

## LANTA's Big Move To Alternative Fuels

Anyone whose daily commute includes driving behind a mass transit bus has had that less-than-pleasant experience of the black smoke from the tailpipe wafting across their windshield.

Well, not anymore. At least not in the Lehigh Valley.

The Lehigh and Northampton Transit Authority (LANTA) has retired its last fully diesel bus, completing a conversion of its entire 84-bus fleet to alternative fuels, and giving LANTA Pennsylvania's largest fleet of compressed natural gas (CNG) buses.

It's a transition that's been 11 years in the making, but now as transit operations across the nation make the move away from air polluting diesel fuel, LANTA. It gives LANTA 57 CNG buses and 27 hybrid diesel-electric buses. Before the transition began, LANTA buses ran primarily on diesel, but it decommissioned its last two fully diesel buses in March.

"CNG is cleaner burning than diesel, and it's cheaper and more stable, in terms of pricing," said LANTA Executive Director Owen O'Neil. "Being able to convert to CNG so quickly has given us the largest CNG fleet in the state."

The alternative fuels transition began in 2010, using federal stimulus money issued for transit during the Great Recession. LANTA began replacing its diesel buses with hybrid diesel-electric. Those use batteries that charge while the bus is braking, cutting in half the time the diesel part of the engine powers the bus. And the hybrid diesel engines being used now are more modern, cleaner burning engines than the old smoke-belching ones decommissioned by LANTA.

However, the transition went into high gear when LANTA went all-in on a Pennsylvania Department of Transportation (PennDOT) program to encourage compressed natural gas buses. It struck a private-public deal to build a CNG station at LANTA's Allentown headquarters, and LANTA negotiated bulk gas purchases from UGI Utilities in 2017. Since then, it's replaced diesel with CNG buses and the benefits go well beyond the substantial improvement in air quality.

Factoring in the cost to build the CNG station, the cost of powering a CNG bus is about \$1.02 a gallon, while the equivalent diesel cost is about \$1.90, O'Neil said. With LANTA using about 1 million gallons a year, that's a nearly \$900,000 savings. Adding to the benefit is that while diesel costs can fluctuate wildly from month to month, LANTA is able to get three-year price commitments on natural gas, O'Neil said.

But the transition is not over. LANTA replaces 8-10 buses a year. For the next two to three years, it will likely be adding a combination of hybrid and CNG buses, but going forward, it will be looking to convert to all electric buses.

“Battery electric still has some limitations with range and economics, but technology is changing fast and we know that down the road, all transit will be going full electric,” O’Neil said. “We know we’re going there as soon as the math makes sense.”

For now, the math is better today than it was a just a few months ago. With the all-diesel buses gone, LANTA has no bus older than 12 years.