Comparing Experiences in EV Fleet Acquisition and Deployment

RISC REPORT

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Executive Summary

For more than a decade, the Postal Service has needed new delivery vehicles to replace its iconic Long-Life Vehicles (LLVs) and Flex-Fuel Vehicles (FFVs). How to approach fleet modernization is a vital decision for an agency that serves nearly 169 million addresses in the U.S. The Postal Service began seeking input on a new custom delivery vehicle in 2014, and in 2021, the agency chose a supplier for a right-hand drive delivery vehicle to contribute to replacement of nearly 150,000 LLVs and FFVs. The contract allowed for the purchase of both gas-powered vehicles and electric vehicles (EVs). The agency has since made a public commitment to acquiring more than 66,000 electric delivery vehicles.

The process to select, acquire, and deploy a custom vehicle took around six years longer than the Postal Service's initial deployment schedule for the NGDV project. It took the Postal Service more than six years to select a supplier and more than three years from awarding the contract to receiving the first production vehicles. In total, more than nine years passed (three times longer than the originally planned three years) between the beginning of the NGDV project and the receipt of the first electric NGDVs, which began serving delivery routes in September 2024. Two other delivery organizations that have integrated large numbers of custom EVs into their fleets, Amazon and DHL, had financial and regulatory flexibility and did not publicly source their suppliers. They directly partnered with EV suppliers and deployed a custom electric delivery van within three to four years. The Postal Service's acquisition of commercially available Ford E-Transit EVs, which began approximately one year after the contract was announced, was more consistent with the timelines observed in other organizations that purchased commercially available EVs. Despite delays, the Postal Service has already reduced its gasoline consumption and greenhouse gas emissions and expects the EVs to be cheaper to operate and more mechanically reliable than gas-powered vehicles.

In this report, the U.S. Postal Service Office of Inspector General compares key aspects of the agency's EV acquisition and deployment with those of other large national posts and private delivery companies that have acquired EVs and charging infrastructure. This report also identifies challenges to the Postal Service's ability to efficiently acquire and deploy EVs and insights that may inform future large-scale procurement efforts.

The Postal Service's Electrification Commitment Is Consistent with Industry Trends

The Postal Service's commitment to acquiring a significant number of electric delivery vehicles aligns with decisions made by other delivery organizations. However, there is a wide range of strategic approaches to EV acquisition, shaped by factors such as organizational needs, vehicle operational capabilities, financial resources, regulatory environments, and the maturity of the EV market at the time of procurement.

Developing a Custom EV Extended the NGDV Timeline

One reason for the Postal Service's lengthy NGDV acquisition timeline was its decision to pursue a custom-built electric delivery vehicle. At the time of the project's inception, the Postal Service did not identify suitable off-the-shelf alternatives on the commercial market that met its needs for a right-hand drive delivery fleet. Pursuing a custom vehicle is generally more complex and time-consuming than purchasing commercially available models. Some other delivery organizations that opted for customized vehicles directly invested in vehicle suppliers to speed up development. Although such a direct investment strategy may theoretically be available to the Postal Service, legal, financial, and implementation factors might make this approach challenging to pursue in practice.

When the Postal Service began the NGDV process, it did not identify any vehicles in the U.S. commercial market that could meet its needs for a right-hand drive delivery vehicle. The agency was open to alternative fuels but did not initially pursue the specific goal of acquiring EVs. An initial commitment to EVs could have reduced the time spent exploring different options and facilitated an earlier start on infrastructure installation, allowing for a quicker and smoother rollout of electric delivery vehicles.

Public Agency Status Contributed to a Cautious, Time-Intensive Process

While the Postal Service is not subject to the Federal Acquisition Regulation that governs most federal agencies—allowing more discretion in its contracting approach—it chose to prioritize transparency and due diligence by conducting an expansive competitive sourcing process. The agency also chose to develop and test 44 prototypes, significantly more than other organizations examined. The scale of this effort, along with limited oversight of prototype development to avoid potential procurement conflicts, contributed substantially to delays in deploying electric and gas-powered NGDVs. These outcomes highlight the importance of balancing transparency, risk reduction, and timeliness to improve efficiency in future acquisition efforts.

Statutory limits to borrowing and lack of financial resources put the Postal Service at a financial disadvantage compared to private sector counterparts in funding large procurement efforts. This extended the timeline of EV acquisition and deployment, as the agency had to wait until it obtained sufficient funds to move forward with large-scale fleet electrification. The Postal Service made an initial order for around 10,000 electric NGDVs in March 2022, but the Inflation Reduction Act passed later that year helped the agency dramatically expand its electrification plans to over 54,000 EVs, by allocating $3 billion to assist USPS in acquiring and deploying EVs and charging infrastructure.

The process has stretched through four administrations with differing stances on alternative fuel technologies. Changes to government policy and incentives can introduce political challenges in implementing large-scale and high-visibility capital investment projects, as a new administration may scrutinize or question projects implemented under the preceding administration.

Incomplete Charging Infrastructure Further Delayed Deployment

Deployment of Postal Service delivery EVs was delayed due to insufficient completed charging infrastructure. After dramatically expanding plans for electrification following the passage of the Inflation Reduction Act, the agency awarded contracts for infrastructure acquisition and installation in February 2023. Under the expanded EV acquisition plans, the agency began receiving its first electric delivery vehicles in early 2024, with thousands more scheduled to arrive through 2025; this left a relatively short time to prepare facilities for EV deployment. The agency received thousands of EVs before it was able to deploy them to delivery routes. The Postal Service set ambitious plans for charging infrastructure installation but could not achieve these timelines at many sites due to complex coordination with utilities, local governments, and construction companies; the Postal Service also used unrealistic project management schedules that could not be met at many facilities. Delivery companies and postal operators the OIG researched for this report highlighted that early and sufficient lead time is critical for effectively planning, procuring, and deploying EV charging infrastructure.

Delays Had Tangible Financial and Operational Costs

Delays in deploying EVs postponed cost savings associated with operating more efficient and reliable vehicles. Previous OIG analysis estimated that delays in NGDV and Ford E-Transit acquisition postponed expected savings between FYs 2024 and 2025, with aging LLVs and FFVs continuing to serve most delivery routes.

The Commercial EV Market Now Offers New Opportunities

Since the inception of the NGDV program, the commercial electric vehicle market has evolved significantly. The Postal Service is now exploring new commercially available EV options that could allow for faster and more flexible expansion of its electric fleet.

The Postal Service is currently undertaking a broad modernization effort, and its experience with electric vehicle investments offers key lessons for future large procurement efforts. These include the importance of setting clear goals and timelines that align with market dynamics, securing funding early, and considering commercial solutions when feasible. The EV rollout also highlights the need for effective coordination with external stakeholders and the benefits of balancing process transparency and risk management with timely execution.

Observations

Introduction

The Postal Service's delivery vehicles are part of the American landscape. The familiar fleet of around 230,000 USPS vehicles brings mail and packages to nearly every community in the country. The iconic core of this fleet for nearly 40 years has been the Long-Life Vehicle (LLV), first deployed in 1986 and designed to have a lifespan of 24 years. The LLV has lived up to its name, with most of the vehicles still operating well beyond their expected years of service. The Flex-Fuel Vehicle (FFV), which looks similar to the LLV and also makes up a prominent portion of the postal fleet, was first acquired in 2000 and has similarly reached the end of its intended 24-year lifespan. Together, the LLVs and FFVs make up around two-thirds of the delivery fleet.[1] These right-hand drive vehicles allow carriers to more easily deliver mail to curbside mailboxes. (See Figure 1 for images of the current right-hand drive custom vehicles in the Postal Service delivery fleet.)

Figure 1: Right-Hand Drive Custom Delivery Vehicles in the Postal Service Fleet

LONG-LIFE VEHICLE | FLEX-FUEL VEHICLE | NEXT-GENERATION DELIVERY VEHICLE

The cost of operating and maintaining this aging delivery fleet has been a growing problem for the Postal Service. When LLV components need replacement, they can no longer be purchased from the original manufacturer and must be acquired through aftermarket manufacturing. This is a major factor driving rising fleet maintenance costs; the average cost of maintaining an LLV exceeds $5,000 each year and, as of FY 2020, seven percent of LLVs in the postal fleet required more than $10,000 a year in repairs to stay on the road. The existing LLVs and FFVs lack modern safety and driver comfort features such as airbags, air conditioning, and backup cameras. Their size and layout are poorly suited to the much higher number of packages the Postal Service now delivers. The Postal Service has needed new delivery vehicles to replace the LLV for more than a decade. How to approach this was a vital decision for a government agency with increasing delivery points, limited capital, and annual operating losses since FY 2007.

