Statement of Joseph Britton

Executive Director of the Zero Emission Transportation Association

Before the United States House of Representatives Committee on Oversight and Reform
117th Congress

It's Electric: Developing the Postal Service Fleet of the Future
April 5, 2022

Chair Maloney and Ranking Member Comer, members of the House Committee on Oversight and Reform: Thank you for the opportunity to speak with you today about the benefits that electrification will bring to the United States Postal Service (USPS). My name is Joe Britton, and I am the Executive Director of the Zero Emission Transportation Association (ZETA). ZETA is an industry-backed coalition of nearly 60 member companies, and we advocate for 100% electric vehicle sales by 2030. Our membership spans the entire EV supply chain, encompassing critical minerals extractors, original equipment manufacturers, charging infrastructure installers, utility providers, and battery recyclers, among others.

ZETA has championed U.S. Postal Service electrification because transitioning this fleet is among the best use cases for electrification in the entire federal estate: The savings potential for USPS vehicles is particularly high because of their frequent stops, regular idling, fixed routes, and convenient overnight parking and recharging hubs. Electrifying this segment of our transportation sector will have marked environmental, public health, and economic advantages—for both USPS and for the American public. Over the course of the past year, however, it has become increasingly clear that USPS is reluctant to electrify its next-generation delivery fleet.

When USPS first awarded its next-generation delivery vehicle (NGDV) contract to Oshkosh Defense, we took issue with USPS's heavy emphasis on Oshkosh Defense's ability to produce "swappable" drivetrains—that is, internal combustion engine vehicles that could later be retrofitted to become electric.[1] ZETA and its member companies—who are the nation's industry leaders in electrification—were surprised to hear the assertion that Oshkosh—which has little to no EV manufacturing experience—had developed a commercially competitive swappable gas-to-electric drivetrain. Such a remarkable claim from Oshkosh Defense and USPS was hard to believe and created cause for concern. In other words, we were suspicious of the contract, its process, and the credibility of its claims from Day 1.

ZETA later submitted a public comment in response to USPS's draft environmental impact statement (EIS) that proposed procuring a 90% fossil fuel-powered NGDV fleet. Our public comment seconded the Environmental Protection Agency's concerns that the EIS lacked transparency, contained numerous factual errors, and relied on mistaken assumptions.[2] In short, we concluded that USPS 1) underestimated the clear benefits of fleet electrification; 2) diminished the technical and functional capabilities of electric vehicles; and 3) obscured the fundamental models and assumed facts in its EIS, preventing third parties from analyzing and replicating USPS's analysis.

Most recently, ZETA called upon the USPS Board of Governors to halt the NGDV procurement process until the problems and defects in USPS's final EIS were resolved.[3] I am eager to speak with you today to further articulate the flaws of USPS's decision—and the very real costs of not electrifying their delivery fleet. I should note before proceeding that Postal Service electrification is tremendously popular. In a

[1] Dr. Fleming, K., "A Roadmap For U.S. Postal Service Electrification," ZETA, https://www.zeta2030.org/insights/zeta-insights-a-roadmap-for-u-s-postal-service-electrification.
[2] "ZETA Submits Public Comment Outlining Flaws in USPS Proposal to Procure a New, 90% Gas-Powered Fleet," ZETA, October 13, 2021, https://www.zeta2030.org/news/zeta-submits-public-comment-outlining-flaws-in-usps-proposal-to-procure-a-new-90-gas-powered-fleet.
[3] "ZETA Urges United States Postal Service Board of Governors To Halt Vehicle Procurements, Resolve Mistakes in Environmental Analysis," ZETA, February 14, 2022, https://www.zeta2030.org/news/zeta-urges-united-states-postal-service-board-of-governors-to-halt-vehicle-procurements-resolve-mistakes-in-environmental-analysis.

recent national survey that ZETA commissioned a nonpartisan expert research firm to conduct, we found that a supermajority—a bipartisan 68%—of American voters favor USPS electrification.[4]

1. Benefits of Electrification

Electrifying USPS's delivery fleet will improve environmental quality, bolster public health, and generate cost savings for USPS and the American public. In addition to these direct benefits, electrifying the United States' largest public vehicle fleet will also send a clear market signal that electrification is the future and that we should leave fossil fuel-powered transportation in the past—where it belongs.

