the analysis(es)?**

- As stated before, it is unlikely that greenhouse gases and road congestion will be reduced by the SCMaglev. The operation of SCMaglev maintenance vehicles would add to the existing traffic congestion - **SCMaglev will unlikely reduce greenhouse gases and more likely create an increase in road congestion.**
- Our tax dollars should be used for the infrastructure we all rely on and need. The construction jobs generated will be long-term, as there are miles and miles of roads, bridges, and tunnels that need maintenance, repair, and enhancement. In addition, the continued improvement and expansion of MARC needs to continue. Note: MARC provides a low-cost transportation option to a far greater number of Marylanders than the SCMaglev will ever provide - **The long-term net effect is more long-term construction jobs will be available in Maryland rebuilding and enhancing Amtrak and MARC, as well as the whole of our transportation infrastructure.**
- Note, with the passage of the of the 2021 Infrastructure Investment and Jobs Act, funding was made available to continue upgrading our rail infrastructure, including the replacement of the Baltimore-Potomac tunnel. This Act will create thousands of construction jobs and the work has begun. **Jobs have been and will be created as the result of the 2021 Infrastructure Investment and Jobs Act. Since 2010, few construction jobs have been realized with the building of the SCMaglev.**

(6) The Need for Other Far More High-Value Transportation Infrastructure Improvements Outweigh Wasting Funds on Building the SCMaglev.

Supporters of the SCMaglev state that the existing 150-year-old rail system is out of date and employs obsolete technology. I rode MARC and Amtrak into Washington, D.C. for nearly 30 years. Not once was I on a train that employed a wood-fired steam engine. Amtrak and MARC employ modern equipment, that is running on an upgraded high-speed rail system. Both are purchasing and implementing new, proven, state-of-the-art equipment.

Amtrak and the FRA completed an expensive multi-year EIS and review of Amtrak’s Northeast Corridor Future (NEC) plan (2017).¹¹ One of the key findings in this report was that a new alignment was too expensive and not needed when the planned upgrades and rebuilding of the existing system was considered. With the FRA’s approval of the *NEC Future* plan, Amtrak secured loans totaling \$2.7 billion, and is actively engaged in upgrading rail, equipment, and stations all along the Northeast Corridor.

Note: Maryland’s own BWI Rail Station has been replaced with a larger, modern, and improved comfort building with upgrade technology at a cost of \$4.7 million.

Amtrak has built the next generation of train equipment capable of speeds in the 200 miles-per-

¹¹ U.S. Department of Transportation and Federal Railroad Administration. *NEC Future: A Rail Investment Plan for the Northeast Corridor*. Record of Decision. July 2017. <https://www.fra.dot.gov/necfuture/pdfs/rod/rod.pdf>.

hour range. Having past FRA evaluations, Amtrak is currently testing the new train technology on the Northeast corridor, with the plan to bring this new technology online for customers this to next year. The train is being designed and built in the United States, by American unions and trades, not imported from overseas as the SCMaglev and its supporting systems. More information on Amtrak's NEC Future and the status of the second-generation Acela are readily available on the Internet.

In a recent test, an existing MARC passenger train, running on existing track, and managed by existing control systems, travelled from Baltimore Penn Station (located in the heart of Baltimore City), stopped at the BWI Rail Station, and continued onto Washington, D.C.'s Union Station completing the run in 30 minutes. BWRR claims their SCMaglev can complete the run in 15-minutes, starting from the proposed Cherry Hill station (located on the far southern end of Baltimore City). The MARC ticket cost is \$10. The various stated SCMaglev ticket cost is \$25 to \$80 - a range between twice to eight times the cost to ride the MARC train, all to save a theoretical 15-minutes of travel. As noted in Carol Park's article, the demographics of Baltimore City residents cannot afford to ride the SCMaglev on a regular basis. The MARC service is far more accessible and affordable.

Instead of wasting money to build a transportation system that will not serve Marylanders and take funds needed for transportation infrastructure, I, MCRT, CATS, and a long and growing list of community, civic, environmental organizations, cities and counties, as well as federal agencies, believe it would be far better to invest those funds into Amtrak, MARC, and the current Maryland transportation infrastructure.

For example, look around the room you are in. Everything you see — the structure, paint, electrical systems, electronics, furniture, and clothes and shoes you are wearing — the raw materials to the finished products were transported by commercial truck. Maryland's commerce and economic well-being requires a sound transportation infrastructure to operate efficiently. Such systems draw business to Maryland and improve the economic and tax revenue base of our state. How many Maryland bridges are rated "C" or lower and need to be repaired or replaced? Such work would be a far better use of Maryland's and, for that matter, federal tax dollars, than investing in and subsidizing an unnecessary high-cost train for the elite, "well-heeled" rider.