Since the Postal Service's acquisition of LLVs, the automotive industry has undergone significant changes. Notably, electric vehicles (EVs) have evolved from an experimental technology into a rapidly growing segment of the vehicle market. In 2010, plug-in electric vehicles barely existed in the U.S.; in 2024, more than 1.2 million units were sold.[2]

1 Prior to the recent acquisitions described in this paper, the remaining roughly one-third of the delivery fleet has consisted primarily of two models of gas-powered commercially available vehicles: the Mercedes Metris and Ram Promaster, both used for delivery routes. The fleet also includes smaller numbers of other vehicles, including minivans, step vans, and trucks.

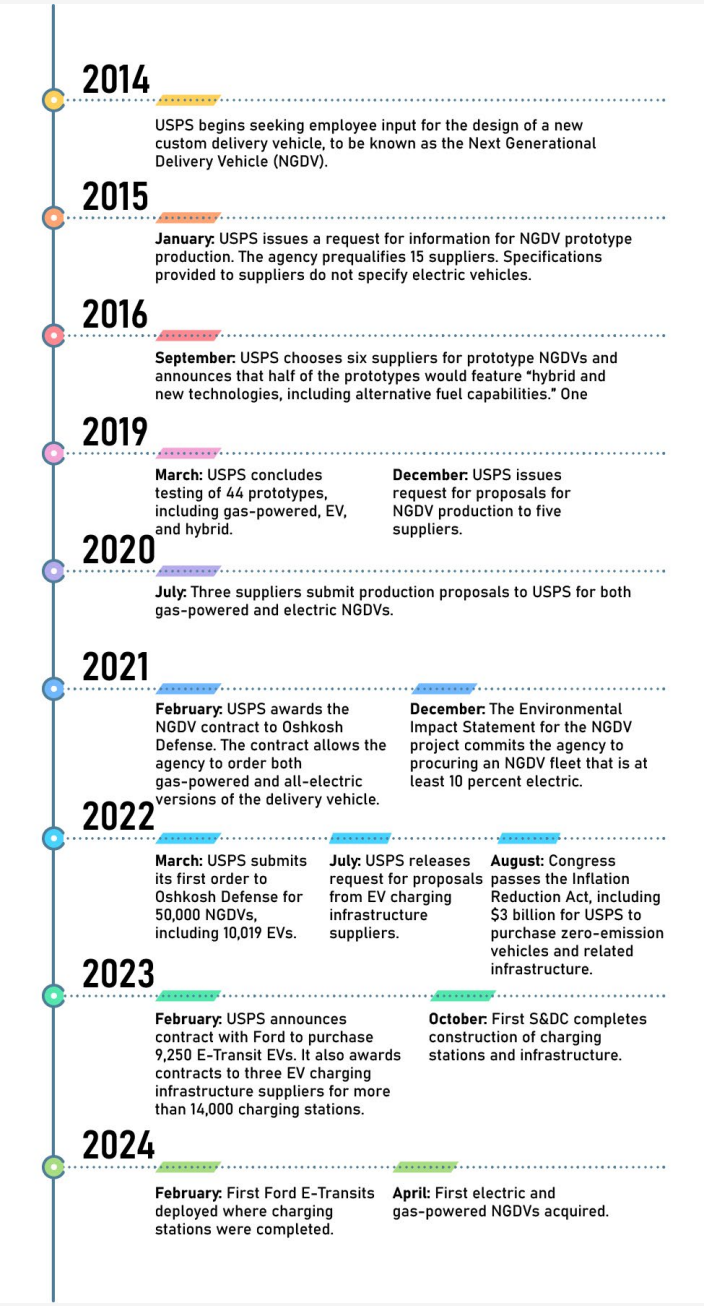
2 U.S. Bureau of Transportation Statistics, "Hybrid-Electric, Plug-in Hybrid-Electric and Electric Vehicle Sales," https://www.bts.gov/content/gasoline-hybrid-and-electric-vehicle-sales.

Since the early 2010s, commercial fleets and some national postal operators have been incorporating EVs into their networks. Delivery organizations have been increasing their acquisitions of EVs over the last decade, incentivized by factors including organizational sustainability goals, government laws and regulations, subsidies, and increasing operational advantages of EVs as the technology has developed. Benefits of fleet electrification include lower costs to operate and maintain EVs than gas-powered vehicles, increased vehicle uptime and availability, and reduced carbon emissions; the most significant drawbacks are the higher upfront cost of EVs and charging infrastructure.

The Postal Service is Committed to a Significant Acquisition of Electric Delivery Vehicles

The Postal Service has a long history with EVs, with examples of electric postal delivery vehicles dating back to the 1890s and small numbers of postal EVs operating at various points during the 20th century. In 2014, the Postal Service began the process of choosing a new delivery vehicle to help replace its nearly 150,000 LLVs and FFVs; in 2021, the agency awarded a contract for the Next Generation Delivery Vehicle (NGDV) allowing for the purchase of both conventional gas-powered and battery electric versions. That same year, the Postal Service stated in its 2021 *Delivering for America* (DFA)10-year plan that adopting EVs would contribute to the agency's commitment to environmental sustainability. Limited financial resources made investment in EVs difficult but Congress appropriated $3 billion for USPS fleet electrification in the 2022 Inflation Reduction Act, allowing the Postal Service to commit to a majority-electric fleet. (See Figure 2 for a timeline showing key steps in the Postal Service's acquisition of electric delivery vehicles.) The Postal Service has begun purchasing and deploying EVs and corresponding charging infrastructure, focusing its initial deployment in new sorting and delivery centers that are being created throughout the country as part of the DFA.

Figure 2: Timeline of the Postal Service's Acquisition of Electric Delivery Vehicles



Source: USPS OIG research.

Through May 2025, the Postal Service had acquired more than 130 custom electric delivery vehicles and more than 7,300 commercial off-the-shelf electric vans and had installed and commissioned more than 4,000 chargers at 55 facilities. USPS aims to acquire a total of 66,230 EVs and 40,250 gas-powered vehicles between FY 2023 and FY 2028 to refresh the fleet. The Postal Service intends to completely replace LLVs, FFVs, and outdated minivans from its fleet by FY 2033, although this will require acquisitions beyond its current plans and is dependent on the agency's financial health and the vehicle supplier market.[3] (See Figure 3 for a breakdown of the EVs currently in the Postal Service's delivery fleet and the plans for EV deployment by the end of FY 2028.)

Figure 3: Current and Planned Electric Delivery Vehicle Acquisition

Model	Acquired Through May 2025	Plan for FY2028 Fleet	Percentage of Goal
E-Transit (LHD COTS BEV)	7,334	9,250	79.3%
NGDV BEV (RHD Custom)	134	43,500	0.3%
RHD Commercial Off-the-Shelf (Model TBD)	0	11,980	0.0%
Additional BEV (TBD)	0	1,500	0.0%
Total	**7,468**	**66,230**	**11.3%**

Notes: LHD=Left-hand drive, RHD=Right-hand drive, COTS=Commercial off-the-shelf, BEV=Battery electric vehicle, NGDV=Next Generation Delivery Vehicle. The number of acquired vehicles represents those listed as "in service" in the Postal Service's Fleet Management Information System database at the end of May 2025.

Source: USPS OIG analysis of data from the USPS Fleet Management Information System

The Postal Service's initial fleet electrification measures have contributed to some significant early results. In addition to tracking the number of new vehicles deployed, the agency measures progress in this area through metrics including emissions reductions, fuel usage, and the retirement of LLVs and FFVs. The Postal Service reported that as of February of 2025 it had reduced its greenhouse gas emissions from delivery vehicles by more than 36,000 metric tons of CO_2 equivalent, and reduced its usage of fuel for delivery vehicles by more than 2.7 million gallons.

