EPA 2022 Clean School Bus Rebates Awards

- **Who owns the liability responsibility for "an exploding battery"?**

  PCPS owns the battery, and the bus, including the battery, will be insured like the diesel buses. The bus and the liability would be with VaCorp (unless there is something otherwise stated with the manufacturer of the buses). Should there be a claim, VaCorp's claims team would investigate. If there is negligence on the manufacturers side, they would handle from there.

- **What is the anticipated increase to PCPS for coverage for the electric buses?**

  Insurance needs the following information in order to provide a quote for comparison:
  - *Effective Date*
  - *Year*
  - *Make*
  - *Model*
  - *Last four (4) of the VIN #*

- **What is the life expectancy of the tires on an electric bus as compared to a diesel bus?**

  The life expectancy of tires is the same regardless of the buses' fuel type.

- **Is there an optimum battery size given Powhatan's terrain and temperature?**

  There is currently only one battery size that Thomas Buses utilizes for their electric buses. It is a 226kw battery, which yields a 100-120 mile battery life.

- **How will fluctuating temperatures (either hot or cold) affect the battery's performance?**

  The more accessories running on the bus, the more load there is on the battery. The heater running draws more power than the air conditioner running.

- **How long does it take to recharge the battery to full capacity?**

  This will depend on the current charge on the battery at the time of plugging it into the charging station. If it is at or near zero charge, it should take approximately 2 to 3 hours on a fast charger.

- **How does the start/stop action draw on the electric battery? How might that affect the battery's miles, time, and strength?**

A regenerative braking system slows the vehicle down and in turn takes the excess energy and 'recharges' the battery.

- **Who owns the buses after 15 years of service, and what will PCPS do with them?**

  PCPS will still own the buses. At the time the batteries are removed, all options will be evaluated to include battery replacement (depending on price considering age of vehicle) scrapping for parts or auctioning off in whole.

- **What issues (other than battery) have surfaced with these buses in other localities?**

  There have been some minor charger reliability issues, but the division is not responsible for the chargers.

- **What is the seating capacity of the electric buses? How does this compare with the seating capacity of diesel buses?**

  There are multiple sizes of both electric and diesel buses. The most common are 65- and 77-passenger buses, and these two common sizes are offered in both electric and diesel options.

  The actual number of students on a given school bus depends on size of bus and the route itself.

- **Which of the two bus choices, 65- or 77-passenger, work best for PCPS?**

  Due to narrow roads and multiple cul-de-sacs used by PCPS buses, 65-passenger buses (shorter) are better suit for PCPS.

- **How often are electric buses required to be inspected?**

  The current VDOE inspection requirement for any school bus is every 45 school days.

- **How complicated is it to repair an electric engine?**

  While the process will be new, it is not complicated. The mechanics will be provided training on the maintenance of the electric buses.

- **What is the cost of charging each battery to 100%?**

  The cost of charging a bus battery to 100% varies based on the residual charge of the battery when charging begins. If the battery is at 0%, it would cost approximately $18 to charge it to 100%.

- **Will the electricity rates be locked in?**

  Powhatan County's electric rates are negotiated and contractually set every year in July. Historically, these rates are stable from year to year, however, similar to the cost of food, gasoline and other goods, the County's electric rates may fluctuate due to global and economic factors.

- **Is the terrain throughout Powhatan County a good fit for an electric bus? Will some county bus routes be a better fit than others?**

  The terrain in Powhatan County does not create any issues for the electric buses. While the electric buses can be used for any runs in PCPS, the plan is to begin with the runs that should not require recharging of the battery mid-day. As the team becomes more familiar with the electric buses, the assigned routes may be modified.

- **How will PCPS navigate security of the charging stations?**

  The current plan is to install the charging stations at the bus garage so access to the chargers are limited to PCPS buses. The bus garage is secured with fencing and the gates are locked after hours. There are no plans at this time to place chargers anywhere other than at the bus garage.

- **Will an upgrade of the electric service be required at the bus garage to support the charging stations?**

  There will be a new transformer and connection added to the east side of the building. There will also be a new meter installed at the bus hookup location.

- **What are the benefits to Dominion Energy?**

  Dominion Energy will be able to access the bus batteries when they are not being used for vehicle to grid (V2G) purposes. In addition, Dominion Energy will retain the bus battery after the bus has been in-service for 15 years to support the electric grid. This provides the battery with a second life. This also relieves PCPS from having to recycle or dispose of the battery.