

# Dead Battery

## Army's Transition to Zero-Emission Non-Tactical Vehicles Faces Roadblock

BY JAN TEGLER

**T**he Army's effort to comply with the Biden administration's 2021 executive order to transition to 100% acquisition of zero-emission vehicles for the federal vehicle fleet by 2035 will likely be shut down swiftly by the Trump administration, according to some defense analysts.

"The executive order was a purely political directive by the Biden administration," said John Ferrari, nonresident senior fellow at the American Enterprise Institute. "It remains political, and I think that on day one or day two of the new administration that executive order will be withdrawn."

That will include a similar order for all light-duty vehicle purchases — sedans, sport utility vehicles, smaller pickup trucks — to be zero-emission vehicles by 2027.

Executive Order 14057, signed in December 2021 by then-President Joe Biden, was part of the administration's effort to establish the federal government as "a leader in sustainability."

So far, the Army has acquired "a little over 4,000 zero-emission vehicles," according to Paul Farnan, principal deputy assistant secretary of the Army for installations, energy and environment. The figure represents a fraction of the service's light-duty, non-tactical vehicle fleet, which numbers 56,000 vehicles.

The Army's effort to comply with Biden's executive order got off to a slow start, Farnan said.

"The big push really started with the fiscal year 2023 orders," Farnan noted. "By the time the [Army] Climate Strategy was published, it was late winter of 2022, so the orders for fiscal year 2022 had already been placed."

"Back then, there were still a lot of supply shortages," he continued. "EV production hadn't really ramped up. We asked for well over 2,000 electric vehicles, but we only got about 1,100 that year, because we weren't able to procure any more from the manufacturers."

The Army would be well on its way

to transitioning its non-tactical fleet to zero-emission vehicles by 2027 if the executive order remained in force. "Certainly by 2027 we would be complying with the executive order to be only purchasing ZEVs," he said.

A December 2024 report from the Government Accountability Office on how the costs and benefits of operating and maintaining electric vehicles in the federal fleet compare with those of operating and maintaining gas vehicles concluded that "agencies overall were only at about 50% of their self-set target for acquisition of zero-emission vehicles," according to David Marroni, GAO's director of physical infrastructure.

Required by a provision in the National Defense Authorization Act for fiscal year 2023, the report also stated that the cost of zero-emission vehicles is generally higher for federal agencies than the cost of gas vehicles, largely due to higher acquisition costs and monthly lease payments. Officials at the federal agencies GAO spoke with also described gas vehicles as more flexible and convenient.

Marroni said that the scope of GAO's report was "the point at which the federal agencies are acquiring vehicles to the end of their leases or ownerships. So, it's not covering what comes either before that or the disposal that might come after that."

Apart from the cost of purchasing or leasing zero-emission vehicles, there are many other expenses that accompany acquisition. The list includes the cost to buy the charging infrastructure that supports electric and hybrid vehicles, the cost of building that connected infrastructure, costs to secure the infrastructure against cyber intrusion or exploit, local and regional electrical energy prices, federal or local taxes on electricity, maintenance, battery disposal or recycling, the impact on local energy grids and more.

"It's not just the costs to acquire charging equipment, which can vary a lot depending upon what level of charger you have," Marroni said. "Installation costs are wildly variable in terms

of where it is and for example if you have to put conduit under a parking lot. There are all sorts of things that come into play there with zero-emissions vehicles in terms of costs."

Farnan said he does not know the total costs for the Army to comply with the executive order so far, nor does the service have a breakdown of the cost of zero-emission versus the internal combustion engine vehicles in its fleet.

"We're paying for vehicles either way, whether it's electric or internal combustion engine," he said. "We don't deal with the manufacturers. We deal with [the General Services Administration] and the fiscal year 2025 GSA [lease] rate for a midsize car is \$351 per month. The monthly



A charging station at Fort Knox, Kentucky, for government-owned and personal vehicles

rate for a midsize electric is \$290. That's what we pay GSA. I don't know what GSA pays the manufacturers."

Farnan's example contradicts GAO's report, and the figure he cited could not be confirmed. As Farnan noted, GSA purchases and leases all non-tactical vehicles on behalf of federal agencies. GSA declined to answer a long list of questions *National Defense* submitted, refer-

ring back to the Army for answers.

Included in the questions was whether the purchases/leases of zero-emission vehicles made by the GSA and the Army included the tax credits — up to \$7,500 for electric vehicles and up to \$1,000 for charging equipment — that apply to consumer electric vehicles and hybrids. No answer was offered.