While the Postal Service has made notable progress in advancing a historic transformation of its delivery fleet, the process to select, acquire, and deploy a custom vehicle took around six years longer than the Postal Service's initial deployment schedule for the NGDV project. It took the Postal Service more than six years to select a supplier and more than three years from awarding the contract to receiving the first production vehicles. In total, more than nine years passed (three times longer than the originally planned three years) between the beginning of the NGDV project and the receipt of the first electric NGDVs, which began serving delivery routes in September 2024.[4] Two other delivery organizations that have integrated large numbers of custom EVs into their fleets, Amazon and DHL, had financial and regulatory flexibility and did not publicly source their suppliers. They directly partnered with EV suppliers

3 In addition to a planned acquisition of 16,500 gas-powered NGDVs, the Postal Service also plans to procure 23,750 commercial off-the-shelf gas-powered delivery vehicles. These vehicles include two models: 14,500 Mercedes Metris right-hand drive vans and 9,250 Ram ProMaster left-hand drive vans. As of January 2025, the Postal Service had already acquired most of these off-the-shelf vehicles. These acquisitions have helped the agency retire more than 23,000 LLVs and FFVs in FY 2024 and the first six months of FY 2025.

4 The NGDV project has also taken much longer than the Postal Service's previous design-build project – the mid-1980s delivery vehicle replacement that became the LLV. For that vehicle, the contract was open for bidding in 1984, only three prototypes were tested, and the first LLVs hit the road in around three years. The Postal Service operated under different conditions at the time, however, including growing mail volumes, a different regulatory structure, and mail revenue sufficient to cover most of the agency's operating expenses.

and deployed a custom electric delivery van within three to four years.

However, when looking at procurements of commercially available vehicles, timeframes were much more comparable. The Postal Service's acquisition of commercially available Ford E-Transit EVs took only around one year, a timeframe comparable to other organizations' acquisitions of EVs on the commercial market. (See Text Box 1 for a comparison of delivery organizations' timelines for acquiring and deploying both custom-built and commercial off-the-shelf EVs.)

Text Box 1: Comparing Timelines for Electric Delivery Vehicle Acquisition

Custom Vehicles: The Postal Service took longer to acquire and deploy a custom electric delivery vehicle than two other delivery organizations researched for this paper, while a third partnered with a supplier that was unable to provide a production vehicle and a fourth is still pursuing a custom delivery vehicle:

- **USPS**: Around nine years passed between the initial request for information for the NGDV project, which was issued in 2015, and the acquisition of the first production electric and gas-powered NGDVs in 2024. More than six years passed between the beginning of the project and selecting a supplier and more than three years passed between the awarding of the NGDV contract in 2021 and the acquisition of electric NGDVs.
- **Amazon**: Less than three years passed between the announcement of the company's partnership with Rivian in 2019 and the deployment of the first electric vans in 2022.
- **DHL (Germany)**: Around four years passed between the initial partnership with StreetScooter in 2011 and the deployment of its first production delivery vehicles to postal routes in 2015.
- **UPS**: The company announced a contract with an EV company in 2020 for a custom vehicle, but by 2024 that supplier went out of business. UPS was unable to deploy this vehicle but pursued and deployed commercially available EVs.
- **Canada Post**: A request for proposals for a custom delivery vehicle was issued in 2017 and the post unveiled the gas-powered prototype in 2023. As of 2025, Canada Post was still evaluating potential electric vehicles.

Off-the-Shelf Vehicles: The timeline for the Postal Service's acquisition of the commercial off-the-shelf Ford E-Transit is more in line with examples of other delivery organizations.

- **USPS**: Around one year passed between announcement of the contract award to Ford in 2023 and the acquisition of the first E-Transits in 2024.
- **FedEx**: Around two years passed between the creation of BrightDrop as a GM subsidiary in 2019 and FedEx's receipt of the first BrightDrop vans in 2021.
- **La Poste (France)**: Around one year passed between a call for tenders issued by the French government in 2010 and La Poste's receipt of the first Renault Kangoo Z.E.s in 2011.

To explain the time elapsed in deploying custom EVs, this report describes the Postal Service's strategy and practices for procuring EVs and charging infrastructure. It also compares key aspects of the agency's EV acquisition and deployment with those of other large delivery organizations that have acquired EVs and charging infrastructure. Finally, the report identifies challenges to the Postal Service's ability to efficiently acquire and deploy EVs and insights that may inform the agency's future large procurement efforts.

Comparing USPS Electric Fleet Acquisition and Deployment with Other Organizations

The Postal Service's commitment to a majority electric delivery fleet is comparable to similar decisions taken by other posts and delivery companies. Delivery organizations choose to pursue electric delivery vehicles for similar reasons, including:

- **Organizational sustainability goals:** Posts and delivery companies have generally set goals for reducing emissions, and EVs help achieve such goals because they have no tailpipe emissions. The Postal Service, for example, aims to reduce its direct and indirect greenhouse gas emissions by 40 percent by FY 2030 compared to FY 2021 levels.
- **Operational and financial benefits of EVs:** Delivery organizations seek to reduce operational costs by integrating electric delivery vehicles. EVs require greater upfront costs due to the higher price of EVs compared to gas-powered vehicles and the need for charging infrastructure, but they are generally cheaper to operate per mile driven due to lower fuel and maintenance costs. Electric fleets also provide more vehicle uptime and availability because they can charge on site overnight, eliminating the need to spend time during the day at gas stations, and their greater mechanical reliability means they spend less time out of service.
- **Laws, regulations, and subsidies:** Regulations, laws, and government incentives may also influence delivery organizations to electrify their fleets. For the French and German posts, national and European Union regulations such as bans on diesel vehicles in urban areas helped motivate these organizations to electrify. Such regulations have not been a major factor for the Postal Service, as the U.S. generally has less strict emissions rules than Europe. Governments may also provide subsidies to help organizations afford the higher upfront cost of EVs and charging infrastructure. Congress appropriated $3 billion in 2022 for postal fleet electrification, allowing the Postal Service to more easily afford electrifying a majority of its delivery fleet. DHL is another example, as it initially received a subsidy of around 4,000 Euros per EV (a subsidy also available to individual consumers) from the German government.

Delivery organizations balance these benefits with the higher upfront costs of EVs and the charging infrastructure required to operate them. The average retail price of an electric car on the U.S. consumer market was about 40 percent higher than a gas-powered car in 2024, although the difference in actual price paid was only around 15 percent. (The volume prices for delivery fleet vehicles are more difficult to compare due to this information not being shared publicly.) Organizations deploying EVs must purchase and install chargers, which can often require significant site work and utility upgrades. Higher vehicle acquisition costs, charging station acquisition costs, infrastructure deployment costs, and the cost of operating and maintaining a vehicle over its lifespan factor into the estimated total cost of ownership, a figure that helps organizations decide whether EVs make financial sense in a specific context. Delivery organizations, especially private companies, are sensitive to return on investment and generally will not pursue large expenditure projects like fleet electrification if they would significantly hurt the financial bottom line. Delivery companies have recently found value in electric cargo vans, which

were nearly nonexistent in the U.S. in 2021; today, there are more than 22,000 in operation.[5]

The process of acquiring and deploying a large fleet of EVs is time and resource intensive, which is only fitting for an endeavor with profound and long-lasting financial and operational implications. The overall process is dependent upon a series of smaller steps and decisions, and the way that an organization addresses those decisions significantly impacts the ultimate outcome. This section compares the approaches the Postal Service and other delivery organizations have taken in electrifying their fleets.

Developing Custom Vehicles Takes Longer Than Acquiring Commercially Available Vehicles

Fleet management best practices and industry standards among posts and delivery companies favor the acquisition of standard commercially available vehicles or modification of such vehicles. Organizations may pursue the design and production of a custom vehicle when it does not identify a commercially available vehicle that meets their needs. The Postal Service, like some other organizations researched for this paper, chose to design and develop a new custom vehicle to meet the agency's specific needs for right-hand drive delivery vehicles. However, customization is generally more time-consuming and complex than purchasing commercially available vehicles, for which deployment with some modifications may take as little as one year.

Acquiring custom vehicles requires organizations to work with suppliers on a new vehicle design and generally necessitates more testing and troubleshooting before a vehicle is ready to deploy. Delivery organizations have turned more toward commercially available options in the past several years, as the market has evolved to better meet their needs with existing vehicles.

