Environmental Defense Fund

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*Submitted via email to: Don Brown – Clerk of the Board, at don.brown@illinois.gov*

Re: Comments of EDF on the Proposed Clean Car and Truck Standards in Illinois, R24-17

## I. Introduction

Environmental Defense Fund (EDF) thanks the Illinois Pollution Control Board ("the Board") for its consideration of these comments in the matter of *Proposed Clean Car and Truck Standards: Proposed Section 35 Ill. Admin. Code 242* (Case #: R2024-17). EDF urges the Board to vote in favor of the Clean Car and Truck Standards ("the Standards") to protect public health and the environment, help mitigate climate change, and support Illinois' economy and consumers. Illinois has a clear and non-negotiable opportunity to achieve the Climate and Equitable Jobs Act's goal of 1 million EVs by 2030 while tangibly improving air quality in the near term. Together, the Advanced Clean Trucks (ACT), Advanced Clean Cars II (ACCII), and Heavy-Duty Engine and Vehicle Omnibus (HDO) will greatly increase the number of zero-emission vehicles (ZEVs) available for sale in Illinois, ensuring a better, more equitable future across the state.

The most urgent reason for emissions reductions is the public health impact of air pollution, especially in overburdened communities where industrial corridors intersect through neighborhoods, parks, and dense residential areas.[1] The impact is not felt equally – nonwhite residents in Illinois live in areas with the highest nitrogen oxide (NOx) burden at a rate nearly double that of white residents.[2] This pollution contributes to, among other conditions, new cases of childhood asthma, which affects every part of a child's life. It is the leading cause of missed school days and has been linked to diminished school performance.[3] Across Illinois, Black children are six times more likely to be hospitalized for asthma and a shocking ten times more

[1] *Chicago Truck Data Portal*, available at https://chicagotruckcounts.cnt.org/.
[2] Environmental Defense Fund, *Illinois Warehouse Boom: Tracing the growth of mega-warehouses and their health impacts* (Apr. 24, 2024), https://globalcleanair.org/wp-content/blogs.dir/95/files//IL_Warehouse_Boom_Report_EDF_4-24-24.pdf at 4.
[3] Bonnie B. Dean, *et al.*, *Uncontrolled asthma: assessing quality of life and productivity of children and their caregivers using a cross sectional Internet-based survey* (Sep. 8, 2010), Health and Quality of Life Outcomes, https://doi.org/10.1186/1477-7525-8-96 at 8, 96.

likely to die from asthma compared to non-Hispanic white children.[4] The medical cost of asthma alone in Illinois in 2020 was $2.2 billion.[5] Although vehicle pollution has decreased nationwide, historically overburdened areas continue to struggle with disproportionately high exposure and subsequent negative health outcomes.[6]

In this case before the Board, numerous affected community members have voiced their concerns through expert testimony and public comment. EDF emphasizes the urgent and thoughtful consideration of the testimony of Illinoisans most impacted by air pollution. In support and solidarity, EDF seeks to expand on the feasibility of these standards and their benefits to all Illinoisans regardless of where they live or whether they want to adopt this technology.

In these comments, EDF will address the following points:

- The Standards are flexible and feasible.
- Greater supply and access to ZEVs benefits consumers, fleets, and ratepayers.
- State action is necessary and urgent to meet consumer demand and support complementary state priorities.

## II. ACT, ACCII, and HDO are feasible standards to meet and offer flexible compliance strategies.

*Mass ZEV adoption is feasible and accelerating.*

Light-duty electric vehicle (EV) adoption is booming. Forecasts consistently underestimate EV sales growth – 2023 sales outperformed 85 percent of "expert forecasts" from 2019 to 2022, in many cases double the expected growth.[7] According to Kelley Blue Book's analysis of January 2025 sales numbers, there was a 30 percent year-over-year increase in EV sales after a record-busting year in 2024 with an average vehicle price paid of 1.4 percent less than last year.[8] Used EV volume is at an all-time high, contributing to a 64 percent increase in year-over-year

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[4] Illinois Department of Public Health, *Hospital Discharge Dataset* (2020), https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/asthma-trends-hospital-discharge-data-2016-2019.pdf; Illinois Department of Public Health, *Asthma Burden Update* (2015), https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/asthma-mortality-tablessept20docx-10062020.pdf.

