



Public Comment in Opposition to Proposed Regulation PR2023-023: California Light Duty Vehicle Emission Standards for 2027-2035

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August 23, 2023

The adoption of these regulations from the California Air Resources Board will only serve to export Connecticut's transportation emissions overseas, increase the cost of car ownership and infrastructure, and fails to recognize the reality of electricity generation and costs in our state and region.

According to the Department of Energy and Environmental Protection (DEEP), Connecticut's transportation sector comprises all of an estimated 0.04%² of global carbon emissions.³ Eliminating every single carbon emission from the transportation sector here will have an undetectable effect on anthropogenic climate change according to the IPCC.⁴ This policy will not even achieve that goal and will increase emissions outside of Connecticut.

The manufacturing of electric vehicle (EV) batteries requires heavy industrial mining for minerals such as lithium, manganese, graphite and cobalt.⁵ The majority of mining for cobalt, to use one example, occurs in the country of Congo, where extensive child labor is used to get it out of the ground along with energy intensive machinery which run on various forms of petroleum.⁶ There have been long running concerns over fuel shortages in the future for

¹ Yankee Institute is a non-profit organization based in Hartford, CT: <https://yankeeinstitute.org>

² Connecticut Greenhouse Gas Emissions Inventory, *CT Department of Energy and Environmental Protection*: https://portal.ct.gov/-/media/DEEP/climatechange/1990-2021-GHG-Inventory/DEEP_GHG_Report_90-21_Final.pdf

³ CO2 Emissions in 2022, *International Energy Agency*: <https://www.iea.org/news/global-co2-emissions-rose-less-than-initially-feared-in-2022-as-clean-energy-growth-offset-much-of-the-impact-of-greater-coal-and-oil-use#>

⁴ Summary for Policymakers, *Intergovernmental Panel on Climate Change*: <https://www.ipcc.ch/sr15/chapter/spm/>

⁵ Minerals Used in Electric Cars Compared to Conventional Cars, *International Energy Agency*: <https://www.iea.org/data-and-statistics/charts/minerals-used-in-electric-cars-compared-to-conventional-cars>

⁶ How 'Modern-Day Slavery' in the Congo Powers the Rechargeable Battery Economy, *National Public Radio*: <https://www.npr.org/sections/goatsandsoda/2023/02/01/1152893248/red-cobalt-congo-drc-mining-siddharth-kara>

internal combustion engine vehicles (ICEVs), but ignoring the limit on current mines⁷ and total minerals available on Earth that are required to create EVs at scale is shortsighted at best.⁸

After the mining process occurs, these minerals must be shipped to where they can be processed. The majority of EV mineral processing occurs in China⁹ which is the planet's largest carbon emitter and is building new coal-powered power plants every week to fuel the industry.¹⁰

This mining, processing, manufacturing, and shipping – on diesel-powered cargo ships¹¹ – means an EV has emitted far more carbon to arrive at your home than an ICEV.¹² Current estimates find that EVs must be driven for 60,000 miles or more to generate emissions reductions when compared to ICEVs.¹³

Given that EVs are heavier, thanks to their massive batteries, they also lead to increased wear and tear of roads, tires, brakes, etc. than comparable ICEVs which require more carbon emissions to replace them over time – further reducing the proposed benefit they provide.¹⁴ Heavier vehicles also cause higher accident-related fatalities.¹⁵

Any potential net reduction in carbon emissions based on this regulatory change will not be realized until after an EV has been driven on our roads for years – assuming it stays charged in the winter¹⁶ and doesn't catch fire in the summer.¹⁷

⁷ Dig This: The Shift to EVs Requires a Massive Expansion of Battery Metal Mining, *Forbes*:

<https://www.forbes.com/sites/alanohnsman/2022/09/19/dig-this-the-shift-to-evs-requires-a-massive-expansion-of-battery-metal-mining/>

⁸ Why the Rush to Mine Lithium Could Dry Up the High Andes, *Yale School of the Environment*:

<https://e360.yale.edu/features/lithium-mining-water-andes-argentina>

⁹ Why a Chinese Company Dominates Electric Car Batteries, *New York Times*:

<https://www.nytimes.com/2021/12/22/business/china-catl-electric-car-batteries.html>

¹⁰ China is Building Six Times More New Coal Plants than Other Countries, *National Public Radio*:

<https://www.npr.org/2023/03/02/1160441919/china-is-building-six-times-more-new-coal-plants-than-other-countries-report-fin>

¹¹ How Much Fuel Does a Cargo Ship Use?, *Maritime Page*: <https://maritimepage.com/fuel-consumption-how-much-fuel-cargo-ship-use>

¹² The Race to Decarbonize Electric-Vehicle Batteries, *McKinsey & Company*:

<https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/the-race-to-decarbonize-electric-vehicle-batteries>

¹³ Electric Vehicles for Everyone? The Impossible Dream, *Manhattan Institute*:

<https://manhattan.institute/article/electric-vehicles-for-everyone-the-impossible-dream>

¹⁴ Comparison of Total PM Emissions Emitted from Electric and Internal Combustion Engine Vehicles: An Experimental Analysis, *Science of The Total Environment*:

<https://www.sciencedirect.com/science/article/pii/S004896972204058X>

¹⁵ Make Electric Vehicles Lighter to Maximize Climate and Safety Benefits, *Nature*:

<https://www.nature.com/articles/d41586-021-02760-8>

¹⁶ How Well Do Electric Cars Work in Cold Weather, *Cars.com*: <https://www.cars.com/articles/how-well-do-electric-cars-work-in-cold-weather-459914/>

¹⁷ Report Identifies Issue with Liquid Accumulating in EV Batteries, Including CT Bus that Burned, *CT Insider*:

<https://www.ctinsider.com/news/article/ct-ev-bus-fire-lithium-battery-ntsb-report-18206381.php>

Electric vehicles also cost nearly twice as much to purchase as comparable gasoline powered cars.¹⁸ To offset this, Connecticut taxpayers have provided some of the most generous subsidies in the country.¹⁹ And yet, less than 0.75% of all vehicles on Connecticut's roads are electric,²⁰ and the vast majority of households that own an electric vehicle also own a gas-powered one.²¹

Connecticut also has some of the highest electricity costs in the nation, currently 49th out of 50 states in residential electricity rates.²² With no foreseeable increases in access to cheap natural gas, renewable breakthroughs, or nuclear investments; Connecticut residents will only be paying more and using less as EVs drastically increase demand on the electrical grid.²³

California recently issued an alert to residents asking them not to charge their EVs during certain time periods to avoid overburdening its grid,²⁴ and that is with around 3% of all registered cars in the state being electric.²⁵ There will need to be a massive increase in electric energy supply across the country if EVs are going to comprise a significant portion of the automobile market.

U.S. taxpayers provided \$30 billion in subsidies to support the EV market in 2021 alone,²⁶ and \$5 billion of taxpayer resources have been allocated to build out EV charging stations across the country over the next several years.²⁷ Taxpayers have been subsidizing the sale and necessary infrastructure for EVs for decades and yet they only comprise a very small portion of the market and almost all of the benefits have gone to the wealthiest of U.S. residents.²⁸ This proposed regulation will make it inevitable that taxpayers will have to fund even more charging

¹⁸ Gas vs. Hybrid vs. Electric Cars: A Complete Guide, *The Zebra*: <https://www.thezebra.com/resources/driving/gas-car-vs-hybrid-car-vs-electric-car/>

¹⁹ Top States for Electric Vehicle Incentives 2023, *Vault Electricity*: <https://www.vaultelectricity.com/top-states-for-electric-vehicle-incentives/>

²⁰ Report: CT's EV Market Share Grew by 3.64% in Q4, *CT News Junkie*: <https://ctnewsjunkie.com/2022/03/22/report-cts-ev-market-share-grew-by-3-64-in-q4/>

²¹ Electric Vehicles in Multi-Vehicle Households, *Energy Institute at Haas, University of California, Berkeley*: <https://haas.berkeley.edu/wp-content/uploads/WP322.pdf>