The Postal Service Chose to Design and Build a Custom Vehicle

In 2014, the Postal Service began work on the NGDV project. At the time, the agency did not identify any suitable alternatives in the commercial market and opted to develop a custom vehicle to replace its right-hand drive delivery fleet. This matched its approach in the 1980s, when it acquired the custom-built LLVs. The Postal Service prefers right-hand drive vehicles because they are capable of efficiently delivering to curbline stops; the agency stated that the most efficient delivery fleet for USPS would be comprised solely of right-hand drive vehicles. Routes vary by features including length, terrain, climate, and types of delivery points (such as curbside mailboxes, cluster boxes, or door-to-door delivery). The Postal Service intended the NGDV to operate on routes that were less suitable to commercially available left-hand drive delivery vehicles.

The Postal Service sought several features in a delivery vehicle that it felt necessitated a custom-build solution. A major requirement was for a right-hand drive vehicle (meaning the driver sits on the right side) that allowed carriers to efficiently and ergonomically deliver mail to curbside mailboxes. Sixty-seven percent of routes are primarily curbside delivery, and other routes had some curbside delivery points. The agency determined that routes with more than 20 curbside stops were poorly suited to left-hand drive vehicles, the main option on the U.S. market. The Postal Service asserted that curbside delivery required not only right-hand drive vehicles, which could potentially have been obtained by modifying existing commercial vehicles but also necessitated a vehicle that placed the driver at the optimal height to deposit mail in curbside boxes. (The Postal Service also includes a variety of left-hand drive, non-custom vehicles in its fleet to serve routes that do not have curbside delivery.)

5 Sam Wilson, "Delivery Vans Are Going Electric: Where and Why," Union of Concerned Scientists, September 17, 2024, https://blog.ucs.org/sam-wilson/delivery-vans-are-going-electric-where-and-why/.

The Postal Service also sought a degree of durability that it did not consider to be available in the commercial market. The agency determined that commercially available vehicles would not last more than eight years on postal routes given the demands placed upon them, such as frequent starts and stops and repetitive usage of various body components. Mirroring its decision in the 1980s, it opted for a custom build made to last at least 20 years; the agency estimated that procuring a custom-made vehicle for 20 years would be cheaper over that timeframe than buying an off-the-shelf vehicle and having to replace it within ten years. Durability is an important factor for other delivery organizations as well, although their vehicle lifespans are generally less than 20 years. Amazon, for example, acquired a custom delivery vehicle that was specified to last 10 years or 330,000 miles while making 150 stops each day. DHL plans for its delivery vehicles to last around eight to ten years.

Adopting a custom delivery vehicle introduced greater risk of delay into the NGDV process. Testing and troubleshooting contributed to the Postal Service's relatively long timeframe for acquiring a custom delivery vehicle, as did issues the supplier experienced in ramping up toward large-scale production of the NGDV. A subcontractor tasked with building the vehicle's body also faced supply chain problems that significantly slowed down initial production of NGDVs.

Other Delivery Organizations Used Partnerships to Speed Up Custom Vehicle Development

Like the Postal Service, some other large delivery organizations have partnered with suppliers to build custom electric delivery vehicles after finding that the commercial market did not offer an acceptable alternative. This was the case when European postal operators made their first significant moves toward electrification in the 2010s. For example, DHL, the delivery company that serves as the national post in Germany, sought electric delivery vehicles in the early 2010s but found nothing on the market. In 2011, it partnered with a university to create a company, StreetScooter, that could produce a suitable custom EV. StreetScooter vehicles would become a significant part of DHL's German fleet. DHL now has a diverse electric fleet with vehicles from multiple suppliers, but this early partnership paved the way.

A notable recent custom-build project in the U.S. involves Amazon. In 2019, Amazon bought a stake in Rivian, a company that specializes in EVs, and awarded that company a contract to create and deploy a custom electric delivery vehicle; by 2025, Amazon had deployed more than 25,000 of these vehicles. For Amazon, the custom vehicle was also a business opportunity. It originally had an exclusivity arrangement with Rivian, but the two companies ended that arrangement when Amazon bought a smaller number of vehicles than originally planned. This allowed Rivian to sell the delivery vehicle to other organizations, while Amazon maintained an investment in the company.

Amazon and DHL, the most rapid examples of custom EV acquisition and deployment among the organizations studied for this paper, went from inception to deployment of a custom vehicle in three to four years. Although such a direct investment strategy may theoretically be available to the Postal Service, legal, financial, and implementation factors might make this approach challenging to pursue in practice. There are also risks involved in direct investment. In 2020, UPS similarly announced an investment with a vehicle startup, although that company struggled to produce a viable product and ultimately failed. (UPS proceeded with electrification plans by acquiring vehicles from other suppliers.)

Customization of electric delivery vehicles has become less desirable for delivery organizations as the market has evolved to better meet their needs. DHL, for example, sold off its stake in StreetScooter, the startup that had supplied its first large purchase of EVs. The supplier still exists but is just one of multiple companies from which DHL can buy EVs for its German operations. DHL notably buys vehicles from suppliers without a cargo box and then adds its own cargo box onto the purchased vehicle frame.

Commercially Available Vehicles Have Become Increasingly Capable of Meeting Delivery Organizations' Needs

While the Postal Service has made the custom NGDV a focus of its planned future fleet, it has also incorporated commercial off-the-shelf vehicles on many routes. The agency explored commercially available vehicles throughout the time it was developing the NGDV and recently acquired thousands of EVs on the commercial market. USPS awarded a contract in March 2023 to boost its electric fleet with 9,250 Ford E-Transit vans (left-hand drive vehicles that the Postal Service considers suitable for postal routes with 20 or fewer curbside mailboxes); the agency began receiving those vehicles in February 2024. The Postal Service pursued E-Transits and other readily available commercial off-the-shelf vehicles because of the urgent need to replace its aging fleet while it awaited delivery of the NGDVs. The E-Transits were planned to be placed primarily at newly consolidated Sorting and Delivery Centers (S&DCs) and large delivery units with more than 50 total routes.[6]

Organizations that once pursued custom solutions may now find that adequate options are commercially available. DHL, for example, sourced its first electric delivery vehicles by purchasing a startup, but later sold off most of its stake in that company and was able to purchase suitable vehicles from other suppliers.

Instead of a full custom-build project, some posts and delivery companies have opted to work with suppliers by providing input and advice in the development of a commercially available vehicle. This is not a custom build but can help an organization acquire a product that meets its needs. In 2021, for example, FedEx became the first customer for General Motors subsidiary BrightDrop's electric delivery vehicle. BrightDrop had informed the industry it was developing an electric cargo van and FedEx contributed advice, including specification goals for vehicle size, distance, and range; BrightDrop adopted some but not all of these suggestions. FedEx also tested prototypes for that vehicle but did not have an ownership stake or an exclusivity agreement with the supplier. The first 150 BrightDrop vehicles entered the FedEx fleet in 2022, deployed in Southern California. (The BrightDrop vehicle is now sold under the Chevrolet brand.) As the market for EVs continues to evolve, working with commercial suppliers in this way may become increasingly viable, especially for delivery companies that have traditionally built their fleet out of commercially available cargo trucks and vans. The Postal Service, however, had more specific needs from its right-hand drive delivery vehicles and determined a custom solution was necessary.

The NGDV Process Did Not Begin With a Firm Commitment to Electrification

Delivery organizations and national posts that have deployed electric delivery vehicles generally approached vehicle acquisition with the specific goal of buying EVs. Starting with the intention of electrification allows for a more efficient process that is deliberately focused on delivering EVs and preparing sites for charging infrastructure. The Postal Service, in contrast, began the NGDV project in 2014 with the intention of procuring a replacement for its massive LLV and FFV fleet, but not with the specific goal of acquiring electric vehicles.[7] The agency put time and resources into evaluating different powertrains and did not make clear plans for site preparation until more than five years into the NGDV project. While the EV market, including the state of technology and available vehicles, was less developed in 2014 (at the beginning of the NGDV project) than today, two European posts – DHL in Germany and La Poste in France – made commitments around that time that enabled early deployment of EVs and paved the way for large-scale electrification. An initial commitment to EVs could have reduced the time spent exploring different options and facilitated an earlier start on infrastructure installation, allowing for a quicker and smoother rollout of electric delivery vehicles.

6 S&DCs are large, centrally located sorting and delivery centers created as part of the Postal Service's *Delivering for America* 10-year strategic plan.