[5] U.S. Centers for Disease Control and Prevention, National Center for Health Statistics, *Underlying Cause of Death 2000-2016 on CDC WONDER Online Database* (2020), https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/publications-ohpm-asthma-burden-update-2015-cost-040516.pdf.

[6] Colmer, *et al.*, *Disparities in PM2.5 air pollution in the United States* (Jul. 31, 2020), Science 369 (6503), https://www.science.org/doi/10.1126/science.aaz9353.

[7] Environmental Defense Fund, *Electric vehicle sales are going further, faster than experts predicted* (March 2024), https://www.edf.org/sites/default/files/2024-03/EDF_Actual_2023_Sales_Compared_to_Forecasts_Mar2024.pdf .

[8] Sean Tucker, *EVs Hit Record Market Share in January*, Kelley Blue Book (Feb. 21 2025), https://www.kbb.com/car-news/evs-hit-record-market-share-in-january/.

sales, 57 percent of which cost under $30,000.[9] Prices are expected to fall further as approximately 125,000 leased vehicles enter the secondhand market in 2025, doubling in 2026, and growing fivefold by 2027.[10]

More medium- and heavy-duty (MHD) ZEVs were deployed in 2024 alone than 2020 through 2023 combined, setting a record year of over 15,300 deployments.[11] Sales have been especially bolstered by Amazon's order of 100,000 Illinois-built Rivian electric delivery vans.[12] Manufacturing is booming so quickly that by 2028, U.S. EV manufacturing facilities will be capable of producing approximately 4.7 million new EVs each year, nearly one-third of all new vehicles sold in the US in 2023, and enough gigawatt-hours of EV batteries to supply more than 12 million new electric cars, SUVs, and trucks.[13] The state of Illinois has been awarded over $543 million in federal EV investments: $430 million in Climate Pollution Reduction Grants,[14] over $55 million to support transit electrification,[15] $3 million to improve air quality near ports,[16] nearly 300 electric school bus grants,[17] and nearly $55.4 million in Clean Heavy Duty Vehicle grants for school buses, vocational vehicles, and accompanying infrastructure.[18]

Some Illinois fleets are already leading local progress. Illinois-based Dot Transportation, Inc. (DTI), North America's largest food industry redistributor, has logged a mighty 30,000 hours of usage with its first-deployed Orange EV electric terminal truck.[19] DTI has reported "substantial operational and environmental benefits, reducing its carbon footprint while enhancing efficiency and reducing costs at its distribution centers."[20] Midwest based Orange EV has deployed more

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[9] Liz Najman, *Used Electric Car Prices & Market Report – Q1 2025*, Recurrent Auto (Feb. 6, 2025), https://www.recurrentauto.com/research/used-electric-vehicle-buying-report.
[10] *Id.*
[11] Marissa Nixon, *2024 was another record year for electric truck deployment, proving that the shift to zero-emission is not slowing down*, Environmental Defense Fund (Nov. 19, 2024), https://blogs.edf.org/energyexchange/2024/11/19/2024-was-another-record-year-for-electric-truck-deployments-proving-that-the-shift-to-zero-emission-is-not-slowing-down/.
[12] Marissa Nixon, *Electric truck deployments by U.S. companies grew five times in 2023*, Environmental Defense Fund (Dec. 13, 2023), https://blogs.edf.org/energyexchange/2023/12/13/electric-truck-deployments-by-u-s-companies-grew-five-times-in-2023/.
[13] Environmental Defense Fund & WSP, *U.S. Electric Vehicle Manufacturing Investments and Jobs: Turning Investment into Action* (Jan. 2025), https://library.edf.org/AssetLink/j1n8dp1041c0g2m68lf0m5qp7p1e2i45.pdf.
[14] Environmental Protection Agency, *State of Illinois*, https://www.epa.gov/inflation-reduction-act/state-illinois.
[15] Federal Transit Administration, *FY24 FTA Bus and Low- and No-Emission Grant Awards*, https://www.transit.dot.gov/funding/grants/fy24-fta-bus-and-low-and-no-emission-grant-awards.
[16] Environmental Protection Agency, *Clean Ports Program Selections*, https://www.epa.gov/ports-initiative/clean-ports-program-selections.
[17] Environmental Protection Agency, *Clean School Bus Program Awards*, https://www.epa.gov/cleanschoolbus/clean-school-bus-program-awards.
[18] *Id.*
[19] Orange EV, *Dot Transportation's First-Deployed Orange EV Electric Terminal Truck Reaches 30,000 Hours of Usage, Setting a New Benchmark in Sustainable Fleet Operations,* PR Newswire (Feb. 25, 2025), https://www.prnewswire.com/news-releases/dot-transportations-first-deployed-orange-ev-electric-terminal-truck-reaches-30-000-hours-of-usage-setting-a-new-benchmark-in-sustainable-fleet-operations-302383941.html
[20] *Id.*