AND . . .

In this written testimony, we have not addressed security concerns associated with having a 300-plus mile-an-hour train flying down a guideway 150-feet in the air, or through a tunnel. What catastrophic results would occur if someone is able to access the track and executes an attack? Who is going to maintain the security envelope, what is the cost of these resources, and what will the state, cities and counties will be required (forced) to provide? All of this would take additional tax dollars, again dollars better used elsewhere.

I agree with the *Lessons from Asia for the Northeast SCMaglev* report recommendation:

"The Northeast Maglev project should be scrapped before it is too late. There are many transportation priorities that are worthier of attention."

There are two additional concerns to which I draw your attention:

- (1) If built, the SCMaglev will potentially release toxins, carcinogens, and radon gas into our communities.
- (2) If built, the SCMaglev will expose our school structures, personnel, and students to constant low-level vibration and oscillating magnetic fields as the train is running under them.

Concerns Explained:

- (1) If built, the SCMaglev will potentially release toxins, carcinogens, and radon gas into our communities.

As described during the BWRR-Maryland Transit Administration (MTA) Open House (October 16, 2017) by the Louis Berger professional engineer, the ventilation facilities' primary purpose is to clear smoke in case there is a fire in the tunnel. Located every 3 to 4 miles apart along the underground tunneled route, the ventilation units will force air into the tunnel on the side of the section filled with smoke as the next ventilation facility exhausts air from the tunnel. In other words, one ventilation facility will pressurize the tunnel ahead of the section with smoke while the alternate ventilation facility will depressurize the tunnel to exhaust the smoke into the atmosphere.

Our concern is that the source of a fire will likely be electrical. Such a fire consumes electrical insulation and lubricants. As identified in a Massachusetts Institute of Technology (MIT) study, when burned, these fuel sources produce both toxic and carcinogen compounds¹² that, according to the planned use of the ventilation system described, will exhaust these dangerous compounds into the atmosphere, exposing the surrounding communities to these unhealthy chemical compounds. Such toxins and carcinogen exposure released into the atmosphere can potentially create damaging respiratory effects, with the possibly of life-threatening scenarios for the residents and wildlife near the vents who would be suddenly inhaling these hazardous compounds.

Our question: What short-, mid-, and long-term health effects will this have on the affected community? If nothing else, it will have a negative effect on property values and their related property tax revenue. Who wants to raise their family next to a facility that may release poison into the atmosphere at any time?

As you may know, Anne Arundel and Prince George's Counties have naturally occurring radon gas. Radon gas is a known carcinogen, which is why homes and other buildings are tested across both counties. Infiltrating from the ground, this colorless and odorless gas finds its way

¹² As noted in an MIT study referenced in "SCMagLev DEIS Comments, Concerns, and Questions" section LI "The Building and Operation of the SCMagLev Will Have Significant and Potentially Health Harming Impacts on Human and Wildlife and Property" pages 122 to 131. May 20, 2021. https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_12074e36746044e08fccd7a57f081409.pdf.

into building basements through cracks and seams between the basement walls and concrete floor.

During the discussion with the professional engineer from Louis Berger hired to design the building of the SCMaglev, we asked about water infiltration, drainage, and pumped water removal, as the tunneling under Linthicum will likely intersect the aquifer. Also, there is the question about monitoring and venting naturally occurring gases that leak into the tunnel through the same openings through which ground water enters, as the tunnel will serve as a large collecting system for ground leaching gases as it transits Anne Arundel County and the southern section of Prince George's County 80 to 150 feet below the surface. When these ventilation facilities exhaust into the atmosphere, anyone near these facilities will also be exposed to any radon gas collected in the tunnel. As with all radioactive materials, the intensity and length of time of exposure determines the severity of the side effects. Therefore, any low-level exposure, whether to radiation over a short or a long period, will likely have negative effects on human and wildlife resulting in health issues. Further, like long-term exposure to low-level radiation, long-term exposure to low levels of electromagnetic radiation may also have cumulative health effects on the human and wildlife. The electromagnetic radiation generated by the SCMaglev needs to be evaluated and publicly reported well before any building authorization is approved.

Our question: What long-term cumulative health effects will radon gas and electromagnetic radiation exposure have on the affected community as radioactive radon gas is vented into the atmosphere through the ventilation facilities?