7 Canada Post, another publicly owned national post operator, took a similar approach to the Postal Service in the development of its new custom delivery vehicle. It began the process of acquiring a custom vehicle in 2017 without a commitment to EVs. It selected a supplier for a gas-powered vehicle and is currently exploring options for creating an electric version of that vehicle.

Organizations more commonly decide to deploy electric delivery vehicles before approaching suppliers. For the French and German national posts, for example, laws or government directives (such as restrictions on gas-powered vehicles in urban centers) in their countries drove an initial push toward fleet electrification in the early 2010s. In the U.S., private delivery companies also increasingly adopted EVs through the 2020s and specifically went to suppliers with the purpose of acquiring EVs. The Postal Service, however, awarded a contract to the NGDV supplier at a time when the agency still planned for a majority gas-powered fleet. The contract provided for the supply of both EVs and gas-powered vehicles.

The Postal Service Only Gradually Increased Its Commitment to Fleet Electrification

More than seven years passed between the inception of the NGDV program and the Postal Service's commitment that a majority of its new delivery vehicles would be electric. An earlier decision to obtain a large number of electric vehicles could have streamlined the acquisition process by reducing the options considered and potentially allowing an earlier start on the installation of charging infrastructure on a large scale. Instead, the Postal Service spent two years testing prototypes that included various gas-powered, hybrid, and range extender electric vehicles.

The Postal Service was open to alternative fuels from the beginning of the NGDV development process, but did not initially commit to any specific fuel sources. The first request for information (RFI), issued in January 2015, defined many requirements for the NGDV but did not specify a battery electric powertrain (a term referring to the motor and drivetrain). The document did state that the NGDV must be an "alternative fuel vehicle" as defined by U.S. law, but that definition included vehicles that can run on 85 percent ethanol gasoline blends (as is the case with the FFVs currently in the fleet). In 2016, the Postal Service announced that half of the prototypes it was collecting were to feature "hybrid and new technologies, including alternative fuel capabilities," but there was not a specific mention of electric vehicles.[8] The prototypes tested did not include pure battery electric vehicles, but did include three kinds of hybrid vehicle technologies: plug-in hybrids, mild hybrids, and range extender electric vehicles.[9]

Several years into the NGDV process, the Postal Service began to articulate an explicit plan for including EVs in the delivery fleet and then incrementally increased its plans for fleet electrification. (See Figure 4 for a timeline of the Postal Service's increasing commitment to electric vehicles.) In February 2021, it awarded the NGDV contract to Oshkosh Defense, with a flexible agreement allowing the Postal Service to specify the exact number of electric versus gas-powered NGDVs in any order placed under that contract. This supplier had not focused on EVs and had only provided gas-powered vehicles during prototype testing.

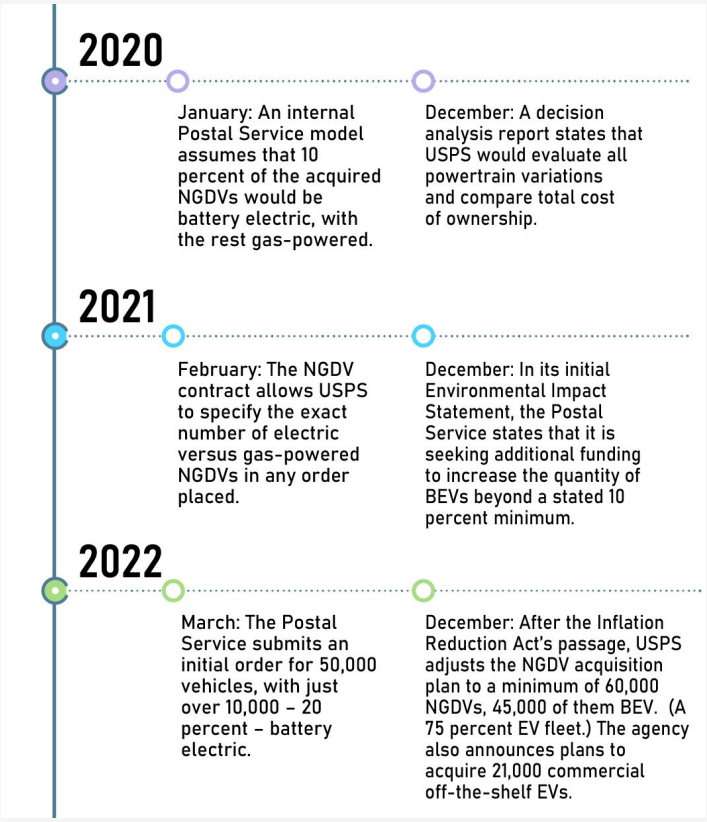
In its December 2021 Environmental Impact Statement, the Postal Service committed to acquiring an NGDV fleet that was at least 10 percent EVs but noted a willingness to increase that percentage if more funds became available. More than 20 percent of the vehicles in its initial March 2022 order of NGDVs were electric. Shifts in government policy, pressure from members of Congress and other stakeholders, and incentives related to alternative fuel technologies influenced the timeline for EV deployment and the Postal Service's plans for overall fleet electrification. In December 2022, Congress appropriated $3 billion to assist in the purchase of EVs and charging infrastructure, allowing the Postal Service to more easily acquire a larger number of EVs. This money would cover part of the difference in the initial upfront cost for the Postal Service of EVs versus gas-powered vehicles. The funding represented a significant driver in increasing electrification and the agency

8 U.S. Postal Service, "USPS Statement on Next Generation Delivery Vehicles Prototype Selection and Request for Proposal for Commercial Off-the-Shelf Delivery Vehicles," September 16, 2016, https://about.usps.com/news/statements/091616.htm.

9 A battery electric vehicle is powered by an electric motor and does not include an internal combustion engine. A mild hybrid vehicle uses a combustion engine but is equipped with a small electric motor, charged by the engine and through regenerative braking, that can power the vehicle at slow speeds and provide greater efficiency. A plug-in hybrid also uses an internal combustion engine but generally has a larger battery pack that can be charged from an external source. A range extender EV is a battery electric vehicle with an auxiliary power unit, generally a small fuel-powered combustion engine, that extends the range of a battery electric vehicle by driving an electric generator that charges the vehicle's battery.

responded by adjusting the NGDV acquisition plan so that the majority of the new vehicles would be electric, with a minimum of 60,000 NGDVs and 45,000 (75 percent) of those battery electric. The money also facilitated the acquisition of more than 9,000 E-Transits that could be deployed on routes suited to left-hand drive vehicles.

Figure 4: Timeline of the Postal Service's Increasing Commitment to Electric Vehicles



The Postal Service's Status as a Public Agency Has Contributed to a More Cautious Acquisition Approach

The Postal Service's status as a public agency influenced its decision to take a more transparent, but also more cautious, approach than some private delivery companies in acquiring electric delivery vehicles. The agency used a transparent competitive sourcing process to collect a variety of proposals and took time to test and evaluate prototypes and suppliers. This process was more time-consuming than that of private delivery organizations researched for this paper that acquired custom electric delivery vehicles, but it reduced the risk that the Postal Service would be perceived as favoring a certain company and allowed the agency to demonstrate its due diligence in evaluating a variety of proposals before awarding a contract.

The Postal Service Engaged in Expansive Competitive Sourcing and a Lengthy Prototype Development and Testing Process

Compared to other federal agencies, the Postal Service has greater legal flexibilities in how it approaches contracting, as it is not subject to the Federal Acquisition Regulation that governs the contracting activities of most federal agencies.[10] For this reason, the agency was not strictly required to adhere to rules governing other federal agencies, such as publicly bidding out contracts instead of directly working with a supplier. However, in developing the NGDV, the agency chose to use a competitive sourcing process with extensive prototype development and testing.

The Postal Service formally began the NGDV acquisition in January 2015 with an RFI for developing NGDV prototypes, followed by a request for proposals (RFP) to prequalified suppliers. In September 2016, the agency awarded contracts to six suppliers for 50 prototype vehicles (one supplier would drop out, leaving five producing 44 vehicles). This was a significantly larger number of prototypes than were tested by other organizations researched for this paper. In a 2016 document laying out the business case for the NGDV project, the Postal Service recognized that prototype testing threatened to draw out the vehicle acquisition process while the agency was in urgent need of new vehicles; the agency, however, saw benefits in collecting prototypes from multiple suppliers to assess potential solutions and explore new technologies.

