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The CLEAN Future Act: Driving Decarbonization of the Transportation Sector
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Introduction

Subcommittee Chairman Rush and Ranking Member Upton, Full Committee Chairman Pallone and Ranking Member McMorris Rodgers, and other members of the Energy and Commerce Committee, thank you for the opportunity to speak about zero emission transportation and the CLEAN Futures Act today. Electric Vehicles (EVs) present a critical pathway and opportunity for American leadership in manufacturing and the environment at a time when economic advancement in these sectors is sorely needed.

My name is Joe Britton, and I am the Executive Director of the Zero Emission Transportation Association, a public interest non-profit with over 50 member companies advocating for 100% electric vehicle sales by 2030. Our membership spans the entire EV supply chain and includes critical materials, charging companies, utilities, vehicle manufacturers, and battery recyclers.

The world is moving toward electric transportation, and the United States has an opportunity to revive its industrial automotive prowess while reducing air pollution and addressing dressing climate change. And while other solutions may require sacrifice on the part of the consumer, EVs are far superior products that deliver a better driving experience than gas-powered cars, have zero emissions and cost significantly less in terms of fuel, maintenance and service. EVs are irreversibly the defining product of the new automotive economy. The choices we face are stark – we either cultivate an advanced vehicle sector or cede this economic opportunity to others. We don't have to look far back to recall what happened when more efficient foreign imports consumed the market. The United States cannot be on the sidelines while countries like China continue to solidify their control over the commodities, processing and manufacturing critical to our economic future.

ZETA's membership has come together to ensure the United States has the capability to lead the global EV market – while creating well-paying domestic jobs spanning the entire supply chain and cutting our emissions to improve public health and reduce our carbon footprint. We can make this an American success story and outcompete anyone, but the time for half-measures is behind us. ZETA's policy platform lays out a roadmap that both Congress and the Biden administration can take to secure U.S. leadership in clean transportation. We must use public policy as a tool to galvanize our global competitiveness to match the scale of our foreign counterparts – like China – that have made significant strides in the last decade.[1] For example, we can help the U.S. become an EV leader by passing strong consumer incentives, investing in charging infrastructure, and instituting rigorous fuel economy standards that send a strong market signal that we are going to make this transition in the next 10-15 years, not the next 40-50. Together, we can establish the best products, supply chains and economic development the

[1] "Policy Platform." ZETA, https://www.zeta2030.org/policy-platform/. Accessed 28 Apr. 2021.

automotive world has ever seen. I look forward to taking your questions and contributing to the discussion about how best to invest for a stronger economic future.

Environmental Benefits of EVs

Transportation accounts for 28% of all U.S. greenhouse gas (GHG) emissions and is the largest source of emissions across all economic sectors.[2] With both population and driving rates on the rise, it is also the only sector that continues to increase its GHG emissions. Electrification of the transportation sector is a critical step to reversing this troubling trend.

An overwhelming amount of research has shown that EVs produce lower lifecycle GHG emissions than traditional Internal Combustion Engine Vehicles (ICEVs). A well-cited and regularly updated study from the Union of Concerned Scientists demonstrates that, on average, even in the region of the country using the most carbon intensive electricity, EVs perform better than the equivalent of a 50 mile-per-gallon (mpge) gas-powered car, and in the cleanest region of the grid, EVs perform at the equivalent of 122 mpge.[3] As the grid continues to move to clean power, these numbers will only continue to improve –whereas an ICEV is locked into the same inefficiency over its lifetime.[4]

Medium- and heavy-duty vehicles (MHDVs) play an outsized role in negative environmental implications from emissions. Although they represent 7% of vehicles on the road, they are responsible for 25% of GHG emissions, 50% of nitrous oxide (NOx) emissions, and 67% of particulate matter (PM) emissions.[5] NOx and PM emissions are linked with higher rates of asthma, birth defects, premature birth, and complications from COVID-19.[6] New research published last week shows that PM pollution, which is the largest environmental cause of human mortality, disproportionately affects communities of color in the U.S. It also found that gasoline vehicles were the largest source of PM emissions negatively impacting those communities.[7] Removing tailpipe emissions associated with these vehicles will not only have a marked benefit to the U.S. economy, but also an immediate and dramatic impact on public health and equity.

