

Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

February 23, 2021

MEMORANDUM

To: Members of the Board of Education

From: Jack R. Smith, Superintendent of Schools

Subject: Contract Approval for RFP No. 9462.1, Electrification of School Buses

Background

During typical school years, Montgomery County Public Schools (MCPS) buses travel almost 20 million miles per year transporting students to and from school and school-related activities. MCPS' current school bus fleet is powered entirely by diesel engines, as are most school bus fleets throughout the nation. On a typical school day, MCPS buses use approximately 17,000 gallons of diesel fuel. While federal standards for diesel emissions have resulted in school buses emitting a small fraction of the greenhouse gases and particulate matter they once emitted, the buses continue to emit some of these byproducts and continue to use a non-renewable fuel source.

MCPS has been working to increase sustainable practices in all aspects of school system operations. In addition to the internal system motivation to be good stewards of our natural resources and operate in a way that maximizes health, we also have heard from many who are interested in our acceleration of those sustainability efforts. One major area of potential improvement in sustainability for any organization is transportation.

The school bus industry has developed several alternatives to school buses fueled with either diesel or gasoline. The alternatives include compressed natural gas and propane. Recently, the electric school bus emerged as an option. Electric is the only school bus drivetrain option boasting zero tailpipe emissions.

The cost of purchasing an electric school bus is two to three times the cost to purchase an equivalent diesel school bus. Until recently, school districts had to spend a great deal more to purchase an electric school bus or obtain grant funding to cover the cost differential—both unsustainable plans. A recent development in the overall effort to electrify school buses involves companies that are willing to invest the high up-front cost to fund the purchase of electric school buses with the goal to recover their investment over time.

The entire school bus industry is predicting a strong move toward electric school buses. Mr. Todd M. Watkins, director, Department of Transportation (DOT), reports learning at several national meetings that the three major American school bus manufacturers expect that within 5 to 10 years, all orders for new school buses will be for electric buses. It is anticipated that this shift to electric school buses will cause the cost of the new technology to significantly decrease over time. This decrease, along with savings in electric over diesel fuel and maintenance savings due to many fewer moving parts in an electric chassis, make the eventual recovery of the current up-front costs realistic.

On August 31, 2020, MCPS issued a Request for Proposals for turn-key, budget neutral, electrification of the school bus fleet. Highland Electric Transportation, Inc., Hamilton, Massachusetts, was the offeror selected following the Request for Proposals evaluation process. A contract has been negotiated and is recommended for approval with HET MCPS, LLC, a wholly owned subsidiary created by Highland Electric Transportation, Inc., specifically for this project. Budget neutrality is possible over time because this vendor will invest in the otherwise high up-front costs of purchasing electric school buses with the plan to recoup that investment over time through decreasing vehicle prices, less expensive fuel (electric vs. diesel), and maintenance savings. MCPS will continue to spend what otherwise would be spent purchasing, operating, fueling, and maintaining equivalent diesel school buses until the investment is recouped. Then MCPS will spend less than what otherwise would be spent on equivalent diesel buses. As far as MCPS and the vendor know, this is the first budget neutral, non-grant dependent, school bus fleet electrification plan available. This is the leading edge of the trend that is expected to sweep through the school bus industry.

MCPS will acquire electric and diesel replacement school buses for the next two school years. Subsequently, all replacement school buses will be electric. The contract calls for 25 electric buses for fall 2021, 61 additional electric buses in fall 2022, and approximately 120 electric buses (one-twelfth of the fleet), each year thereafter.

The price paid for the electric school buses includes use of the bus, all charging infrastructure, charge management, fuel (in this case, electricity), and reimbursing MCPS for maintenance of the buses. MCPS is responsible for vehicle liability insurance, tags, any damage MCPS causes to the buses, and additional vehicle safety features to be added as they become available. Budget neutrality depends on achieving all of the savings associated with not using the equivalent number of diesel buses. As some of the diesel infrastructure is scaled back, there may be some modest cost in the early years, which will be offset in later years as the whole fleet is electrified. For the Fiscal Year 2022 Operating Budget, staff in DOT is confident all costs of electrification can be covered within the existing department budget, barring extensive COVID-19 related expenses. In my view, this is a reasonable investment to make more significant progress on this priority sustainability effort than otherwise would be feasible.

I recommend that the Board of Education approve the following resolution:

WHEREAS, On August 31, 2020, Montgomery County Public Schools issued a Request for Proposals for turn-key, budget neutral, electrification of the school bus fleet; and

WHEREAS, All proposals were reviewed by the Request for Proposals review committee in accordance with Montgomery County Public Schools standard procurement procedures; and

WHEREAS, Contract negotiations have resulted in a proposed contract agreeable to HET MCPS, LLC, and Montgomery County Public Schools; and

WHEREAS, Montgomery County Public Schools' Department of Transportation expects to cover the cost of said contract over time with funds that otherwise would have been spent purchasing and operating diesel equivalent school buses; now therefore be it

Resolved, That an initial four-year contract be awarded to HET MCPS, LLC, for 326 electric school buses and all associated charging infrastructure, charge management, electric, and maintenance expenses, with a Fiscal Year 2022 cost of \$1,312,500; and be it further

Resolved, That the total lifetime contract cost for the 326 electric buses is \$168,684,990, which is projected to be recovered through funds that otherwise would have been spent on diesel school bus purchases and operations; and be it further

Resolved, That the contract also provides for the potential future generation of electricity with solar or other renewable methods and micro-grid development at bus depots, with the possibility of contract extensions through the completion of fleet electrification.

JRS:MBM:DGT:EM:ESD:TMW:amd