Developing, delivering, and testing these prototypes was planned to take around 14 months but actually lasted two and a half years due to issues suppliers faced in meeting deadlines and delivering vehicles

10 The Federal Acquisition Regulation, codified in Title 48 of the Code of Federal Regulations, is the primary set of policies and procedures used by executive agencies in the acquisition of supplies and services.

that met the Postal Service's requirements. One source of delay was the Postal Service extending the timeframe for building prototype vehicles from six months to one year after suppliers requested additional time. Another cause of delay was an extended period of prototype testing due to critical safety issues identified in prototype vehicles. An OIG audit found that the Postal Service chose to limit oversight of suppliers' design and build activities to prevent any potential conflicts in the competitive process; as part of this limited oversight, USPS engineering officials did not physically observe the production of NGDV prototypes at suppliers' facilities. Such observations may have identified potential problems with the vehicles before prototype testing began. When the Postal Service received the initial protypes and began testing them, it found critical safety issues. The agency decided to suspend this initial testing and return all vehicles to suppliers for redesign and modifications. Testing did not resume until suppliers adequately addressed these problems.[11]

After prototype testing concluded, the Postal Service issued the RFP for production vehicles to suppliers in December 2019 and awarded the NGDV contract in February 2021, more than six years after the initial RFI. The first electric and gas-powered NGDVs were not acquired until April 2024, more than nine years after the inception of the project. Amazon and DHL, in comparison, each partnered with just one supplier and were able to complete the entire process of developing and deploying a custom EV within three to four years.

Canada Post is similar to the Postal Service in that it is a public agency with limited financial resources that is expected to be self-funding. It is legally required to competitively source the contract for any large procurement, but it kept the process more streamlined, forgoing an initial RFI and in 2017 proceeding directly to an RFP for a custom delivery vehicle that was issued to qualified suppliers it had identified in the market. Canada Post chose to order prototypes from only two suppliers, in contrast to the six selected in the Postal Service's process. The RFP process concluded in 2020 and Canada Post publicly unveiled its new vehicle in 2023. The chosen supplier has created two prototype electric models of this vehicle, but as of March 2025 Canada Post had not yet ordered an electric version of its custom delivery vehicle for production.

One other option for the Postal Service was to lease vehicles through the General Services Administration (GSA), as most federal agencies do, but the Postal Service stated that it did not consider this a cost-effective approach to procuring either a custom-built or commercial off-the-shelf vehicle.

The Postal Service Prioritized Transparency and Stakeholder Engagement

As a public agency, the Postal Service is accountable to a variety of stakeholders. The agency is subject to oversight from a variety of public bodies, including USPS OIG, the Postal Regulatory Commission, the Government Accountability Office, and Congress. It also engages with other stakeholders including postal labor unions, and the mailing industry. After issuing its initial RFI and a corresponding statement of work in January 2015, the agency held a pre-proposal conference to receive feedback on the NGDV project and also briefed stakeholders including members of Congress, other federal agencies, the automotive industry, postal unions and employees. These stakeholders encouraged the agency to take a more expansive approach to contracting that considered a wide variety of potential vehicles for selection as the NGDV. (The Postal Service also collected feedback from these groups in 2019 when preparing the production RFP.) In response to this feedback, the Postal Service chose to release a statement of objectives with a minimal set of operating requirements. This directive was broader than the original statement of work that USPS had developed, a change intended to encourage suppliers to propose innovative technologies and alternative propulsion technologies. In this way, stakeholder input contributed to the Postal Service's decision to pursue a more expansive, but potentially more

11 U.S. Postal Service Office of Inspector General, *Delivery Vehicle Acquisition Strategy,* Report No. 19-002-R20, August 12, 2020, https://www.uspsoig.gov/sites/default/files/reports/2023-01/19-002-R20.pdf.

time-consuming and costly, approach to vehicle acquisition. While the Postal Service legally could have simplified its supplier selection process, the agency appeared to prioritize transparency and risk avoidance over speed, a choice likely influenced by its public agency status and the scrutiny associated with a large, high-profile purchase.

The Postal Service is also subject to transparency and disclosure requirements that do not apply to private companies. These requirements can increase public attention and attract controversy over the agency's decision making. Most notably, the National Environmental Policy Act requires agencies, including USPS, to prepare an Environmental Impact Statement (EIS) when evaluating major federal acquisitions that could significantly affect the environment. USPS issued its EIS for the NGDV project in December 2021, but stakeholders including the Environmental Protection Agency, the White House Council on Environmental Quality, members of Congress, and environmental groups raised concerns about the document, stating that it failed to consider more environmentally friendly alternatives and underestimated greenhouse gas emissions. At the time, USPS had decided that at least 10 percent of the NGDVs would be electric, asserting in the EIS that a greater commitment to EVs would be cost-prohibitive. The EPA requested that USPS prepare a supplemental EIS. A congressional hearing in April 2022 examined the benefits, opportunities, and challenges of electrifying the Postal Service fleet and the NGDV process, with the EIS a topic of discussion. Lawsuits were filed in Federal District Court in late April 2022 challenging the USPS EIS. When USPS issued its supplemental EIS in September 2023, circumstances had changed significantly, including congressional appropriation of funds for fleet electrification. The agency included its revised plans for electrifying more than 60 percent of its delivery vehicles.

Unlike the Postal Service, private companies can make quick decisions without the same obligations for transparency or stakeholder engagement because they are not expected to maintain the same level of openness as public entities.

Limited Availability of Financial Resources Affected the Postal Service's Ability to Quickly Acquire EVs

The Postal Service has financial constraints compared to some private sector counterparts in funding large procurement efforts, and these constraints affected the Postal Service's decision making for the NGDV development and acquisition process. For example, in FY 2024, USPS had a net loss of $9.5 billion and held $15 billion in debt (the maximum amount of debt the agency is legally permitted to hold). Private companies have a greater ability to make long-term investments and raise capital. Amazon, for example, had $59 billion in net income in 2024 and reached a market capitalization of more than $2 trillion that year. Upgrading the delivery fleet was a burdensome project for the Postal Service, at least in part due to its lack of resources.

The Postal Service had to ensure it had sufficient money on hand before moving forward with large-scale electrification of the fleet. Due to EVs' greater upfront costs compared to gas-powered vehicles, the agency stated that it could not commit to acquiring a significant number of EVs without some assistance. In its December 2021 Environmental Impact Statement for the NGDV project, USPS reported that it was seeking additional funding to allow the NGDV fleet to be more than 10 percent electric. The Postal Service engaged with Congress in 2021 and 2022 about support for fleet electrification, telling lawmakers it needed $8 billion for full delivery fleet electrification. Public assistance arrived with the August 2022 Inflation Reduction Act, which set aside $3 billion to assist USPS in acquiring and deploying EVs and charging infrastructure. (Of these funds, Congress directed $1.29 billion to USPS for the purchase of EVs and $1.71 billion for the purchase, design, and installation of related infrastructure at USPS facilities.) The agency has used this money to invest in charging infrastructure at postal facilities around the country and to purchase electric NGDVs and Ford E-Transits.

Canada Post has taken a similarly cautious approach to fleet electrification due to its own recent financial losses. That post piloted 100 EVs on seven sites but

has not yet moved forward on an electric version of its new delivery vehicle. Private delivery companies, in contrast, were able to move more quickly toward fleet electrification because they had sufficient cash on hand and were not reliant on the government for financial support.

The Postal Service has also been challenged by the fact that the NGDV process has stretched through four administrations with differing stances on alternative fuel technologies. Changes to government policy and incentives can introduce political challenges in implementing large-scale and high-visibility capital investment projects, as a new administration may scrutinize or question projects implemented under the preceding administration.

Late Installation of Charging Infrastructure at Facilities Delayed Deployment

Delivery companies and posts emphasized to the OIG the importance of allowing sufficient time for planning, procuring, and deploying EV charging infrastructure. Such infrastructure is crucial for fleet electrification, as having adequate charging stations and power supply in place before receiving EVs is essential for effective operation. If charging infrastructure is not in place, vehicles may need to be stored until site upgrades are completed. This issue has impacted the Postal Service, with delayed infrastructure installation slowing the deployment of EVs to delivery routes.[12]

Acquiring and installing charging infrastructure is one of the biggest potential obstacles to successful deployment of an EV fleet. The North American Council for Freight Efficiency reported that fleets spend between 12 and 36 months installing charging infrastructure at their sites, with planning and approval cycles, supply chain challenges, planning inefficiencies, and delayed permit approvals among the reasons for the considerable time spent on these projects.[13] The entire process, from planning to deployment, may take several years. The Postal Service has pursued charging infrastructure deployment on a large scale and had more than 4,900 chargers in place at 55 facilities as of May 2025. The agency set ambitious timeframes for installing this infrastructure but faced similar challenges to other delivery organizations and has experienced some delays.