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[2] US EPA, OAR. "Sources of Greenhouse Gas Emissions." US EPA, 29 Dec. 2015, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

[3] https://blog.ucsusa.org/dave-reichmuth/are-electric-vehicles-really-better-for-the-climate-yes-heres-why

[4] "Are Electric Vehicles Really Better for the Climate? Yes. Here's Why." Union of Concerned Scientists, 11 Feb. 2020, https://blog.ucsusa.org/dave-reichmuth/are-electric-vehicles-really-better-for-the-climate-yes-heres-why.

[5] Ready for Work | Union of Concerned Scientists. https://www.ucsusa.org/resources/ready-work. Accessed 30 Apr. 2021.

[6] Brown, Austin L., et al. Driving California's Transportation Emissions to Zero. Apr. 2021. escholarship.org, doi:10.7922/G2MC8X9X.

[7] Tessum, Christopher W., et al. "PM2.5 Polluters Disproportionately and Systemically Affect People of Color in the United States." Science Advances, vol. 7, no. 18, Apr. 2021, p. eabf4491. advances.sciencemag.org, doi:10.1126/sciadv.abf4491.

The U.S. can position itself as an innovator and dramatically reduce emissions with full transportation electrification. Economic growth and emissions reductions do not need to be mutually exclusive; in fact, 41 states demonstrated that GDP and emissions can be negatively correlated when their emissions dropped to all-time lows and their GDP rose.[8] This resulted from a combination of regulatory policy and incentives for innovation in clean energy. As demonstrated by ZETA's 55 members in the industry, clean transportation is no different.

Domestic Manufacturing Opportunity

Securing our global competitiveness rests on our ability to create domestic manufacturing jobs. With U.S. auto sector employment down 30% as a result of the COVID-19 pandemic[9], American auto workers are in a precarious position that an investment in electric vehicle manufacturing can help alleviate. A report by the BlueGreen Alliance found that over 250,000 Americans are working to manufacture, sell, and repair electric and hybrid vehicles[10]; as the number of EVs sold globally and domestically grows, we can anticipate even greater job growth.

On the other hand, choosing to ignore the opportunities presented by EVs will result in devastating losses for communities dependent on the auto industry as foreign competitors move past us. A 2018 study found that in Ohio alone, failing to attract members of the EV industry will correlate with a 7,000-job loss[11]. By leaning into the opportunities presented by the EV sector and the U.S. companies leading this charge, the United States can protect the futures of our auto workers and reestablish our automaking dominance.

U.S. companies like Tesla, Rivian, Ford, GM, Lucid, Lordstown, and others manufacture EVs that outperform foreign competitors in terms of sales, quality, and performance. However, China's critical minerals stronghold has allowed it to gain outsized control of the EV market. With the right policy to shift supply chain control away from China and to North America, the United States can secure and prioritize sourcing critical minerals domestically.

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[8] Saha, Devashree, and Joel Jaeger. Ranking 41 US States Decoupling Emissions and GDP Growth. July 2020. www.wri.org, https://www.wri.org/insights/ranking-41-us-states-decoupling-emissions-and-gdp-growth.

[9] See national employment in motor vehicles and parts manufacturing for May 2020. U.S. Bureau of Labor Statistics, "Automotive Industry: Employment, Earnings, and Hours," available at https://www.bls.gov/iag/tgs/iagauto.htm. The COVID-19 pandemic cost nearly 50,000 jobs in clean vehicles alone in March and April 2020, with greater losses expected to continue in coming months. See Philip Jordan, "Memorandum: Clean Energy Employment Initial Impacts from the COVID-19 Economic Crisis, April 2020" (Carlsbad, CA: BW Research Partnership, 2020), available at https://e2.org/wp-content/uploads/2020/05/Clean-Energy-Jobs-April-COVID-19-Memo-FINAL.pdf.

[10] National Association of State Energy Officials and Energy Futures Initiative, "2020 U.S. Energy & Employment Report" (Arlington, VA, and Washington: 2020), available at https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5e78b3c756e8367abbd47ab0/1584968660321/USEER+2020+0323.pdf.