1.1 Environmental Quality Improvements

Transportation-based pollution from vehicles like USPS's delivery fleet damages the environment. Greenhouse gas emissions (GHG) are widely recognized as worsening global warming and the extreme weather events we increasingly face the costs and burdens of enduring.[5] Additionally, combustion exhaust forms dangerous ground-level ozone, which leaves agricultural crops and forests particularly susceptible to stunted growth and a decreased ability to sequester carbon dioxide.

Regardless of the generation source of electricity, electric vehicles have significantly lower total lifetime emissions than fossil fuel-powered vehicles. On average, EVs produce 66.9% less emissions than gas-powered vehicles over their lifetime.[6] Given how many miles a USPS vehicle will drive, an electric NGDV fleet will create even greater emissions reduction. And, as more clean electricity comes online in the coming years, EVs' emissions will further decrease over time.[7] Fossil fuel-powered vehicles, on the other hand, have a set carbon footprint.

USPS acknowledged in its EIS that completely electrifying its delivery fleet would release 200% fewer direct and indirect GHG than its proposed 90% fossil fuel-powered fleet.[8] The Environmental Protection Agency suggested that the 200% emissions reduction potential of electrification USPS noted is likely an underestimate, instead saying that the true emissions discrepancy could be at least 2.5 times higher. From our analysis, we believe that USPS's proposed action will—based on USPS's own social cost of carbon calculations—cost Americans $200 million per year, and perhaps far more, in public health and environmental damages.[9] That is billions of dollars over the lifetimes of these vehicles.

1.2 Public Health Benefits

Electrifying USPS's delivery fleet will also boost America's public health. The International Council on Clean Transportation estimates that there were 22,000 premature deaths attributed to transportation-sector

---

[4] "New National Poll Shows That A Large Bipartisan Majority Of Voters Favor Policies To Accelerate Electric Vehicle Adoption," ZETA, March 28, 2022, https://www.zeta2030.org/news/new-national-poll-shows-that-a-large-bipartisan-majority-of-voters-favor-policies-to-accelerate-electric-vehicle-adoption.

[5] Gonzalez, L., S. Olenicheva, E. Brungard, and R. Lehane, "Medium- and Heavy-Duty Electrification: Weighing the Opportunities and Barriers to Zero-Emission Fleets," ZETA, January 2022, https://fs.hubspotusercontent00.net/hubfs/8829857/ZETA-WP-MHDV-Electrification_Opportunities-and-Barriers_Final3.pdf.

[6] "EVs up to 67% less emissions intensive than ICE cars," Wood Mackenzie, September 10, 2018, https://www.woodmac.com/press-releases/evs-up-to-67-less-emissions-intensive-than-ice-cars/.

[7] "Renewable electricity growth is accelerating faster than ever worldwide, supporting the emergence of the new global energy economy," IEA, December 1, 2021, https://www.iea.org/news/renewable-electricity-growth-is-accelerating-faster-than-ever-worldwide-supporting-the-emergence-of-the-new-global-energy-economy.

[8] "Final Environmental Impact Statement: Next Generation Delivery Vehicle Acquisitions," United States Postal Service, December 2021, https://uspsngdveis.com/documents/USPS+NGDV+FEIS_Dec+2021.pdf.

[9] "Final Environmental Impact Statement: Next Generation Delivery Vehicle Acquisitions," United States Postal Service, December 2021, https://uspsngdveis.com/documents/USPS+NGDV+FEIS_Dec+2021.pdf.

pollution in the United States in 2015.[10] This transportation-sector pollution includes particulate matter, nitrogen oxides, and carbon dioxide, among others; these pollutants are linked to long-term respiratory, cognitive, and autoimmune impairment. According to the American Lung Association, the widespread adoption of electric vehicles could save 110,000 lives, avoid $1.2 trillion in public health costs, and avoid more than $1.7 trillion in environmental costs over the next thirty years.[11]