Installing charging infrastructure requires interfacing with different suppliers, and effective communication is key to understanding and working through potential problems. Organizations must coordinate with electric utilities to ensure sufficient power supply and with local government on proper permitting and approvals. Installation requires varying degrees of construction, such as trenching and electrical upgrades, depending on a site's specific layout and existing electrical capacity. Interviewees emphasized that it is important to install sufficient charging infrastructure to meet not only immediate needs but also projected future needs. This is because upgrading or expanding later will be more expensive than doing all necessary work upfront.

The Postal Service began the research and planning process for deploying EVs in 2021, when it held exploratory discussions with relevant entities, including electric utilities, charging station hardware and software providers, and installation suppliers. The agency decided to focus its initial EV deployment in its S&DCs, large facilities that are being established as part of the 2021 *Delivering for America* 10-year plan. The creation of these facilities involved renovation of existing sites, and USPS reasoned that these facilities are the most likely to have the necessary power and space to host EV fleets.

Deployment of Postal Service delivery EVs was delayed due to insufficient completed charging infrastructure. In July 2022, the Postal Service released an RFP to solicit proposals from charging infrastructure suppliers. After receiving the $3 billion in assistance from Congress in August 2022, the agency was able to move forward, awarding contracts to three infrastructure suppliers in February 2023. But

12 USPS OIG, *Fleet Modernization – Charging Station Deployment Timelines*, Report No. 23-170-R24, July 16, 2024, https://www.uspsoig.gov/sites/default/files/reports/2024-07/23-170-r24.pdf.
13 North American Council for Freight Efficiency, "Early Lessons Learned From Run on Less – Electric DEPOT," September 18, 2023, https://nacfe.org/news/early-lessons-learned-from-run-on-less-electric-depot/.

the Postal Service said that its commitments with EV suppliers, particularly for the E-Transit, required the agency to quickly take possession of thousands of vehicles before it had installed enough chargers to power them at the appropriate postal facilities. The Postal Service negotiated with the E-Transit supplier at a cost of more than $1 million to delay and extend the production and acquisition schedule for that vehicle to better match the completion of EV infrastructure.[14] USPS reported that, as of May 1, 2025, it had received more than 7,000 E-Transits but had only delivered around 1,100 of these vehicles to S&DCs. This necessitated storing thousands of EVs at holding lots while the agency awaited the completion of site upgrades.

In addition to the general challenge of installing chargers in a short period of time, the Postal Service failed to meet its own timeline for charger installation. USPS initially planned to finish installation at the first 29 sites by year-end 2023, but this proved to be overly ambitious. By January 2024, an OIG audit found that installation was delayed by an average of 219 days compared to its June 2023 schedule. Reasons for delay included weather, site-specific conditions requiring additional construction, utility-specific regulations regarding certain types of electrical supply equipment, and coordination issues with local utilities for capacity upgrades and procurement of electrical equipment. The audit report also found that the Postal Service did not factor in foreseeable issues when scheduling, follow best practices in schedule management, or use an overarching project management system.[15]

The Postal Service is initially prioritizing EV rollout at S&DCs, but as it broadens its electrification across the country and deploys charging infrastructure to smaller facilities, there may be additional coordination challenges. The majority of the Postal Service's more than 31,000 sites are leased, not owned, requiring cooperation with the lessor in approving installation. There are also older postal facilities that require electrical upgrades, adding costs and lengthening the timeframe of infrastructure installation. To help facilitate site upgrades, the Postal Service has stockpiled transformers and related supplies, key elements of upgrade projects that are not always readily available on the market.

Conclusion

The Postal Service has been in dire need of new delivery vehicles for over a decade and is now in the midst of a transformative fleet modernization project. After taking six years to identify a supplier and determine the energy sources for these vehicles, the agency committed to a majority-electric fleet, as did other posts and delivery companies. Although there have been delays in deployment, USPS has already reduced its gasoline consumption and greenhouse gas emissions while rolling out vehicles that should be cheaper to operate and more mechanically reliable than gas-powered vehicles. The decision to pursue a custom vehicle mirrored the Postal Service's approach to acquiring the LLVs in the 1980s. The agency chose this approach due to the lack of suitable vehicles on the commercial market, but this necessarily added time and cost to the acquisition process. The Postal Service did not set out to procure an electric fleet, but it included the option in its contract with the supplier and incrementally increased its commitment to electrification. Amid public and stakeholder pressure to increase its plans for EV acquisition, the agency worked with the administration and Congress to receive financial support allowing the agency to better afford EVs and charging infrastructure.

The Postal Service's EV acquisition has faced challenges due to the inherent complexity of large-scale procurement to replace a fleet well past its intended operational life, strained finances for capital expenditure, regulations that limited its ability to directly partner with suppliers, and considerations around transparency and accountability that are distinct from the private sector. Decisions the agency made about the acquisition process, including testing

14 USPS OIG, *Fleet Modernization: Delivery Vehicle Acquisition Status*, Report No. 24-051-R25, October 3, 2024, https://www.uspsoig.gov/sites/default/files/reports/2024-10/24-051-r25.pdf.
15 USPS OIG, *Fleet Modernization – Charging Station Deployment Timelines*, Report No. 23-170-R24, July 16, 2024, https://www.uspsoig.gov/sites/default/files/reports/2024-07/23-170-r24.pdf.

more than 40 prototypes and limiting oversight of prototype development to avoid procurement conflicts, contributed significantly to delays in acquiring EVs.

USPS OIG identified several takeaways from the Postal Service's experience acquiring and deploying electric delivery vehicles in comparison with other national posts and delivery companies that could help inform future large procurement efforts:

- **Delays in vehicle acquisition pushed back expected cost savings**. A prior OIG audit found that delays in NGDV and E-Transit acquisition and deployment postponed expected cost savings associated with operating more efficient vehicles, with the Postal Service continuing to rely on aging LLVs (which cost more than $5,000 a year to maintain) and FFVs to serve the majority of delivery routes.[16] In addition to the financial consequences, these delays may slow the Postal Service's progress in reaching its own environmental sustainability goals, including reducing its emission of greenhouse gases by 40 percent in key areas by FY 2030. Going forward, USPS should strive to reduce delays in implementing transformative projects that can deliver cost savings and improve operations.
- **The EV market has grown and evolved, and a greater variety of vehicles that can meet a wider range of delivery needs are now available**.The Postal Service has indicated that, after completing the acquisition of the NGDVs, it does not currently intend to engage in another design-build vehicle project. The agency has been evaluating new options on the commercial market that may help it build out its electric fleet in the coming years. For example, it has been replacing LLVs with left-hand drive commercial off-the-shelf vehicles on routes with 20 or fewer curbline delivery points and is exploring right-hand drive delivery vehicles now available on the market.
- **Starting with a defined intention to electrify the fleet could have streamlined the acquisition and deployment process**. An effort to be open to various types of vehicles early in the acquisition process contributed to the length and cost of the process, as the Postal Service put time and money into testing technologies, such as hybrid vehicles and variations of gas-powered vehicles, that it did not ultimately procure. For future projects, the Postal Service would benefit from more quickly narrowing options to more efficiently use scarce time and resources.
- **A better balance between transparency, risk reduction, and timely action can improve process efficiency**. The agency approached delivery vehicle replacement with a focus on collecting a broad set of proposals from different suppliers. The need to test 44 prototypes added years to the process and contrasts sharply with other organizations, which tended to target only one or a small number of suppliers and had less need to test a large number of prototypes. While USPS was able to eventually arrive at a vehicle design that met its specific requirements, future projects may benefit from more focused, streamlined acquisition processes that can yield suitable results significantly faster.

Summary of Management's Comments

Management states that while the Postal Service was open to electric vehicles from the start of the process to modernize its delivery fleet, the lack of maturity of the electric vehicle industry in 2014 meant that focusing on an EV solution at that time would have been risky.