[11] On the other hand, if Ohio embraces electrification, the auto industry could add an estimated 2,000 jobs. See Asa S. Hopkins and others, "A Path Forward For Energy & Transportation" (Powering Ohio, 2018), available at http://www.poweringohio.org/files/2018/11/Powering-Ohio-A-Path-Forward-FINAL.pdf.

Recent events like the blockage of the Suez Canal and the year-long, pandemic-related computer chip shortages demonstrate the fragility of the supply chain. Establishing a domestic supply of critical minerals and manufacturing capacity to prevent these issues from recurring must be a top priority. The U.S. has both the supplies and the capacity to expand, but this can only occur if domestic projects are a priority and Congress sets criteria for project review based on the Biden Administration's net-zero goals. China has taken a lead in the EV manufacturing supply chain largely because of its investment in research and development to source critical minerals and process them into battery-grade metals. China's dominance stems from heavy government support, not naturally-occurring deposits – most lithium is sourced from South America, and China is ranked sixth in the world. The United States, which is rich in these same critical minerals, has the potential to outperform China.

ZETA member companies produce, process, and recycle the minerals and components needed for EV batteries and components domestically. For this reason, ZETA has endorsed the American Jobs in Energy Manufacturing Act of 2021,[12] which provides a 30% tax credit to manufacturers that are retooling, expanding, or building new facilities making clean energy and transportation technologies.

With strong public policies encouraging responsible development like the American Jobs in Energy and Manufacturing Act, the U.S. can realize its geological advantage over China and can scale its processing and refining capacity. Examples of North American raw materials companies with the sources and capacity to bring domestic supply to the U.S. are outlined below.

- **Albemarle Corporation**'s lithium site in Silver Peak, Nevada has been in production since the 1960s. This site is the most productive lithium brine well field in the U.S. and produces lithium carbonate. Albemarle's domestic resources also include the 800-acre Kings Mountain, North Carolina lithium site, which is one of the richest spodumene ore deposits in the world and home to the company's global lithium technical center and piloting operations. Albemarle also operates lithium-containing brines in Arkansas.[13]
- **The Piedmont Lithium Project** is located within the world-class Carolina Tin-Spodumene Belt (TSB) and trends along the Hallman Beam and Kings Mountain mines. Sited approximately 25 miles west of Charlotte, North Carolina, the TSB is one of the largest lithium regions in the world and provided most of the western world's lithium from the 1950s through the 1980s.

[12] Manchin, Joe. S.622 - 117th Congress (2021-2022): American Jobs in Energy Manufacturing Act of 2021. 9 Mar. 2021, https://www.congress.gov/bill/117th-congress/senate-bill/622.

[13] Albemarle Announces Expansion of Nevada Site to Increase Domestic Production of Lithium. Albemarle Corporation. https://investors.albemarle.com/news-releases/news-release-details/albemarle-announces-expansion-nevada-site-increase-domestic. Accessed 13 Apr. 2021.