“I cannot comment on that,” Farnan said. “I don’t know what GSA pays. All I’m tracking is what we pay GSA.”

Similarly, Farnan could not say what the Army has spent to date on electric vehicle supply equipment, the infrastructure that underpins zero-emission technology.

“We have been appropriated



money ... for all the charging equipment,” he said. “We’ve been given about \$22 million per year for electric vehicle charging equipment.”

GAO’s report also noted that the higher acquisition costs of zero-emission vehicles are “generally not offset by savings in fuel and maintenance costs.”

But the costs of electric and hybrid vehicles vary significantly due to fac-

tors including the range and size of the vehicles, environmental conditions and the passage of time. A January 2024 study from the University of Michigan’s Center for Sustainable Systems found that gasoline vehicles are generally less expensive to purchase, but electric vehicles are less expensive over time through lower maintenance, repair and fuel costs.

Farnan acknowledged that zero-emission vehicles are not appropriate for some of the missions non-tactical vehicles perform, noting that he has spoken with commanders at Army facilities nationally for their input.

“I think it’s kind of a mixed bag,” he said. “As I go out and talk to the garrisons, there are a little bit of mixed reviews.”

“And there are cases where it’s not appropriate to have an electric vehicle,” he added. “Up in Alaska, we probably don’t want to be putting a lot of battery electric vehicles at Fort Wainwright.”

Farnan also highlighted problems using zero-emission vehicles on some of the Army’s vast and remote training ranges.

“On some of those ranges they have to drive 100 miles just to get out there,” he said. “They’re driving loaded over dirt roads with mud. We’ve found it not appropriate to have an electric vehicle do that. We need to figure if we have a charger out on the range to take care of it.”

According to the GAO report, it’s likely that the Army currently doesn’t have enough chargers on its training ranges or at its garrisons to support the vehicles the executive order requires.

“In 2022, GSA said the federal government would need more than 100,000 ports,” Marroni noted. “As of November [2024], there are about 10,500 charging ports activated nationwide by federal agencies.”

“What we have made clear to all of our garrisons and all of our soldiers is, common sense should guide your purchases,” Farnan said. “If it doesn’t make sense to get a battery electric vehicle, then don’t. If it’s not going to fulfill the mission or be a negative mission impact, don’t get a battery electric.”

Domestic automakers Ford, General Motors and Stellantis — formerly Chrysler — the companies GSA primarily buys government vehicles from, have so far failed to make profits on electric vehicles, having lost billions of dollars on their production

despite billions of dollars in loans and subsidies thanks to the Biden administration’s Inflation Reduction Act.

The administration’s executive order is “a major distraction from lethality, which is what the Army and the military ought to be focused on,” said Wilson Beaver, a policy advisor for defense budgeting with the Heritage Foundation, noting that America’s military is suffering from dangerous shortages of munitions, personnel, weapons systems and training capacity.

“If, as it looks, ZEVs are ballooning in cost and not being delivered on time while distracting from other priorities and misdirecting resources, then senior DoD leadership need to be telling Congress in a non-partisan way that these things are expensive and the juice isn’t worth the squeeze,” Beaver said. “Existing cars work better, are cheaper and get the mission done.”

Meanwhile, China’s dominance in the international supply chain for the vehicles is a “huge problem,” Beaver added, noting the strategic risk of U.S. government and public sector reliance on the country.

A 2024 report from the India-based group Organization for Research on China and Asia noted that China produces 70% of the battery cells for the electric vehicle industry and provides nearly 80% of the world’s lithium refining capacity. The country also has significant investments in the world’s top lithium mining countries from South America to Africa and domestic lithium mineral reserves. Six of the world’s top 10 lithium-ion battery makers are Chinese companies, with one, CATL, accounting for 40% of the global electric vehicle battery market.

“We cannot be relying on our primary adversary to supply critical technologies or defense-critical components,” Beaver said.

“Unfortunately, many of the strongest advocates of EVs are engaging in ‘NIMBYism,’ as you might put it, in refusing to mine for these kinds of materials in the United States,” he continued, using a word derived from the acronym for “not in my back yard.”

“We have discovered massive lithium and cobalt deposits in places like Arkansas, Alaska and Nevada, but they’re all being blocked by the EPA and the Department of the Interior,” he said. **ND**