Management asserts that testing 44 prototype vehicles and limiting oversight of prototype development "was necessary to the success of the NGDV program," and feels that the OIG's assertion that this contributed to the delay in acquiring EVs is inaccurate. They believe that the financial condition of the Postal Service, particularly prior to the Postal Service Reform Act of 2022, was a far more

16 USPS OIG, *Fleet Modernization: Delivery Vehicle Acquisition Status*, USPS OIG, Report No. 24-051-R25, October 3, 2024, https://www.uspsoig.gov/sites/default/files/reports/2024-10/24-051-r25.pdf.

significant factor causing delays to the ultimate deployment of EVs.

In their comments, Management states that their unique operational requirements necessitated a custom-built solution, and that failing to pursue a custom-built product "would add significant operational costs due to inefficiency which would not be sustainable."

Finally, Management took issue with the OIG's presentation of project timelines for USPS and other delivery companies. They state that the OIG measured private companies from the time they announced their partnership with suppliers until deployment, while looking at USPS from the time they began their search for suppliers through deployment. They assert that the USPS' time from the selection of a supplier to deployment — three-and-one-half years — is consistent with that of other companies.

Evaluation of Management's Comments

The OIG appreciates the Postal Service's engagement with our work. We recognize in the paper that the electric vehicle market in 2014 was nascent and make it clear that the Postal Service's first RFI issued in 2015 did not specify (or rule out) any specific type of power train. While we do not second guess USPS' decision to not pursue an EV from the very start, we note that not doing so contributed to the extended timeline and more quickly narrowing options in future procurement projects may lead to more efficient use of scarce time and resources.

While we point out that the Postal Service tested 44 prototype vehicles, we also note that "the Postal Service's status as a public agency influenced its decision to take a more transparent, but also more cautious, approach than some private delivery companies in acquiring electric delivery vehicles." We further state that "this process was more time consuming…but it reduced the risk that the Postal Service would be perceived as favoring a single company and allowed the agency to demonstrate its due diligence." In looking at lessons learned, we note that for future large procurement projects, a better balance between transparency, risk reduction, and timely action can improve process efficiency. We are also careful to note the role the Postal Service's financial situation played in the NGDV acquisition process.

In the paper, we take care to identify the justification for the Postal Service's pursuit of a custom vehicle, including the need for right hand drive and a much higher level of durability than that typically available on the commercial market. In looking to the future, we note that the electric vehicle market has matured to the point where off-the-shelf solutions may warrant consideration. This maturation is exemplified by the Postal Service's recent purchase of more than 9,000 off-the-shelf Ford E-Transits.

Finally, in Text Box 1 of our report we present the timeline of the Postal Service's NGDV acquisition process in several parts: nine years from the initial RFI to acquisition, six years from the beginning of the project to selection of the supplier, and more than three years between the awarding of the contract and the delivery of the first electric NGDVs. Further, we note Amazon took three years from announcing their partnership with Rivian to deployment of electric vans, and DHL took four years from beginning to work with StreetScooter to deployment. For Amazon and DHL, who are not mandated to follow federal procurement processes, acquisition of EVs began with the selection of their vehicle supplier rather than an RFI and prototyping process; there is nothing to report prior to that. While we do note that "the Postal Service took longer to acquire and deploy a custom electric delivery vehicle than two other delivery organizations researched for this paper," we are also careful to point out the unique challenges the Postal Service faces, such as limited opportunities to pursue partnerships, finite financial resources, and its position as a public agency.

Appendices

Appendix A: Additional Information

Objective(s), Scope, and Methodology

The first objective of this paper was to describe the Postal Service's electric vehicle (EV) and charging infrastructure acquisition strategy and practices, with an emphasis towards the development and deployment of the Next Generation Delivery Vehicle (NGDV) fleet. The second objective was to compare key aspects of the Postal Service's EV acquisition and deployment with those of other large delivery organizations that have acquired EVs and charging infrastructure. The third objective was to Identify factors that may affect the Postal Service's ability to efficiently acquire and deploy EVs and insights that may inform the Postal Service's future large procurement efforts.

The research team gathered information on the Postal Service's EV acquisition and deployment and that of other national posts and delivery companies. The team collected documentary sources such as financial disclosures and sustainability reports, public reporting, and available government reports on procurement and EV deployment. The team also interviewed subject matter experts in the Postal Service, other U.S. government agencies, and other posts and delivery companies.

The inspection was conducted in accordance with the Council of the Inspectors General on Integrity and Efficiency's Quality Standards for Inspection and Evaluation. We discussed our observations and conclusions with management on July 2, 2025 and July 8, 2025, and incorporated their comments where appropriate.

Prior Coverage

Title	Objective	Report Number	Final Report Date	Monetary Impact
Electric Delivery Vehicles and the Postal Service	To identify opportunities and challenges for the Postal Service in moving to an electric vehicle delivery fleet.	RISC-WP-22-003	March 17, 2022	$0
Fleet Modernization – Electric Vehicle Charging Stations Acquisition	To determine whether the Postal Service was effectively testing and monitoring the performance of, providing effective oversight over the contract for, and storage of, charging stations.	23-059-R24	December 29, 2023	$0
Fleet Modernization – Electric Vehicle & Charging Infrastructure Incentives	To determine if the Postal Service is participating in incentive programs related to its electric vehicles and requisite charging infrastructure.	24-038-R24	June 27, 2024	$8,718,000
Fleet Modernization: Delivery Vehicle Acquisition Status	To assess the status of the Postal Service's acquisition of new delivery vehicles.	24-051-R25	October 3, 2024	$0

Appendix B: Management's Comments

UNITED STATES POSTAL SERVICE

August 19, 2025

PAOLA PISCIONERI
RESEARCH DIRECTOR
RESEARCH AND INSIGHTS SOLUTION CENTER

SUBJECT: Management Response: Comparing Experiences in EV Fleet Acquisition and Deployment (2025RISC004)

Thank you for the opportunity to review and comment on the Office of Inspector General's (OIG's) white paper: *Comparing Experiences in EV Fleet Acquisition and Deployment.*

There are a few findings that the Postal Service would like to comment upon. First, the OIG suggests that an initial commitment to EVs could have reduced the time spent exploring different options and facilitated an earlier start on infrastructure installation and a quicker rollout of electric vehicles. The Postal Service was certainly open to electric vehicles when it started its first phases of the acquisition in 2014. However, the electric vehicle market had yet to mature, with only 170,000 total on the road in the U.S. at the time. To limit our evaluation to EVs at that time, without being open to other options that the market was developing, would have been far riskier especially for a public organization that has limited financial resources and an ongoing, critical need to modernize its delivery fleet.

Additionally, the OIG suggests that the Postal Service's testing of more than 40 prototypes and limiting oversight of prototype development contributed significantly to delays in acquiring EVs. The Postal Service disagrees with those suggestions. We believe, instead, that having a broad pool of manufacturers participate in prototype program and encouraging them to compete to offer their best-value solutions, without micromanaging their proposals, were necessary to the success of the NGDV program. By contrast, the financial condition of the Postal Service – especially prior to the Postal Reform Act of 2022, was a far more significant factor causing delays to the award and deployment of vehicles.

The OIG reported on the Postal Service's need for a custom-built solution and showed that its decision to pursue a custom-built solution aligned with other delivery companies. The OIG points out that the decision adds time and cost to the acquisition process. The Postal Service would like to reiterate that it has unique operational requirements as part of its delivery mission. To not pursue a custom-built solution would add significant daily operational costs due to inefficiency which would not be sustainable. The requirement for a custom-built solution for Postal Service delivery is evident and fully justified.

The OIG also found that private delivery companies went from inception to deployment of a custom vehicle in three to four years compared to nine years for the Postal Service. The comparison drawn is not a fair comparison. The OIG is measuring the private companies from the time they announced their partnership with

their respective suppliers to deployment. If the Postal Service was measured in the same manner, it would show a three-and-one-half year timeline (announced Oshkosh partnership February 2021, deployed first BEV August 2024), consistent with the private companies.

The Postal Service has also reviewed the OIG's conclusions and has no additional comments to provide.

E-SIGNED by ROBERT.J GLASS
on 2025-08-19 12:40:01 EDT

For: Ron Jarriel
Chief Logistics & Infrastructure Officer & SVP

cc: *Corporate Audit Response Management*

Tristan Dreisbach, Rick Schadelbauer, and John Althen contributed to this report.

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