International Newsroom

Why Would Anyone Buy an Electric Truck or Bus?



Photo Courtesy of Advanced Clean Transportation Expo

By Jason Gies

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I get asked this question all the time. Some people are genuinely curious. Others seem to find the whole concept of electric trucks and buses dubious. Or even threatening. Either way, I'm happy to field the question regarding why businesses and schools are switching to electric fleets, because it's right in my wheelhouse.

I am fortunate enough to be on the eMobility solutions team Navistar established to help commercial truck and bus customers understand and implement the transformation to electric vehicles. It's called NEXT eMobility Solutions – and yes, electrification is what's next for the transportation industry.

We are located just north of Detroit, in Rochester Hills, Michigan, which gives us easy access to the best, most forward-thinking automotive engineers in the world. In addition to the engineering facility, this is home to a dedicated customer experience center where those interested in zero emissions vehicles (ZEVs) can see first-hand what's involved in transitioning – whether to electric vehicles (EVs) or hydrogen fuel cell electric vehicles (FCEVs). Our guests can climb around in a truck, look at a charging station, and get a feel for how they are maintained and serviced. Potential customers can even pose some of their gnarlier questions directly to an engineer because our team is right there on site. We are also working on a mobile version of the customer experience center and are doing whatever we can to enable the

customer's success. It's a soup-to-nuts approach.

So, back to the question – why would anyone switch to an EV fleet? The short answer is, because they've seen for themselves that it makes fiscal sense for their operation. Granted, most customers need help figuring out what it will cost and the ROI over time. But that's where our NEXT team comes in – we have the experience and the data to lay out the costs and benefits so the customer can make an informed decision.

To reach the best decisions, we need to build extra time into the sales cycle. Let's face it – it's easy and quick to buy trucks and buses with internal combustion engines (ICE) because everyone knows the drill. Place an order with an International® or IC Bus® dealer, and we can turn it around in short order.

The sales cycle for electrified vehicles is longer – it must be – because for most customers, it's all new. It begins with understanding the expected duty cycle of the fleet. We do online and actual facility site surveys to estimate charging station requirements. We make sure service personnel (for the customer and supporting dealers) are fully trained. We help the customer anticipate their future growth plans so that it's considered in the initial capital outlay. And we make sure the future plan comprehends the options for repurposing or recycling used batteries.

Our eMobility solutions team breaks down this customer-centric approach into a comprehensive process that considers all aspects of the electrical transformation: Consulting, Charging, Constructing, Connecting, and Conserving.

Consulting

Consulting begins with asking the big questions that help a customer understand if taking on EVs makes sense for their operation. Our shorthand for this formula is ZETCO – Zero-Emissions Total Cost of Ownership. Some of the people who reach out to us are skeptical regarding the viability of electric commercial vehicles but are curious enough to investigate. Others show up driving an electric sports car, armed with detailed questions about repurposing batteries. In both cases, we want to understand the duty cycle of their fleet. We can look at the patterns, run route simulations, and identify charging opportunities and efficiencies. Right now, the sweet spot for EV trucking consists of medium-duty straight rail trucks running

basically the same trip everyday. Our new International® eMV™ Series answers the call.

Another aspect of consulting is sharing what we know about federal and local grants and other funding sources. Our team has experienced experts who can help with grant proposals. This is especially relevant for school districts that need to upgrade their buses; migrating to electric IC buses is often a perfect solution.

Charging

The next consideration is how they plan to charge their fleet, and we have a full suite of solutions. To help customers get a grasp on the order of magnitude involved, we ask them to complete a remote site survey. Basically, this consists of 12 questions and a handful of photos they submit so we can check out their power source and where they're thinking about installing their charging units. We feed this to a charging partner – In-Charge Energy –who can give them a preliminary quote for the initial tranche of vehicles.

Then the discussion advances to a consideration of their five-year plan. Again, we believe it's our job to set them up for success. So, before they spend that first dollar, we want to plan accordingly. Will they need building upgrades for power? Are they interested in things like solar or battery storage to help offset energy costs? Once we dial in the plan a bit and the customer decides to move forward with their charging equipment, we'll come out to do a full site survey and engineering drawings. We can do complete turnkey installations, ensuring the charging equipment is qualified and then, once the vehicles arrive, testing to make sure everything works together.

Constructing

Of course, somewhere in here we actually spec and build the customer's vehicles. Our customers can rely on the robust health of Navistar's manufacturing and parts operations – trucks and buses are our core business. We've talked to some early adopters who've worked with startups and upfitters to launch their EVs. They love electric trucks but are left holding the bag when service needs emerge. Busy fleet operators can rely on our extensive service network, with nearly 1,000 outlets in North

America. Again, uptime is critical to customers, and we are surrounding them with everything they need to be successful.

Connectivity

One of the ways we contribute to their sustainable success is by building connectivity into all our electric vehicles. This provides real-world data to enable the creation of highly customized dashboards that customers can use to keep tabs on charging and energy usage across different duty cycles, to monitor vehicle health, to track driver behavior, and to access other diagnostics that can inform the operation's ROI. In the future, we plan to build connectivity into the charging units, too, to get more granular data and further optimize the charging process. Longer term, we are looking at over-the-air updates and other diagnostics designed to analyze and understand ZETCO data.

Conserving

A frequently asked question is, what happens to the batteries when the vehicles reach their end-of-life cycle? We provide environmentally friendly options that extend the economic life of battery packs by offering a closed-loop system. We have a rigorous remanufacturing process that puts 95 percent of batteries back on the road. Those not suited for in-vehicle use can be refurbished as stationary power sources and, when mounted on truck trailers, become traveling charging stations. These second-use options could extend the batteries' life another 10 to 20 years. The smaller percentage of batteries that are completely spent can be disassembled and sorted into the parent materials – aluminum, steel, copper, and so on – and recycled into new batteries.

But What If…

As Navistar's designated EV solutions center, we handle "what ifs" all the time. For example, what happens if a fleet of battery-electric power company vehicles is working around the clock in hurricane-ravaged New Orleans, where there is no power? How do they recharge? The answer today would be to use the diesel generators that are a fundamental part of any massive recovery. But longer term, this is the ideal situation to put those mobile charging stations to work. They could power everything from the utility vehicles to the lights and air conditioning in

temporary shelters.

There are exciting innovations happening in the long-tail economy that follows vehicle electrification. We are already seeing the roofs of reefer trailers outfitted with solar panels so that the refrigeration units can recharge on the go. At a recent trade show, I was delighted by all the startups positioning themselves to support the new electrified transportation industry. The possibilities are limitless.

As exciting as I find this, I realize that it still makes some people nervous. I'd like to assure them that the world of electrified trucks and buses is certainly different, but it's not scary. And the fleet managers and drivers who are in EVs today tell me they'd never go back. Of course, we know that Navistar will be supporting its core diesel truck business for decades to come. But it's satisfying to see that even my skeptical diesel-head colleagues have scrutinized these vehicles and found them worthy.

Navistar has the stated purpose of ***reimagining how to deliver what matters.*** We know that the work we are doing to develop new electrification solutions matters to our industry, our customers, our community and our planet. We are proud that Navistar had the foresight to invest in the systems and processes we need to ensure our customers' success. When we can deliver zero emissions and improve on total cost of ownership, the whole proposition ceases to be scary.

The question is no longer why anyone would want to buy an electric truck or bus – but why wouldn't they!

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