Committing to fossil fuel-powered NGDVs will exacerbate adverse health conditions in low-income and frontline communities, many of which are situated along heavy-traffic corridors and in urban areas. The American Lung Association also found that over 40% of Americans—more than 135 million people—are living in places with unhealthy levels of ozone or particulate pollution.[12] The burden of breathing polluted air is not shared equally: People of color are more than three times more likely to be impacted. Electrifying our government's largest fleet would send a meaningful public health message and demonstrate a commitment to resolving these public health inequities. USPS's current path, on the other hand, will lock generations of Americans into a fossil fuel-powered mail delivery system.

1.3 Cost Savings

Finally, electrifying USPS's delivery fleet would deliver cost savings to USPS and to the American public. A recent study conducted by Argonne National Lab posited that maintenance and repair costs are particularly important to consider while evaluating total cost of ownership.[13] Due to their greatly reduced maintenance requirements, electric vehicles provide fleet operators and consumers with significant savings over time.[14]

USPS's claim that electric delivery vehicles would have a higher total cost-of-ownership than fossil fuel-powered delivery vehicles conflicts with nearly every other existing independent analysis. For example, Atlas Public Policy suggests that full electrification could save USPS $4.3 billion over the vehicles' lifetimes. Atlas also found that 97% of Postal Service delivery vehicles can be electrified at a lower total cost of ownership than comparable fossil fuel-powered vehicles.[15]

USPS stated that procuring 75,000 electric NGDVs is $2.3 billion more expensive than procuring 75,000 fossil fuel-powered NGDVs.[16] USPS relatedly claimed that electric NGDVs would have a "significantly higher total cost of ownership," primarily due to the cost of EV charging infrastructure installation. The basis for these total cost of ownership claims is opaque, but the limited data we have seen from USPS shows that some of their assumptions are not grounded in fact. While the exact per-vehicle cost assumptions are unstated, it is apparent that USPS underestimated the cost of operating fossil fuel-powered NGDVs.

---

[10] Anenberg, S., J. Miller, D. Henze, and R. Minjares, "A Global Snapshot Of The Air Pollution-Related Health Impacts Of Transportation Sector Emissions In 2010 And 2015," The International Council On Clean Transportation, 2019, https://theicct.org/sites/default/files/publications/Global_health_impacts_transport_emissions_2010-2015_20190226.pdf.
[11] "Zeroing in on Healthy Air," American Lung Association, March 2022, https://www.lung.org/clean-air/electric-vehicle-report.
[12] "State of the Air: Key Findings," American Lung Association, 2021, https://www.lung.org/research/sota/key-findings.
[13] "Comprehensive Total Cost of Ownership Qualifications with Different Vehicle Classes," Argonne National Lab, 2021, https://publications.anl.gov/anlpubs/2021/05/167399.pdf.
[14] Harto, C, "Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers," Consumer Reports, 2021, https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf.
[15] Di Filippo, J., N. Nigro, and C. Satterfield, "Fleet Electrification Assessments," Atlas Public Policy, August 2021, https://atlaspolicy.com/wp-content/uploads/2021/09/Federal_Fleet_Electrification_Assessment.pdf.
[16] "Final Environmental Impact Statement: Next Generation Delivery Vehicle Acquisitions," United States Postal Service, December 2021, https://uspsngdveis.com/documents/USPS+NGDV+FEIS_Dec+2021.pdf.

For example, USPS selected a low fuel cost point from which it modeled its future gasoline price projections, basing its benchmark gasoline cost on the October 12, 2020 national gasoline average, when gasoline cost $2.19 per gallon.[17] This peak-pandemic gasoline price was near a 5-year low.[18] No American can purchase gasoline for anything close to $2.19 per gallon today. This low-estimate cost modeling dramatically drives down USPS's long-term fuel cost assessments. Electricity is far cheaper than gasoline, and because electricity isn't subject to foreign supply chain interruptions, its price is far more stable. The USPS Office of the Inspector General (USPS OIG), recently reiterated this fact, writing in a report that "Since 2000, gasoline and other petroleum products have experienced significant price fluctuations. Electricity prices, on the other hand, tend to show only cyclical price variations from summer months to winter months."[19] ZETA recently published a report showing that across the country, EVs are 3–5 times cheaper to drive per mile than gasoline-powered vehicles. In many states, some EVs are nearly 6 times cheaper to drive.[20]