than 1,300 trucks nationwide, and DTI plans to expand its fleet further.[21] Legacy manufacturers have also made bold commitments to transition their vehicle production to zero-emission: Volvo and Daimler, which make up 70% of Class 7-8 truck sales, have joined International (formerly Navistar), Paccar, and Walmart in committing to zero-emission sales by 2040, beyond the requirements set forth in the ACT.[22] Vehicle models are growing as well, as there are now over 200 models of MHD ZEVs available from 60 manufacturers, including 24 heavy-duty trucks, the largest size.[23]

Nevertheless, data on zero-emission truck deployment demonstrates that despite making up only a quarter of all truck registrations, states that have adopted the ACT account for 38 percent of all zero-emission truck deployments.[24] ACT states are simply prioritized by manufacturers for sales and service operations. Meanwhile, Illinois fleet operators with ambitious electrification goals have found it "almost impossible to buy from within the state."[25] For example, Illinois-based all-electric composting service WasteNot Compost navigated many bureaucratic hoops to purchase electric trucks and vans for their operations from California, lamenting that having in-state options for purchase would have been a "game changer" for their fleet, and hope to see the ACT change that.[26] They now operate the largest fully electric fleet of waste management vehicles in the country. With the ACT, progress will only continue to grow.

For charging needs under the ACT, an Atlas Public Policy study found that the majority of MHD EVs in Illinois under ACT compliance will be Class 2b/3 vehicles such as heavy-duty pickup trucks and cargo vans.[27] Already, cargo vans make up 88% of zero-emission truck deployment, according to CALSTART, with almost 38,000 zero-emission cargo vans and nearly 1,500 in Illinois.[28] Many of these vehicles will have individual owners with access to home charging, and fleet operators most often have access to long dwell-times in depots where charging is more affordable to install and maintain. Even for larger Class 4-8 trucks, the vast majority of charging

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[21] The EV Report, *Orange EV Truck Hits 30,000* (Feb. 26, 2025), https://theevreport.com/orange-ev-truck-hits-30000.

[22] European Automobile Manufacturers Association and Potsdam Institute for Climate Impact Research, *Joint Statement – The Transition to Zero-Emission Road Freight Transport,* https://www.acea.auto/files/acea-pik-joint-statement-the-transition-to-zero-emission-road-freight-trans.pdf; Jason Mathers, *Walmart commits to 100% zero-emission trucks by 2040, signaling electric is the future,* Environmental Defense Fund (Sept. 22, 2020), https://blogs.edf.org/energyexchange/2020/09/22/walmart-commits-to-100-zero-emission-trucks-by-2040-signaling-electric-is-the-future/.

[23] Baha M. Al-Alawi, *Zeroing in on Zero-Emission Trucks,* CALSTART (Jan. 2022), https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf.

[24] Jacob Richard, Jessie Lund, and Baha Al-Alawi, *Zeroing in on Zero-Emission Trucks*, CALSTART (Jan. 2024), https://calstart.org/wp-content/uploads/2024/01/ZIO-ZET-2024_010924_Final.pdf

[25] Il Clean Jobs, *Meet the Chicago compost company with an all-electric fleet!*, YouTube (Dec. 6, 2024), https://www.youtube.com/watch?v=4iNTjsD4GCQ.

[26] *Id.*

[27] Lucy McKenzie and James Di Filippo, *Charging Infrastructure Needed to Support Advanced Clean Trucks in Illinois*, Atlas Public Policy *(prepared for Environmental Defense Fund)* (June 2024), https://library.edf.org/AssetLink/34rs2tc02xau5hnjcic3yg5j521v656u.pdf.

