



ZERO EMISSION
TRANSPORTATION
ASSOCIATION

August 28, 2023

The State of Maine
Department of Environmental Protection
17 State House Station
Augusta, ME 04333

RE: Chapter 127-A: Advanced Clean Cars II Program
Submitted via email to rulecomments.dep@maine.gov.

The Zero Emission Transportation Association (ZETA) is an industry-backed coalition of over 60 member companies advocating for 100% electric vehicle (EV) sales. ZETA is committed to enacting policies that drive EV adoption, create hundreds of thousands of jobs, dramatically improve public health, and significantly reduce emissions. Our coalition spans the entire EV supply chain and includes vehicle manufacturers, charging infrastructure manufacturers and network operators, battery manufacturers and recyclers, electricity providers, and critical minerals producers, among others.

We thank the Maine Department of Environmental Protection (DEP) for the opportunity to comment on its proposal to adopt the Advanced Clean Cars II (ACC II) program. ZETA supports ACC II adoption in Maine and encourages the DEP to adopt the program without delay. This program is an important step towards decarbonizing the transportation sector and we believe its goals are achievable.

The automotive industry, led by innovations in electric drivetrains and pulled forward by rapidly expanding consumer demand, has centered on electrification as the most commercially viable way to protect public health, our climate, and the environment by reducing tailpipe emissions. The full EV supply chain is preparing to support increased transportation electrification and Maine's ACC II adoption will help ensure it has the regulatory certainty needed to protect the investments being made today that will put the sector on a path to a zero-emission future.

Industry confidence in electric vehicles is paralleled by public opinion. Consumers want to buy EVs and demand is growing exponentially: domestic demand for EVs increased 350% between 2020 and 2022, and new sales increased 55% year-over-year in 2022.¹ In 2023, total U.S. EV sales are on track to surpass 1 million units for the first time ever.² A primary driver of these rapidly increasing sales is the fact that consumers save money by driving an EV. Due to reduced

¹ <https://advocacy.consumerreports.org/wp-content/uploads/2023/03/Excess-Demand-The-Looming-EV-Shortage.pdf>

² <https://www.coxautoinc.com/news/cox-automotive-forecast-june-2023-u-s-auto-sales-forecast/>

fuel and maintenance costs, a typical driver can expect to save between \$6,000 and \$12,000 over a vehicle's lifetime by switching to an EV.³ Savings on fuel alone for drivers in Maine ranges from \$19 to \$30 per fill-up, depending on the type of vehicle.⁴

The transportation sector is the leading source of greenhouse gas emissions and according to the U.S. Environmental Protection Agency (EPA) emissions from Maine's transportation sector totaled 6.89 million metric tons of CO₂e in 2019.⁵ Widespread research indicates that adequate regulation of vehicle emissions—through programs such as ACC II—is critical to meeting the U.S. targets under the Paris Climate Agreement while also protecting American communities from avoidable increases in adverse health outcomes.

Widespread electric vehicle adoption will not only reduce emissions but it will also promote American economic competitiveness and create good-paying jobs. Due largely to the incentives in the federal Inflation Reduction Act (IRA), the industry is continuing to invest at unprecedented speed to scale the domestic EV supply chain at every stage of production. Since August 2022, the private sector has invested over \$70 billion in the domestic EV supply chain and has created over 32,000 American jobs.⁶

As demand for critical minerals to support the transition to EVs is expected to grow rapidly, it is first necessary to evaluate the current state of global production. For most minerals, production has grown in the past decade.⁷ While much of the production for critical minerals is concentrated in a handful of countries, the Carnegie Endowment for International Peace argues nearly all critical mineral demand could be met through reserves in democratic countries.⁸

The U.S. battery manufacturing industry is quickly scaling to meet the demand driven by transportation electrification. According to Argonne National Laboratory, domestic EV battery manufacturing capacity will increase by almost 20-fold between 2021 and 2030.⁹ Since January 2021, the U.S. private sector has announced over \$100 billion in battery manufacturing investments, translating to over 190 new or expanded processing and manufacturing facilities with enough production to power 10 million EVs each year.¹⁰

³ https://advocacy.consumerreports.org/wp-content/uploads/2023/06/CR_EV Savings_FACTSHEET_6.2023.pdf