- **Livent Lithium** has been a leader in lithium production and supply since the 1990s. Livent's largest manufacturing facility is located in Bessemer City, North Carolina and produces lithium hydroxide, butyllithium, and high purity lithium metal. Notably, their proprietary processing method results in 95% lithium purity.[14]
- **Lithium Americas Corporation**'s Thacker Pass Project is a pre-feasibility stage lithium project in Humboldt County, Nevada. The Project is situated at the southern end of the McDermitt Caldera, approximately 60 miles northwest of Winnemucca. In 2018, Lithium Americas completed a pre-feasibility study on a two-phase project with a production capacity designed to reach 60,000 tonnes of battery-grade lithium carbonate per annum and a 46-year mine life.[15] In January 2021, the Bureau of Land Management granted a Record of Decision to allow for construction to begin. Final feasibility engineering is progressing to support construction and will be completed this year. This is the first lithium asset permitted in the United States in over 50 years.
- **Ioneer** operates the Rhyolite Ridge Lithium-Boron Project. The Rhyolite Ridge is a large, shallow lithium-boron deposit located close to existing infrastructure in southern Nevada. The lithium and boron mineral resource is estimated at 146.5 million metric tonnes and includes an ore reserve of 60.0 million metric tonnes. This represents a 280% increase in reserves from the Pre-Feasibility Study. The company expects to process 63.8 million metric tonnes over the 26-year mine life at an average annual rate of 2.5 million metric tonnes per year.[16]
- **NOVONIX** is an advanced battery materials and technology company with synthetic graphite manufacturing operations based in Chattanooga, Tennessee. They are set to support 10,000 tonnes of synthetic graphite anode production by 2023 and have plans to expand capacity to 40,000 tonnes by 2025 and 150,000 tonnes by 2030. Graphite is the largest input material by volume into lithium-ion batteries. High purity graphite powder is used to make the anode of a lithium-ion battery and represents 10-15% of the cost of the battery cell. According to the USGS, approximately 1.1 million tons of graphite were produced in 2020, with 650,000 tons from China and zero tons from the United States.
- **Jervois Mining USA Limited**, a Nevada-registered corporation, is proposing to build what will be America's only primary cobalt production operation in the heart of the Idaho Cobalt Belt, which stretches 40 miles near the town of Salmon, Idaho. Jervois' production could represent 15-20 percent of U.S. annual consumption and will directly counter risks that China could use its dominant position in the cobalt supply chain to the detriment of the U.S. Cobalt is critical to the performance and stability of EV batteries and helps to mitigate thermal runaway, making it a difficult-to-replace component in the

[14] "Pursuing Advanced Lithium Technologies | Livent's History & Growth." Livent, https://livent.com/company-overview/history-of-livent/. Accessed 14 Apr. 2021.
[15] "Lithium Americas." *Lithium Americas*. Accessed 13 Apr. 2021.
[16] "Overview." *Ioneer Ltd (INR)*, 1 Feb. 2018, https://www.ioneer.com/rhyolite-ridge/overview.

cathodes of these batteries. China also dominates the supply of refined cobalt products, controlling around 80% of global cobalt refining capacity.

- The **Copper Development Association** has led the way in ensuring our copper supply can be maximized for the benefit of EVs and auto manufacturers. While not given the same attention as a defined critical material, it is important to recognize the value of copper to EVs and EV infrastructure. The average EV battery pack uses 183 lbs. of copper, compared to internal combustion engines (48 lbs.) and hybrid EVs (88 lbs.). Additionally, copper is essential to charging stations: a charging port from 3.3 kW to 200 kW contains between two to 17 pounds of copper. As we seek to drive domestic supply chains, ZETA sees copper development as an important part of our security considerations.
- Battery recycling is a promising American innovation that can help free us from reliance on foreign supply chains. Recycling technology is already delivering on a promise to reclaim 95% of critical materials in a commercially competitive way.
    - **The American Battery Technology Company (ABTC)**, **Redwood Materials**, and **Li-Cycle** utilize cutting-edge recycling technologies to separate and process these minerals from used batteries and convert them to storage cells and new EV batteries. While over 69% of the world's lithium battery recycling occurs in China, ABTC is currently permitting and building a lithium-ion battery recycling facility in Fernley, Nevada. This facility would quadruple the current annual U.S. lithium carbonate equivalent (LCE) supply to 20,000 metric tonnes a year. By recovering critical materials and selling high-quality metals back into the battery market, ABTC and others in this sector are forging a path for sustainability and supply chain security.
    - **Enel** is embarking on Second Life, a partnership with Nissan Leaf. This initiative disassembles batteries at the end-of-life and repurposes them for large stationary storage systems. Rivian is designing their batteries for both first-life vehicle application and a post vehicle second life in energy storage. The Department of Energy (DOE) should engage in public-private partnerships to develop and deploy repurposed batteries, use sustainable materials in battery manufacturing (i.e. reclaimed/recycled rare earth metals), and standardize battery module design and build for easier disassembly, repair or recycling.