Even with USPS's low estimate for gasoline costs, these vehicles will remain expensive to operate because they are inefficient. The proposed NGDVs are expected to achieve an 8.6–14.7 miles per gallon (mpg) efficiency—which is lower than the Environmental Protection Agency-rated 17 mpg city/highway combined average of the Grumman LLVs currently in service, which were built between 1987 and 1994. It is indefensible that this "new" model is not more fuel-efficient than the model it is replacing after more than thirty years of technological advancement. Relatedly, reports have indicated that had USPS set its proposed NGDV's weight to be just one pound lighter, its vehicles would have failed to meet federal emissions standards and would have therefore been banned. The bottom line is that USPS's claim that its fossil fuel-powered NGDV is "fuel efficient" defies reality, and this NGDV fails to achieve efficiency standards readily available for similar vehicles on the market today.

USPS has also overestimated the operating costs of electric NGDVs. For example, USPS specifies that its benchmark electric NGDV should have a 94 kilowatt-hour (kWh) battery pack, but that it would only achieve 70 miles of range per charge—which is a much lower range than that of comparable off-the-shelf models, such as the 2022 Ford E-Transit, which gets 126 miles of range using just a 68 kWh battery.[21] A 94 kWh vehicle of the NGDV's weight and size should see upward of 200 miles of range, not 70 miles. USPS's analysis overestimated the required size and cost of an EV battery pack and dramatically underestimated the range and capability of today's battery cells. It is worth noting that battery prices will continue to decline as research and development continues,[22] and these NGDV procurements will occur over the course of the next decade, creating an even greater delta between USPS's estimated needs and EVs' projected costs and range capabilities.

[17] Ibid.
[18] "Gas Price Charts," Gas Buddy, https://www.gasbuddy.com/charts.
[19] Electric Delivery Vehicles and USPS," United States Postal Service Office of the Inspector General, March 17, 2022, https://www.uspsoig.gov/sites/default/files/document-library-files/2022/RISC-WP-22-003.pdf.
[20] "Comparing the Operating Costs of Electric Vehicles and Gas-Powered Vehicles," ZETA, March 14, 2022, https://www.zeta2030.org/news/electric-vehicles-are-delivering-marked-cost-savings-for-drivers-and-surging-gasoline-prices-are-making-the-cost-savings-increasingly-apparent.
[21] "2022 Ford E-Transit," Ford, https://media.ford.com/content/fordmedia/fna/us/en/products/evs/e-transit/2022-ford-e-transit.html.
[22] "Electric Vehicle Outlook," BloombergNEF, 2021, https://about.bnef.com/electric-vehicle-outlook/.

The USPS OIG found in a report published on March 17, 2022, that USPS could cost-effectively electrify much of its fleet.[23] The report, for example, took issue with USPS's charging infrastructure cost estimates and suggested that USPS could install fewer chargers than vehicles, which is possible because an "NGDV with an electric powertrain would deplete only 20 percent of battery capacity on an average route." Thus, most electric NGDVs would not require nightly charging and could therefore share chargers. The USPS OIG also called attention to USPS's claim that Level 2 chargers would cost $18,000 per charger. This is at least two times more than what most Americans and fleet operators pay for purchasing and installing a Level 2 charger, and it stands to reason that USPS could pursue a bulk purchasing agreement to further drive down costs.[24]

Each of these cost discrepancies would have been transparently corrected had USPS performed a fleet transition plan and engineering analysis, as some other federal agencies do and as state departments of transportation are required to do under the Infrastructure Investment and Jobs Act before they receive funds from the Federal Transit Administration.[25]

2. State of Private-Sector Electrification

It is worth taking time to highlight the suite of other delivery services that are electrifying their fleets—both to achieve their emissions reduction goals and to generate cost savings. These companies, operating in the free market, believe that electrifying their fleets will deliver long-term competitive advantages.