⁴ <https://www.washingtonpost.com/climate-environment/interactive/2023/electric-vehicle-charging-price-vs-gasoline/> ; accessed August 23, 2023

⁵ <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#transportation/entiresector/allgas/category/all>

⁶ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/16/fact-sheet-one-year-in-president-bidens-inflation-reduction-act-is-driving-historic-climate-action-and-investing-in-america-to-create-good-paying-jobs-and-reduce-costs/>

⁷ <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf>

⁸ <https://carnegieendowment.org/2023/05/03/friendshoring-critical-minerals-what-could-u.s.-and-its-partners-produce-pub-89659>

⁹ <https://publications.anl.gov/anlpubs/2022/11/178584.pdf>

¹⁰ <https://www.energy.gov/investments-american-made-energy>

While petroleum can't be recycled, the critical minerals in EV batteries can. The global market for battery recycling alone is expected to grow as an increasing number of EVs approach their end-of-life and while the volume of such feedstocks is less than 2 GWh today, it could reach 100 GWh by 2030 and 1.3 TWh by 2040.¹¹

Expanded EV deployment will lead to significant changes to the 24-hour electricity demand cycle. By incorporating emerging technologies such as power storage and grid-scale battery technology, using smart software to optimize charging schedules, capitalizing on time-of-use rates, and ensuring strategic charging buildout, transportation electrification has the potential to become a mechanism for reinforcing and stabilizing U.S. electricity infrastructure.¹²

The U.S. Department of Energy's Alternative Fuels Data Center has mapped 430 public Level 2 and DC fast charging stations with 915 individual ports in Maine and that data excludes residential charging—where a majority of charging occurs.¹³ While it is already easy for EV drivers to find a charge, the expansion of the U.S. national charging network through the National Electric Vehicle Infrastructure formula program, of which Maine will receive \$19.3 million over five years, paired with millions of dollars in private capital will only further inspire confidence in the technology.¹⁴

In 2022, the number of available EV models worldwide reached 500, up from below 450 in 2021 and more than doubling relative to 2018-2019.¹⁵ In particular, OEMs are expanding their SUV and pickup truck offerings in line with consumer demand. Consumer Reports has compiled a list of at least 30 new EVs in a variety of makes and models that are expected in the U.S. by the end of 2024.¹⁶ In addition to new models from legacy automakers, there are a number of new entrants expected in 2024 including Fisker, Indi, Polestar, and VinFast. Over the time frame covered by the ACC II program, the number of models can be expected to continue to increase quickly as major carmakers expand their EV portfolios and new entrants strengthen their positions.

Maine has an opportunity to lead in this space by adopting the Advanced Clean Cars II program. Doing so will produce good-paying American jobs, reduce consumer costs, improve public health, and reduce carbon emissions. It will also send a strong signal across the EV supply chain that robust demand for electric automotive technologies is here to stay, laying the groundwork for further industry expansion.

¹¹ <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/reliable-supply-of-minerals>

¹² <https://www.zeta2030.org/policy-brief-powering-the-ev-market-how-electricity-providers-are-planning-for-the-future>

¹³ https://afdc.energy.gov/fuels/electricity_locations.html#/analyze?fuel=ELEC; accessed August 23, 2023

¹⁴ https://www.fhwa.dot.gov/bipartisan-infrastructure-law/evs_5year_nevi_funding_by_state.cfm

¹⁵ <https://www.iea.org/reports/global-ev-outlook-2023/trends-in-electric-light-duty-vehicles>

¹⁶ <https://www.consumerreports.org/hybrids-evs/hot-new-electric-cars-are-coming-soon-a1000197429/>

ZETA and our member companies appreciate the opportunity to submit comments on this proposed action. For a more comprehensive discussion on how the EV supply chain is preparing for a fully electric future, we encourage the DEP to review ZETA's comments to EPA on its proposed rule to set multi-pollutant emission standards for model year 2027-2032 light- and medium-duty vehicles.¹⁷

Thank you for your consideration of these comments. If you have any questions or concerns, please contact me at al@zeta2030.org.

Sincerely,



Albert Gore
Executive Director
Zero Emission Transportation Association (ZETA)

¹⁷ <https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0829-0638>