[28] *ZET Dashboard*, CALSTART, available at https://calstart.org/zio-zets/#zet-dashboard.

needed will be in depots. En-route charging needs for MHD EVs are not burdensome, either – Atlas predicted 960 en-route fast charging ports for Class 2b-3 vehicles and 2,000 en-route fast charging ports for Class 4-8 vehicles are needed by 2032. For comparison, Illinois already has over 1,300 light-duty fast charging ports[29] and was just awarded $114 million in funding to build 14 truck charging hubs with 345 charging ports for heavy-duty freight vehicles.[30]

The long dwell times of most MHD vehicles are particularly well suited for electrification. Most of these vehicles, across vehicle segments and duty cycles, spend more than 6 hours a day parked.[31] Over 90 percent of Class 2b-3 vehicles, which are most MHD vehicles currently and expected to be most MHD EVs, travel less than 100 miles per day.[32] Around 90 percent of Class 4-8, such as straight body trucks, box trucks, and buses, also travel less than 100 miles per day.[33] Of course, many Class 7 and 8 tractor trucks travel great distances daily, yet over half of them still travel less than 100 miles per day.[34] These mileage figures corroborate data collected by the Large Entity Reporting rule in California, often adopted with the ACT in other states, which found that a third of tractor trucks charged at home bases, over half had a predictable usage pattern, and about forty percent traveled fewer than 200 miles a day.[35]

Meanwhile, light-duty public charging infrastructure has kept up with EV sales growth nationally.[36] In Illinois, the number of public fast-charging ports doubled in 2024.[37] Most Illinoisans, like most of the country, live in single-family homes with access to home charging.[38] Both major investor-owned utilities in Illinois offer EV charging rebates for low-income customers and those in environmental justice areas as required by the Climate and Equitable Jobs Act's Beneficial Electrification plans.[39] For those living in multi-family homes, the EV Charging

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[29] *Alternative Fueling Station Counts by State*, U.S. Department of Energy, available at https://afdc.energy.gov/stations/states.
[30] Office of the Governor J.B. Pritzker, *Gov. Pritzker Announces New Electric Vehicle Charging Wins for Illinois* (Jan. 10, 2025), https://gov-pritzker-newsroom.prezly.com/gov-pritzker-announces-new-electric-vehicle-charging-wins-for-illinois.
[31] Sam Wilson, *Ready for Work 2.0: On the Road to Clean Trucks*, Union of Concerned Scientists (Feb. 2025), https://www.ucs.org/sites/default/files/2025-02/ready-for-work-2.pdf at 22.
[32] *Id.*
[33] *Id.*
[34] *Id.*
[35] California Air Resources Board, *Large Entity Fleet Reporting: Statewide Aggregated Data,* https://ww2.arb.ca.gov/sites/default/files/2022-02/Large_Entity_Reporting_Aggregated_Data_ADA.pdf.
[36] Stephen Edelstein, *US EV charging kept up with growth, gained reliability in 2024*, Green Car Reports (Dec. 31, 2024), https://www.greencarreports.com/news/1145402_us-ev-charging-kept-up-with-growth-gained-reliability-in-2024.
[37] Nara Schoenberg, *Illinois plans to add more than 1,000 new public EV chargers*, Chicago Tribune (Feb. 9, 2024), https://www.chicagotribune.com/2024/02/09/illinois-ev-chargers/.
[38] Jonathan Jones, *U.S. Cities with the Most Single-Family Homes*, Construction Coverage (June 29, 2024), https://constructioncoverage.com/research/cities-with-the-most-single-family-homes
[39] Ameren Illinois, *Ameren Illinois files plan to accelerate electrification of transportation in Downstate Illinois*, https://www.ameren.com/-/media/illinois-site/files/ceja/ameren-be-fact-sheet-08032022.ashx; Denise Munoz, *ComEd's Beneficial Electrification (BE) Plan: New EV Rebates and Customer Tools*, ComEd (May 9, 2024), https://il-act.org/wp-content/uploads/2024/05/Denise-Munoz-ComEd-Green-Drives-Alsip-2024.pdf.