ZETA members also represent battery manufacturers, equipment manufacturers for EV supply equipment, charging companies, utilities, and vehicle manufacturers. Across their organizations, members can create millions of domestic jobs if the federal government commits to supporting EVs. U.S. battery manufacturers have the ability to secure North American supply chains – especially lithium operations – at the scale needed to achieve a zero-emissions transportation sector. This can occur only if we take swift action to make up ground that has been lost in recent

years. With coordination, smart incentives, and appropriate policies, the U.S. can regain a competitive advantage in domestic battery manufacturing and EV production.

Global EV Market Trends

EVs are selling at exponential rates around the world today. In a report released by the International Energy Agency (IEA) last week, the global stock of EVs on the road grew to over 10 million in 2020, despite the economic slowdown that negatively affected the entire auto industry.[17]

In Europe and China, growth of the EV market is largely driven by consumer satisfaction and lower total cost of ownership. Europe had the largest annual growth and increased its EV registrations to 3.2 million, with 1.4 million in 2020 alone, even though the overall car market contracted 22%. In Norway, EVs represented 75% of new car sales, which puts Norway well on its way to the 100% EV sales goal they set for 2025. China followed, having added 1.2 million EV registrations in 2020 and brought their EV total to 4.5 million.

Bloomberg New Energy Finance projects that by 2030 there will be 116 million EVs on the road, driven by lower costs of batteries and ownership, more charging, and sales incentives to spread to new markets.[18] However, the U.S.'s role in this outcome will depend on smart policy at the federal level.

U.S. EV Market Trends and Consumer Choices

Although many of the EVs sold in other countries are made in the U.S. by manufacturers like Tesla and GM, a different story is unfolding in market trends for U.S. EV sales. The U.S. is not growing EV sales at a rate fast enough to meet climate targets or compete with Chinese and European automakers. Although EV registrations fell less than the overall market, the U.S. auto market declined 23% in 2020. Over the course of last year, consumers registered 295,000 new EVs, down from 327,000 in 2019. This was partly due to the elimination of the 30D-related federal tax credit for Tesla and GM. As demonstrated by these trends, the 30D manufacturer cap in the tax code only harms domestic manufacturers and consumers.[19] ZETA's proposed reforms to the 30D tax credit include removing the 200,000-per-unit manufacturer cap and converting the credit into a refundable incentive. ZETA has proudly endorsed the Electric CARS Act of 2021,

[17] "Trends and Developments in Electric Vehicle Markets – Global EV Outlook 2021 – Analysis." IEA, https://www.iea.org/reports/global-ev-outlook-2021/trends-and-developments-in-electric-vehicle-markets. Accessed 30 Apr. 2021.

[18] "BNEF EVO Report 2020 | BloombergNEF | Bloomberg Finance LP." BloombergNEF, https://about.bnef.com/electric-vehicle-outlook/. Accessed 30 Apr. 2021.

[19] "Trends and Developments in Electric Vehicle Markets – Global EV Outlook 2021 – Analysis." IEA, https://www.iea.org/reports/global-ev-outlook-2021/trends-and-developments-in-electric-vehicle-markets. Accessed 30 Apr. 2021.

introduced by Congressman Welch and Senator Jeff Merkley, which calls for the elimination of the cap for the next 10 years.[20]

EVs have a lower total cost of ownership compared to ICEVs due to their maintenance and fuel cost savings.[21] They also have high satisfaction ratings: studies and opinion polls show that people who have ridden in an EV are three times more likely to consider purchasing one as their next vehicle.[22] Research has also shown that as new technologies (like EVs) move out of the "early technology adopter" – who tend to be higher-income [23] – phase, consumer incentives targeting the broader population are critical.[24,25] Although people are reliant on these incentives to help lower upfront cost barriers today, EVs are expected to reach price parity with ICEVs as batteries and other components become cheaper. If trends continue, EVs will become more economical on price, fuel and maintenance than ICE vehicles. Bloomberg New Energy Finance projects cost parity with ICEVs before 2030, and forecasts that over 500 models will be available globally by 2022.[26]

The United States has the world's largest car market, and we must sell EVs domestically if we want to secure our leadership in this space. To do so, the federal government must reform and extend consumer incentives and invest in charging infrastructure.