UPS is one of the world's largest fleet operators, with 125,000 delivery vehicles around the globe. In pursuit of reducing its operating costs and emissions, UPS has ordered up to 10,000 delivery vans from ZETA member company Arrival. Arrival's delivery van is made of ultra-lightweight composite materials that significantly reduce the weight of the vehicle, which, along with lower fueling and maintenance costs, reduces each vehicle's operating cost.[26] UPS now drives more than 1 million miles each business day using alternative fuel vehicles, which has saved more than 60 million U.S. gallons of conventional fossil fuels since 2000.[27]

DHL is another example of private industry leading in this space. DHL has already electrified 20% of its fleet, and it plans to decarbonize 70% of its first- and last-mile delivery services by 2025.[28] The company also found that its electric vans are saving 60–70% on fuel costs and 60–80% on maintenance and repair costs compared to fossil fuel-powered vehicles.[29]

---

[23] Electric Delivery Vehicles and USPS," United States Postal Service Office of the Inspector General, March 17, 2022, https://www.uspsoig.gov/sites/default/files/document-library-files/2022/RISC-WP-22-003.pdf.
[24] Courtney, C., "How much does it cost to install an EV charger?" Carvana Behind-The-Wheel, July 19, 2021, https://blog.carvana.com/2021/07/how-much-does-it-cost-to-install-an-ev-charger/.
[25] "Zero-Emission Fleet Transition Plan," Federal Transit Administration, March 11, 2022, https://www.transit.dot.gov/funding/grants/zero-emission-fleet-transition-plan.
[26] Lambert, F., "UPS orders 10,000 electric delivery vans from startup Arrival," Electrek, January 30, 2020, https://electrek.co/2020/01/30/ups-orders-10000-electric-delivery-vans-arrival/.
[27] "Electrification and charging infrastructure upgrade at UPS," Freight Portal, https://thefreightportal.org/casestudy/electrification-and-charging-infrastructure-upgrade-at-ups-2/.
[28] Streetscooter And The Future Of Electric Vehicles," DHL, March 30, 2022, https://www.dhl.com/discover/en-global/business/business-ethics/future-of-electric-vehicles.
[29] Norman, H., "Going electric," Parcel and Postal Technology International, March 11, 2020, https://www.parcelandpostaltechnologyinternational.com/features/going-electric.html.

Like UPS and DHL, FedEx is electrifying its fleet of 87,000 vehicles. It plans to buy only EVs after 2025, and its fleet will be 100% electric by 2040. FedEx says an electric fleet will cut maintenance costs in half, and its Chanje EV models will save 2,000 gallons of fuel and eliminate 20 tons of emissions per vehicle per year.[30] Its Brightdrop models will decrease the cost of fueling by 75% compared to a fossil fuel-powered truck.[31]

ZETA member company Rivian's partnership with Amazon is another noteworthy example. Amazon plans to purchase 100,000 Rivian delivery vehicles, many of which I saw in person this past week while touring Rivian's manufacturing plant in Normal, Illinois. In addition to reducing Amazon's GHG by 4 million metric tons per year by 2030, Amazon expects that these electric vehicles' fuel savings will significantly cut down on the company's last-mile delivery costs.[32]

A variety of other last-mile delivery services are also electrifying their fleets. For example, Walmart also plans to buy 5,000 electric vans from BrightDrop, which are expected in 2023.[33] Like FedEx, Walmart's Brightdrop vehicles will save dramatically on operating costs. And IKEA is electrifying all of its customer deliveries in thirty markets by 2025. 25% of its deliveries are electric today. IKEA believes electrifying its delivery fleet will create a competitive advantage and generate cost savings.[34]

Finally, EV100 is a group of 121 companies around the world that have committed to electrifying their fleets. By 2030, they will have electrified 5.5 million vehicles, avoiding nearly 86 million metric tons of pollution.[35] In its annual report, EV100 stated that "The business case for a transition to EVs is now stronger than ever, and the associated running costs are considerably lower than traditional internal combustion engine vehicles."