Act, passed in 2023, has made new homes ready for EV charging infrastructure and given renters and condominium owners a right to charge in their homes.[40]

Notably, manufacturers are already satisfying credit requirements in California and Oregon well ahead of schedule[41] and have historically overperformed in the previous Advanced Clean Cars program.[42] Because the early credit flexibility discussed in the next section created an oversupply of credits, analysis shows that manufacturers would need as little as 2 percent fully electric ZEV sales to meet 2026 requirements.[43] Even if those early credits are spread out into 2030, the 2026 requirements would necessitate less than 30 percent ZEVs (of which 23 percent would need to be fuel cell electric vehicles or battery EVs).[44]

*The rules are gradual and offer multiple flexibilities for compliance.*

ACT and ACCII are credit and deficit programs where manufacturers earn compliance credits based on their vehicle sales in a given year. Sales target percentages ramp up gradually.[45] The ACT accounts for emissions differences among vehicle sizes such that weight class multipliers generate higher credit value.[46] And neither rule is restricted to only EVs – sales of fuel cell electric vehicles (FCEVs), plug-in hybrid electric vehicles (PHEVs), and near zero-emission vehicles (NZEVs) all generate credits.[47] Along with these fuel-type and technology flexibilities, the programs themselves have multiple paths to compliance. Although there is a two-year delay before states may begin enforcement after adoption under the Clean Air Act, states may accept early compliance credits.[48] Extra credits may be sold or traded to other manufacturers, rolled

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[40] Neda Deylami, *Illinois renters & condo owners have a right to charge*, Environmental Defense Fund, https://www.edf.org/sites/default/files/documents/SB40%20Fact%20sheet%20final.pdf.
[41] *Advanced Clean Trucks Compliance and Incentive Update,* California Air Resources Board, https://ww2.arb.ca.gov/resources/documents/advanced-clean-trucks-compliance-and-incentives-update?corr.
[42] *Annual ZEV Credits Disclosure Dashboard,* California Air Resources Board, available at https://ww2.arb.ca.gov/applications/annual-zev-credits-disclosure-dashboard.
[43] David Reichmuth, *What the Auto Industry Isn't Telling You About California's Clean Vehicle Rules*, Union of Concerned Scientists (Feb. 28, 2025), https://blog.ucsusa.org/dave-reichmuth/what-the-auto-industry-isnt-telling-you-about-californias-clean-vehicle-rules/.
[44] *Id.*
[45] Neda Deylami, *Here's what the Advanced Clean Trucks rule means for Illinois manufacturers*, Environmental Defense Fund (May 17, 2024), https://blogs.edf.org/energyexchange/2024/05/17/heres-what-the-advanced-clean-trucks-rule-means-for-manufacturers/.
[46] *Id.*
[47] Claire Buysse and Ben Sharpe, *California's Advanced Clean Trucks regulation: Sales requirements for zero-emission heavy-duty trucks*, International Council on Clean Transportation (July 2020), https://theicct.org/wp-content/uploads/2021/06/CA-HDV-EV-policy-update-jul212020.pdf. Under the ACT, NZEVs may generate up to 75% of a ZEV credit, which may only be used for up to half of a manufacturer's yearly deficit. Under ACCII, sales of FCEVs count toward ZEV credits, but only through 2031 and are subject to proportional value requirements based on the FCEV sales percentage share. PHEV sales may account for up to 20% of annual value requirements.
[48] Marie McNamara, *Understanding California's Advanced Clean Cars II Regulation*, RMI (June 13, 2023), https://rmi.org/understanding-californias-advanced-clean-cars-ii-regulation/.

over, or banked.[49] Under the ACT, credits may be traded among vehicle classes.[50] In fact, the ZEV credit data from California show that all manufacturers are comfortably in compliance with ZEV requirements and credit balances far exceed those needed under the Standards.[51] With credit pooling and trading, credit requirements can easily be met. The bottom line is that sufficient flexibilities are provided to accommodate any challenges within a particular market segment.

Adoption of the ACT in Illinois will ensure that the sector as a whole moves toward zero-emissions. However, conventionally powered vehicles will be on the roads for the foreseeable future, and it is imperative that the State address the tailpipe emissions from fossil fuel heavy-duty trucks and buses for as long as they continue to be manufactured. The HDO provides an important complement to the ACT, advancing cleaner vehicle technology while addressing the pressing need for cleaner air in communities suffering from dangerous pollution levels right now.