²² Electric Power Monthly, Table 5.6.A Average Price of Electricity to Ultimate Customers by End-Use Sector, *U.S. Energy Information Administration*: https://www.eia.gov/electricity/monthly/epm_table_grapher.php

²³ Final 2023 Transportation Electrification Forecast, *ISO-New England*: https://www.iso-ne.com/static-assets/documents/2023/04/transfx2023_final.pdf

²⁴ Californians Told Not to Charge EVs as Grid Struggles in Heat Wave, *Barron's*: <https://www.barrons.com/news/californians-told-not-to-charge-evs-as-grid-struggles-in-heat-wave-01661978409>

²⁵ Automobile Registrations in the United States in 2021, by State, *Statista*: <https://www.statista.com/statistics/196010/total-number-of-registered-automobiles-in-the-us-by-state>

²⁶ Global EV Outlook 2022, *International Energy Agency*: <https://www.iea.org/reports/global-ev-outlook-2022/executive-summary>

²⁷ Historic Step: All Fifty States Plus D.C. and Puerto Rico Greenlit to Move EV Charging Networks Forward, Covering 75,000 Miles of Highway, *U.S. Department of Transportation*: <https://www.transportation.gov/briefing-room/historic-step-all-fifty-states-plus-dc-and-puerto-rico-greenlit-move-ev-charging>

²⁸ Today in Energy, *U.S. Energy Information Administration*: <https://www.eia.gov/todayinenergy/detail.php?id=36312>

infrastructure and EV production in order for Connecticut to reach these California imposed rules.

Connecticut's car dealer franchise regulations also decrease the supply and increase the costs of electric vehicles.²⁹ Further eliminating competition by banning ICEVs will only drive-up costs.

These costs will be barriers to Connecticut residents enjoying the freedom of car ownership, and we will also be taking away their most valuable resource: time. Depending on the car and charger, it can take the better part of a day to get a full charge, compare that with few minutes it takes someone to stop in at the pump and fill up at their leisure.³⁰ This also raises concerns over safety for people who cannot access a charged vehicle during an emergency or are forced to charge in an undesired location for an extended period of time.³¹

In Norway the majority of new cars are actually electric, which demonstrates that it is possible to achieve the goal – at least in the short-term – but the country has provided massive subsidies for each car³² and has been able to afford that through the selling of the nation's largest export: barrels of oil.³³

This policy is completely unreasonable for the people of Connecticut. It will not achieve its stated goal, and it will negatively affect every resident and business, disproportionately harming low-income households.

Yankee Institute urges DEEP to forgo adoption of this regulation, and for the Connecticut General Assembly to repeal or amend Section 22a-174g of the General Statutes of Connecticut to not bind the hands of our state regulators to adopt rules passed 3,000 miles away by policymakers who are completely unaccountable to the people of Connecticut.

Thank you again for the opportunity to submit comments against proposed regulation PR2023-023: Adoption of California Light Duty Vehicle Emission Standards for 2027-2035.

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²⁹ Tesla Skirts CT Direct Sales Ban, Plans Retail Location at Mohegan Sun, *CT Mirror*:

<https://ctmirror.org/2023/07/26/tesla-mohegan-sun-ct-store-ev-car-sales/>

³⁰ How Long Does It Take to Charge an Electric Car? *Kelley Blue Book*: <https://www.kbb.com/car-advice/how-long-does-it-take-to-charge-an-electric-car/>

³¹ Women Don't Feel Safe Charging Electric Cars at Night, *Metro*: <https://metro.co.uk/2022/10/03/women-dont-feel-safe-charging-their-electric-cars-at-night-17491799/>

³² Bjorn Lomborg: The Muddled Reality of Electric Cars, *Financial Post*: <https://financialpost.com/opinion/bjorn-lomborg-the-muddled-reality-of-electric-cars>

³³ Norway's Top Ten Exports, *World's Top Exports*: <https://www.worldstopexports.com/norways-top-10-exports/>