In sum, many fleet operators in the United States and around the world are electrifying. Several of these companies are among USPS's direct competitors, and they are securing long-term competitive advantages, to USPS's detriment given the trajectory of its current NGDV contract. This overwhelming number of companies that are electrifying their fleets proves the point that electrification is not just the right environmental and public health decision—it also makes financial sense.

3. Conclusion and Recommendations

Electrifying USPS would improve our environment, protect our public health, and generate cost savings on many, if not all, of USPS's routes. USPS's rationale for rejecting these facts in favor of its own proposed plan is not clear, and this lack of transparency in USPS's decision-making process prevents third parties from reproducing its questionable findings.

---

[30] Skydel, S., "FedEx makes the largest commercial electric vehicle purchase in the U.S., continues the zero-emissions trend," Fleet Equipment Magazine, January 14, 2019, https://www.fleetequipmentmag.com/fed-ex-largest-electric-truck-purchase-zero-emission/.
[31] Holland, F., "FedEx gets first of 500 electric trucks from GM's EV unit in a major advance for green logistics," CNBC, December 17, 2021, https://www.cnbc.com/2021/12/17/fedex-gets-first-of-500-electric-trucks-from-gms-ev-unit-in-move-to-green-logistics.html.
[32] Ohnsman, A., "Amazon's Multibillion-Dollar Bet On Electric Delivery Vans Is Game-Changer For Startup Rivian," Forbes, September 19, 2019, https://www.forbes.com/sites/alanohnsman/2019/09/19/amazons-multibillion-dollar-bet-on-electric-delivery-vans-is-game-changer-for-startup-rivian/?sh=da6f73ed0138.
[33] "BrightDrop Announces Walmart as New EV Customer and Expands Collaboration with FedEx at CES," GM Corporate Newsroom, January 5, 2022, https://media.gm.com/media/us/en/gm/home.detail.html/content/Pages/news/us/en/2022/jan/ces/0105-brightdrop.html.
[34] "A case for last-mile deliveries using EVs," EV Reporter, January 12, 2019, https://evreporter.com/gati-and-ikea/.
[35] "EV100 Progress and Insights Report," Climate Group, March 2022, https://www.theclimategroup.org/ev100-publications.

Congress could help ensure a greater degree of transparency by requiring USPS to prepare a zero-emission fleet transition plan. These are common among fleet operators, and they account for route geographies, local climate variations, market trends, and available battery technologies. Completing a zero-emission fleet transition plan would not require USPS to disclose proprietary information; rather, it would allow USPS to transparently produce a rigorous market analysis using third-party engineering and modeling technology to assess the feasibility of electrifying its delivery routes.

USPS has repeatedly stated that it would electrify its fleet if it had greater financial resources. The Postmaster General recently remarked that electrifying the full delivery fleet would cost approximately $3.3 billion more than procuring a new, fossil fuel-powered fleet.[36] While I believe that number is grossly inflated for many of the reasons I have previously stated, it is nevertheless a small fraction of the nearly $50 billion that USPS just saved, thanks to your passage of the Postal Service Reform Act of 2022.[37] The short-term solvency of USPS is no longer in doubt, and its financial situation is drastically different than it was a few short weeks ago. USPS should be in a much stronger position now to make a short-term investment that will lead to long-term cost savings—and that will dramatically benefit the American people.

Thank you for your time, and I look forward to answering your questions.

[36] Small, J. "Is Louis DeJoy's Plan for New Gas Post Office Truck Fleet the Last Straw?" Newsweek, February 22, 2022, https://www.newsweek.com/louis-dejoys-plan-new-gas-post-office-truck-fleet-last-straw-1681429.
[37] "Congress Poised To Put 'Stamp Of Approval' On Bipartisan Postal Reform," Office of Senator Sheldon Whitehouse, March 4, 2022,https://www.whitehouse.senate.gov/news/release/congress-poised-to-put-stamp-of-approval-on-bipartisan-postal-reform-#:~:text=The%20new%20law%20will%20help,timely%20mail%20and%20package%20deliveries.