April 19, 2018

**BY SYDNEY PEREIRA** | The Metropolitan Transportation Authority’s plan to shuttle 70 buses an hour over the Williamsburg Bridge, and create a high-efficiency “busway” on 14th St., during the proposed L train shutdown, offers the chance to bring the city’s surface-transportation system into the future. But critics say it won’t.

Village and Chelsea community groups, joined by disabled-rights activists, recently filed suit against the city’s plan. In addition, some are critical of the M.T.A.’s missing the opportunity to use the 15-month shutdown, which would start in April 2019, as a testing ground for electric buses in place of diesel buses. More to the point, though apparently not studied as part of the L train mitigation plan, local air quality — and, thus, New Yorkers’ health — could be improved by the use of electric buses.

The city’s mitigation plan calls for turning 14th St. into a car-banning “busway,” installing a two-way bike lane along 13th St., and adding ferries between Williamsburg and Stuyvesant Town. It also includes 200 new M.T.A. buses — running in Brooklyn, over the Williamsburg Bridge, connecting to Downtown subway hubs and along 14th St. — to pick up the slack during the L’s closure. Yet, just 15 of those buses will be all electric. Those 15 are part of the city’s plan to purchase 60 all-electric buses by 2021.

“Diesel is a scourge for the city and the state of New York,” said state Senator Brad Hoylman, who wrote a letter to the M.T.A. in early February, asking why more electric buses were not included in the plan. The M.T.A. launched a pilot program with 10 electric buses in January, but Hoylman called it “too little and not fast enough.”
According to the authority, the 10-bus pilot program will “help inform the planned purchase of 60” electric buses by 2021, and 15 will be used along the 14th St. busway during the Carasie Tunnel repairs. The beginnings of an electric bus fleet in New York may be evidence of some movement toward a sustainable transit system, but other cities are rapidly outrunning New York by leaps and bounds. Shenzhen, China, for instance, had more than 16,000 electric buses in 2017 — nearly 60 times more than it had in 2012.

Cost may be one obvious factor holding the M.T.A. back. Electric buses cost, on average, $300,000 more than diesel buses, according to a 2016 report by Judah Aber commissioned by New York City Transit. Aber conducted the study as part of Columbia University’s environmental science and policy graduate program. But the healthcare cost benefits far surpass any upfront losses from buying electric buses. Aber found that $150,000 per year in healthcare costs could be saved with each electric bus.

“That’s a lot of potatoes,” Aber said.

Those costs illuminate just how pricey respiratory problems and heart disease that result from the chemicals that spew out the back of diesel buses can be. Carbon dioxide, nitrous oxides and a general toxic stew of various chemicals known as particulate matter 2.5 (PM2.5) are just a few chemicals New Yorkers breathe in every day. Particulate matter has been linked to premature death, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function and other respiratory issues, according to the Environmental Protection Agency. Regular cars emit these toxins, too.

In New York City alone, particulate matter emitted from buses and trucks causes 170 premature deaths a year, according to a 2016 study published in the scientific journal Environmental Health. Cars’ particulate-matter emissions are attributable to 100 deaths per year. The study also found that emissions from buses and trucks result in 360 emergency room visits, while cars were responsible for 190.

For state Senator Hoylman, however, the upfront cost of electric buses is not what is holding the M.T.A. back from adding more of them.

“I don’t think it’s the dollars that are blocking the M.T.A.,” he said. “It’s a lack of vision and bureaucratic inertia that prevents our transit system from being a world leader on this issue.”

In response to The Villager’s request for comment, an M.T.A. spokesperson said, “Since electric buses are a relatively new technology in the New York transit world, they still require field testing, which is the M.T.A.’s reasoning for the low number of electric buses so far.”

“We always seem to be the last to adopt improvements,” Hoylman said. “We should be the California of the East Coast on the environment.”

Hoylman said the potential L shutdown is a missed opportunity for a massive electric-bus pilot program.

Beyond the buses’ cost, there are other major infrastructure hurdles that would have to be addressed to create a long-lasting, sustainable bus fleet, said Aber, the Columbia report author.

One of those challenges involves electric bus batteries. Batteries, similar to those in electric cars, degrade differently over time, depending on the weight of the vehicle and its load, hills and climate conditions. The current pilot program of 10 electric buses, Aber said, will help to figure out what kind of battery and electric bus works best in New York City’s conditions. There is also still a lack of standardization between electric bus companies, in terms of how the buses are charged.

Plus, since it takes more time to recharge an electric bus than to refill a diesel tank, a new bus system would need to be designed. In short, in a city where buses should be running 24 hours a day, taking a bus out of service overnight, or even for several hours at a time, would require a larger fleet.
“They’re being, I’ll say, a little bit on the conservative side, but for good reason,” Aber said of the M.T.A.’s small-scale electric-bus pilot program.

Revamping the L train mitigation bus routes with an all-electric fleet might well have been possible at one point, but considering the preparation time needed to make those infrastructural changes, Aber now has his doubts.

“Is it a hill that can be climbed?” he asked. “It was a missed opportunity, but at this point, it may be too late to head down this particular path.” A “small army” of people trained to manage a 200-bus electric fleet would be necessary, he added.

But there are other options the M.T.A. could have taken for the fleet of 200 new buses. Joanna Underwood, founder of the environmental nonprofit Energy Vision, recently argued in a talking point in The Villager for using buses powered by renewable natural gas — which, she noted, have lower emissions than diesel buses, but are less expensive than electric.

Diesel “is a choice of the past,” Underwood said. “We’re going to have to bite the bullet and get off petroleum,” she stated. “Whatever goal we set, the sooner the better. Every place in the world where you replace a diesel bus or a diesel truck, you’ve made a difference.”