Lack of public charging infrastructure and range anxiety are leading reasons for EV hesitancy among consumers. Studies demonstrate that the public is also often unaware of charging locations or how to access them. If we are to meet the goal of full electrification by 2030, the federal government must invest in constructing charging infrastructure.

Currently, about 80% of EV charging occurs at home. Though EVs can be plugged into a standard 120-volt outlet and charged to meet most consumer needs, polling indicates a lack of

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[20] Merkley, Jeff. S.395-117th Congress (2021-2022). "Electric CARS Act of 2021. Introduced February 23, 2021. https://www.congress.gov/bill/117th-congress/senate-bill/395?s=1&r=6

[21] Preston, Benjamin. "EVs Offer Big Savings Over Traditional Gas-Powered Cars." Consumer Reports, https://www.consumerreports.org/hybrids-evs/evs-offer-big-savings-over-traditional-gas-powered-cars/. Accessed 30 Apr. 2021.

[22] Voelcker, John. "J.D. Power Finds The Best Way To Sell EVs Is Getting Butts In Seats." Forbes Wheels, 25 Feb. 2021, https://www.forbes.com/wheels/news/j-d-power-electric-vehicle-consideration-study/.

[23] Muehlegger, Erich, and David Rapson. Understanding the Distributional Impacts of Vehicle Policy: Who Buys New and Used Electric Vehicles? Nov. 2019. escholarship.org, doi:10.7922/G21Z42N.

[24] "An In-Depth Examination of Electric Vehicle Incentives: Consumer Heterogeneity and Changing Response over Time." Transportation Research Part A: Policy and Practice, vol. 132, Feb. 2020, pp. 97–109. www.sciencedirect.com, doi:10.1016/j.tra.2019.11.004.

[25] Hardman, Scott. "Understanding the Impact of Recurring and Non-Financial Incentives on Plug-in Electric Vehicle Adoption – A Review." Transportation Research Part A: Policy and Practice, vol. 119, 2019, pp. 1–14.

[26] "BNEF EVO Report 2020 | BloombergNEF | Bloomberg Finance LP." BloombergNEF, https://about.bnef.com/electric-vehicle-outlook/. Accessed 30 Apr. 2021.

awareness about the necessary types of chargers. Homeowners requiring a longer-range overnight charge can install a Level 2 charger, which has the same electrical service as a dryer. Incentives and rebate programs can help reduce the cost for home charging and public charging alike.

Federal Leadership

The Biden-Harris Administration has signaled that President Biden will require full electrification of the federal fleet vehicles, an action that ZETA supports. The federal fleet consists of over 600,000 vehicles, and mass procurement would be cost effective for the government, including for the U.S. Postal Service's (USPS) fleet of over 200,000 mail delivery vehicles.

This transition will require an accelerated deployment of EV charging infrastructure. The Biden Administration should consider including plans for all federal capital projects to incorporate public EV charging wherever possible.

The federal government can also demonstrate leadership by requiring that federal employees have the option to rent an electric vehicle. Such a position would move commercial rental vehicle companies to procure a range of electric models. Because rental vehicles are a main source of used cars in the market, this move would expand the availability of used EVs.

ZETA is disappointed with the USPS decision to award the contract for its next delivery fleet to a diesel-powered drivetrain concept. However, the Biden administration and Congress have options to ensure the electrification of the fleet. The Postal Vehicle Modernization Act[27] would require 70% fleet electrification in order for the USPS to receive $6 billion in funding from Congress.

EV Equity and Environmental Justice

ZETA's policy objectives are grounded in a recognition that historic infrastructure efforts, even within the environmental policy sphere, have not made a pointed effort to engage with frontline communities and communities of color. This is particularly important to correct for, considering that these same groups disproportionately suffer from mobile-source pollution and public health impacts. A recent study by the Union of Concerned Scientists found that Asian American, Black, and Latino American residents in the Northeast and Mid-Atlantic region of the U.S. breathe an average of 66 percent more air pollution from cars and trucks.[28] ZETA urges that relevant policy

[27] Huffman, Jared. H.R.7969 - 116th Congress (2019-2020): Postal Vehicle Modernization Act. 7 Aug. 2020, https://www.congress.gov/bill/116th-congress/house-bill/7969.