- (2) If built, the SCMaglev will expose our school structures, personnel, and students to constant low-level vibration and oscillating magnetic fields as the train running under them.

As the train passes underground near and or below our schools, homes, and businesses, what effect will the resulting vibration have on the structures? Masonry structures do not fare well with constant exposure to vibration. Given that most of our homes and businesses are built on concrete foundations and masonry walls, continuous exposure to even low-level vibrations will likely have a cumulative effect, which will include cracking followed by water penetration, negatively impacting the structural integrity of the building. Such cracks allow groundwater and rainwater runoff to enter basements. Besides damp and wet basements, mold growth becomes another potential human health issue.

Our questions: What are the long-term health impacts of exposure to low-level oscillating electromagnetic fields and vibrations as the SCMaglev transit passes under our homes, businesses, and schools and their playgrounds?

In Summary:

I, MCRT and CATS have provided a list of reasons why the SCMaglev should be stopped now before Maryland is forced into a position where it has no choice but to make use of our needed tax dollars to directly or indirectly fund the SCMaglev building, maintenance, operation, and

security. Our tax dollars are far better spent to replace, repair, and enhance MARC and our existing transportation infrastructure.

And my concluding question:

Are you willing to expose our families and children to find out what will be the long-term health effects?

Again, thank you for this opportunity to provide this written before you on reasons to oppose building and operating the SCMaglev.

Attachment 1: “Lessons from Asia for the Northeast SCMaglev”
(Copy attached – see pages 15-17).

Short Informational MCRT-CATS Position Papers and their links:

- (1) CATS-MCRT Rpt - SCMagLev Biological Impact – 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_efecc0b083614963a73f1b04cebe4cec.pdf
- (2) CATS-MCRT Rpt - SCMagLev Biological Impact (Part 2) - 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_54c8689b28194a99afcd5e4b404efebe.pdf
- (3) CATS-MCRT Rpt - Amtrak the Better Alternative – 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_62a178a0ce394b6b887b1c4e4f3c44f4.pdf
- (4) CATS-MCRT Rpt - The Next Generation of Acela – 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_60c28f6dad84512802de36f7a79e54d.pdf
- (5) CATS-MCRT Rpt - What Impact Would the Have on Our Communities?– 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_f767cb0eb0724bfb8341cd86df2ab1a4.pdf
- (6) CATS-MCRT Rpt - Is the SCMagLev Safe? – 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_47f2ce2871e24664b8f100db013793ad.pdf
- (7) CATS-MCRT Rpt - Is the SCMagLev Safe? (Part 2) – 20210111 https://aa247ef8-bd4a-4dd2-890c-8b5ebdf396e2.filesusr.com/ugd/6d0640_6181d1a331f94219969c286bc0efec33.pdf
- (8) Kelly PhD, Owen. Ridership Revisted: The Official Ridership Forecast for the Proposed Baltimore-Washington Maglev Is a Factor of Ten Too High. 2021. <https://www.greenbeltonline.org/wp-content/uploads/2021/08/kelley202108.magrider.pdf>
- (9) O’Toole, Randal. Maglev to Destroy Habitat, Climate. April 6, 2021. <https://www.cato.org/blog/maglev-destroy-habitat-climate>.

Maryland Coalition for Responsible Transit (MCRT) evaluates transit projects for social equity, environmental justice, economic viability, and community accessibility. We believe that the Baltimore Washington (BW) SCMaglev must be stopped in order to implement future transit projects that meet our criteria of a much lower price and much less risk and impact to communities. Thus, we support the no-build option and are working to stop this project through the National Environmental Policy Act process. For more information about MCRT see our website at: www.mcrt-action.org.

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: www.facebook.com/groups/CitizensAgainstSCMaglev.

Attachment #1

Report from the Center for Business and Economic Competitiveness at the Maryland Public Policy Institute

Lessons from Asia for the Northeast SCMaglev

Originally published in the *Daily Record*.

December 7, 2018

In China, a bullet train crash in the city of Wenzhou in 2011 killed 40 people. The crash was blamed on poor design and mismanagement. In Taiwan, the bullet train system rang up \$1.5 billion in losses over seven years, requiring a \$1 billion government bailout to date. In South Korea, a high-speed rail line connecting Seoul to Incheon closed in 2018 after just four years of service because 77 percent of seats were unoccupied.

Across the Pacific Ocean, supporters of “SCMaglev” in the United States are gearing up to create an American version of the Asian rail disasters. The Northeast Maglev is a proposed magnetic levitation train that would travel at 311 miles per hour, carrying passengers between Baltimore City and Washington, D.C. in 15 minutes. The Maglev team hopes to start construction on the ostensibly private project in 2020.