California Air Resources Board (CARB) staff demonstrated the feasibility of the HDO through several years of extensive development and testing in partnership with the Southwest Research Institute.[52] Testing shows that the standards can be met with simple technological fixes like improved engine calibration, new configurations of after-treatment devices, and urea injection.[53] Cylinder deactivation, in particular, will ensure emissions are reduced in all driving modes, including those that occur in or near residential neighborhoods exposed to high truck traffic. Cylinder deactivation improves engine efficiency, reduces carbon dioxide, and increases exhaust temperature, which reduces CO2 by improving NOx catalyst efficiency, especially at low speed and low load conditions where current after-treatment systems have been less effective due to low exhaust temperature.[54] In fact, it has been demonstrated that current emissions control technology performs very poorly in real-world conditions, especially in urban areas below 25 miles per hour, resulting in dramatically higher (and illegal) NOx emissions.[55]

To put this rule's feasibility into perspective, the last revision of the NOx standard for 2010 heavy-duty diesel engines was one of the most technology-forcing emission standards ever adopted by EPA and CARB.[56] Compliance required development of a completely new catalyst working in concert with newly developed particulate filters, a urea dosing system that had to

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[49] Buysse and Sharpe, *supra* note 47.
[50] *Supra* note 45.
[51] *Supra* note 42.
[52] California Air Resources Board, *Public Hearing to Consider the Proposed Heavy-duty Engine and Vehicle Omnibus Regulation and Association Amendments, Staff Report: Initial Statement of Reasons* (2020) at ES-12.
[53] *Id.* at III-12 to III-27.
[54] *Id.* at V-5.
[55] Huzeifa Badshah, Francisco Posada, and Rachel Muncrief, *Current state of NOx emissions from in-use heavy-duty diesel vehicles in the United States*, International Council on Clean Transportation (Nov. 2019), https://theicct.org/wp-content/uploads/2021/06/NOx_Emissions_In_Use_HDV_US_20191125.pdf.
[56] Yihao Xie, *U.S. heavy-duty vehicle NOX standards: Updates to emission limits, testing requirements, and compliance procedures*, International Council on Clean Transportation (July 2023), https://theicct.org/wp-content/uploads/2023/07/us-nox-standards-update-jul23.pdf.

closely track the amount of engine-out NOx in the tailpipe that varies greatly under different driving conditions and integration of an advanced and complex engine exhaust gas recirculation system – all while maintaining minimal impact on fuel consumption. Despite all this, heavy-duty diesel engine manufacturers stepped up to this unprecedented challenge and successfully met the 2010 NOx standards. There is no reason to expect that they cannot rise to the occasion again.

## III. ZEVs are economical and benefit all Illinoisans.

*Illinoisans should have access to vehicles with low total cost of ownership, high satisfaction, and falling prices.*

ZEVs have an unbeatable lower total cost of ownership than their fossil fuel counterparts. A 2024 Atlas Public Policy analysis of the five most popular gasoline-powered vehicles compared to an EV equivalent found that in every case, EVs save owners money in the seven-year period most people keep a new car.[57] On average, EVs save consumers $6,000 to $10,000 over their lifetimes.[58] Those switching from a gasoline-powered pickup or SUV save even more due to the significant difference in fuel efficiency.[59] For example, an EDF study found that Pennsylvanians switching from a Ford F-150 to an electric Ford F-150 Lightning could save up to $27,600.[60] These savings will only grow as battery prices fall even further. Goldman Sachs predicts upfront price parity between gasoline-powered vehicles and EVs to occur in 2026 at $80 per kilowatt-hour, half the 2023 price.[61] Some experts predict battery prices to be as low as $45 per kilowatt-hour by 2030.[62]

These savings translate to MHD ZEVs as well. In 2020, California-based food manufacturing company Bolthouse Farms bought five electric yard trucks in addition to a diesel equivalent. They found that the electric trucks averaged 75% less downtime due to fewer maintenance needs (522 hours for the diesel truck compared to 134 hours for the electric truck) and saved 80% in repair costs, compared to the diesel counterpart.[63] Operating costs are also dramatically lower

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[57] Nick Nigro and Dan Wilkins, *Comparing the cost of owning the most popular vehicles in the United States*, Atlas Public Policy (March 2024), https://atlaspolicy.com/wp-content/uploads/2024/03/Comparing-the-Cost-of-Owning-the-Most-Popular-Vehicles-in-the-United-States.pdf.