[28] Inequitable Exposure to Air Pollution from Vehicles | Union of Concerned Scientists. https://www.ucsusa.org/resources/inequitable-exposure-air-pollution-vehicles.

be designed with a focus on equity, inclusion, and justice. The federal government must keep communities of color (particularly Black and Latinx) and low-income communities at the forefront of its infrastructure planning.

Higher income earners tend to lead new technology adoption. However, EV prices have decreased, more models have become available, and studies show that moderate- and low-income earners are entering the market. As referenced in previous sections, this is a critical time to provide consumer incentives that will encourage EV adoption among middle-income consumers.

Consistent with ZETA's policy platform, consumer incentives should extend and expand the current 30D tax credit so that members of all income brackets can realize the value of the credit upfront. Used vehicles should also be eligible for purchase incentives, as over 70% of vehicle sales[29] in the U.S. are used vehicles, and a majority of low- and middle-income earners purchased used vehicles. Point-of-sale purchase incentives for used EVs should be prioritized.

Similarly, current charging access is not equitably distributed. Most EV drivers charge at home in their garage, but a large percentage of low-income earners do not have access to a charger or off-street parking. Representative Clarke's Electric Vehicles for Underserved Communities Act helps address this issue by directing DOE to support deployment of EV charging infrastructure in disadvantaged or underserved communities. On a similar note, the federal government must invest in charging infrastructure for neighborhoods that lack off-street parking and update building codes to drive multi-unit residential charging infrastructure installation. These investments should include grants and incentives for cities and states. Representative Tonko has laid out these policy objectives in the Electric Vehicle Infrastructure Rebate Act of 2021 by establishing a rebate program to promote the purchase and installation of publicly accessible electric vehicle supply equipment. Both Representative Clarke and Representative Tonko's bills will help further the long road to EV equity and ZETA fully supports them becoming law.

The federal government should also prioritize electrification of public transportation, freight vehicles, and ports to reduce the harmful effects of diesel pollution in historically redlined and disadvantaged areas. Electric buses and urban delivery vehicles are already available, including models from ZETA members Proterra, Workhorse, and Arrival. Representative Panetta's Green Bus Tax Credit Act[30] and Senator Padilla's Clean Commute for Kids Act[31] will help reduce negative health consequences for children who can ride on electric school buses. Within Rep.

[29] The US Used Car Market and Digital Disruption | McKinsey. https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/used-cars-new-platforms-accelerating-sales-in-a-digitally-disrupted-market#.
[30] Panetta, Jimmy. All Info - H.R.5163 - 116th Congress (2019-2020): Green Bus Tax Credit Act of 2019. 19 Nov. 2019, https://www.congress.gov/bill/116th-congress/house-bill/5163/all-info.
[31] Cardenas, Tony. H.R.2906 - 116th Congress (2019-2020): Clean Commute for Kids Act of 2019. 9 Jan. 2020, https://www.congress.gov/bill/116th-congress/house-bill/2906.

Panetta’s legislation, a 10% manufacturer's credit up to $100,000 for electric buses will go a long way in transitioning these critical fleets of buses.

Conclusion

We have a once-in-a-lifetime opportunity to dramatically shift the automotive landscape to the benefit of both the American worker and domestically produced zero emission vehicles. Progress with the right federal policies is paramount, but that is only the beginning. In the next few years, tens of millions of Americans and fleet operators will be introduced to the idea of going electric for their next automotive purchase. EVs present an opportunity to raise awareness about fuel and service savings for consumers, dramatic American competitiveness and job creation potential, and a choice to protect public and environmental health by removing harmful tailpipe emissions from communities.

ZETA is encouraged by the transportation electrification commitments recently outlined in President Biden’s American Jobs Plan. The significant investment in EV charging infrastructure, federal fleet electrification goals, strong consumer incentives, and domestic supply chain emphasis are all commensurate with ZETA’s mission to enact policies that will accelerate the United States' adoption of electric vehicles while creating hundreds of thousands of jobs. We look forward to continuing to work with Congress and the Administration to ensure that these proposals are adopted.