SCMaglev enthusiasts have been pushing the project despite warnings of significant risks, just like the supporters of the bullet train did in Asia. For instance, the South Korean government built the Seoul-Incheon line despite consistent warnings of inadequate demand. The project was politically, rather than commercially, driven: Korean officials wanted to present a futuristic version of Korea to the international community as part of the 2018 PyeongChang Winter Olympics.

SCMaglev supporters in Maryland have similar non-business motives for backing the project. Baltimore has been experiencing a steady population decline over the years, and many supporters believe that connecting the city to economically vibrant D.C. could reverse that trend. This vision has blinded the advocates to serious concerns about the project.

First, though the project purports to be a private effort, high-speed train projects are generally magnets of questionable government subsidies. “We can’t build our infrastructure 100 percent privately,” said Wayne Rogers, the CEO of Northeast Maglev. Building the SCMaglev line from Baltimore to D.C. is estimated to cost between \$12 billion to \$15 billion (Others believe the cost will be far more). So far only \$5 billion in private investment has been secured for the project, so taxpayers will be on the hook to finance the rest of the project, likely taking funds needed for other far more valuable national infrastructure projects.

Second, it’s highly doubtful the SCMaglev will attract sufficient ridership to make it economically viable. According to SCMaglev officials, the service would target the “elite business travelers” and charge higher prices than Amtrak, which already provides regular rail service between the two cities, and is in the process of upgrading their infrastructure, equipment and stations to support faster trains on existing right-of-ways. Just as with the Seoul-Incheon line, there are also numerous bus companies that provide affordable trips along the Baltimore-D.C. route.

Finally, building the Northeast Maglev will inevitably disrupt the communities along the line because of noise and electromagnetic fields, destruction of homes and businesses during the building of the elevated portions of the line, as well as destruction of remaining green space between Baltimore and D.C., and the negative environmental impacts of tunneling, not to mention the hurtling trains. As the planned SCMaglev will only make three stops, the affected residents are unlikely to experience any commercial or economic development in their neighborhood. In short, residents along the route will pay the high price and receive little to no benefit from the SCMaglev.

Supporters of SCMaglev dismiss these concerns. They argue that the success of bullet trains in Japan demonstrate that these hurdles can be overcome. That's exactly what officials in China, Taiwan and South Korea thought, only to discover that the situation in Japan is unique. Most of Japan's 128 million inhabitants live in a few densely populated cities. Many of those residents are rich enough to afford expensive train tickets.

Compared to Japan, the situation is the polar opposite in Baltimore, where many of the residents who depend on public transit are low-income workers. If these residents are to commute between Baltimore and D.C., they would need an option that is affordable and easily accessible from their homes. The SCMaglev is neither. MARC provides that reliable and cost-effective transportation system, that last year moved over 8 million passengers into and out of D.C.

The Northeast Maglev project should be scrapped before it is too late. There are many transportation priorities that are worthier of attention.

In early 2018, Baltimore's Metro subway line closed for a month. According to the American Public Transportation Association, the closure was due to the Maryland Transit Administration's lack of expertise and poor communication. Meanwhile, the D.C. Metro system is a never-ending series of service disruptions, crumbling infrastructure and safety failures.

If Maryland wants to improve its transportation system, it should focus on ensuring that its existing projects are safe and managed properly. Whether this is done by restructuring the MTA or by privatizing some of its operations to incentivize better performance, it will not take billions of dollars to ensure that Maryland residents have reliable public transportation.

According to SCMagLev's Chair, Wayne Rogers, "Infrastructure is fundamentally a government responsibility, which has failed." He is right. Many governments across the ocean have failed by partnering with private companies to build trains that turned out to be costly, dangerous, and increasingly reliant on government support. We can avoid recreating the same high-speed catastrophe in North America by abandoning the Northeast Maglev now.

The author of the original article is Carol Park, a senior policy analyst in the Center for Business and Economic Competitiveness at the Maryland Public Policy Institute. She can be reached at cpark@mdpolicy.org.

Source: Park, Carol. "Transportation Lessons from Asia for the Northeast Maglev." December 7, 2018. The Maryland Public Policy Institute. www.mdpolicy.org/research/detail/lessons-from-asia-for-the-northeast-maglev?fbclid=IwAR2C1sAfojicOFJ7J6jXCqvtGmKADrtVAopQpP7XRZnc38V25p8G5wWp2s4.