[58] Chris Harto, *Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers*, Consumer Reports (Oct. 2020), https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf; *see also* Marco Miotti, et al., *Personal Vehicles Evaluated against Climate Change Mitigation Targets* (Sep. 27, 2016), Environmental Science & Technology 50(20), https://pubs.acs.org/doi/full/10.1021/acs.est.6b00177.

[59] *2024 Q3: Despite summer drop in gas prices, EVs save money in all 50 states in Q3*, Coltura (Dec. 16, 2024), https://coltura.org/ev-savings-report/.

[60] *Driving Change: How Electric Vehicles Benefit Pennsylvania*, Environmental Defense Fund (Jan. 2024), https://www.edf.org/sites/default/files/2024-01/PA-Electric-Vehicle-Profiles-EDF.pdf.

[61] *Supra* note 9.

[62] *Id.*

[63] Linda Baker, *California readies nation's first electric truck sales and reporting mandate*, Freight Waves (June 10, 2020), https://www.freightwaves.com/news/california-readies-nations-first-electric-truck-sales-and-reporting-ma.

with electric trucks; the diesel trucks cost $3.93 an hour, or $15,750 a year, while the ZEVs cost 78 cents per hour, or $1,575, a remarkable tenfold cost difference. A 2022 Roush study found that the total cost of ownership of electric Class 7 and 8 tractor-trucks is significantly lower than internal combustion engine counterparts.[64] In addition to lower fuel and maintenance costs, the study also predicts rapidly improving battery chemistry and density such that cargo capacity is equal with the currently heavier ZEV models. By 2030, the International Council on Clean Transportation (ICCT) predicted lower total cost of ownership even for long-haul trucks.[65] In Illinois specifically, ICCT found that the total cost of ownership would be $1.84 per mile for diesel trucks and $1.73 per mile for battery-electric trucks.[66] An additional study found that by 2027, electric trucks would reach upfront price parity with diesel alternatives.[67] Many vehicles have already achieved parity – the 2025 Ford E-Transit costs the same as the gasoline version, not including tax incentives, which would further reduce the purchase price.[68] Notably, the Standards proposed in this case would begin enforcement in 2028, well after these predicted parity timelines.

EV owners are highly satisfied with their vehicles. A 2024 Consumer Reports survey of 330,000 vehicle owners found that all-electric Rivian and Tesla were in the top 5 brands with the highest satisfaction, and the two highest rated for ownership cost.[69] Fleet owners feel similar. A July 2024 Cox Automotive study asked over 500 fleet owners about their experiences with EVs. EVs outperformed ICE in every category: overall satisfaction, total cost of ownership, ability to complete the business purpose, and vehicle usage and capabilities.[70] Although only 14 percent of those surveyed owned EVs, 90 percent are likely to acquire an EV in the next acquisition cycle, and 87 percent are expecting EVs in their fleets in the next five years.[71]

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[64] Vishnu Nair, Himanshu Saxena, and Sajit Pillai, *Class 7 and Class 8 Tractor–Trailer Electrification for MYs 2030 and 2032*, Roush (*prepared for Environmental Defense Fund*) (June 2023), https://www.edf.org/sites/default/files/2023-08/Roush%20Class%207%20and-%20%208%20Tractor%E2%80%93Trailer%20Electrification%20for%20MYs%202030%20and%202032.pdf.

[65] Hussein Basma, et al., *Total cost of ownership of alternative powertrain technologies for Class 8 long-haul trucks in the United States*, International Council on Clean Transportation (Apr. 2023), https://theicct.org/wp-content/uploads/2023/04/tco-alt-powertrain-long-haul-trucks-us-apr23.pdf

[66] *Id.* at 21. The study also analyzed hydrogen fuel cell and hydrogen internal combustion engine vehicles, but both of those had a total cost of ownership above $2.00 per mile.

[67] Vishnu Nair, et al., *Technical Review of: Medium and Heavy-Duty Electrification Costs for MY 2027- 2030*, Roush (Feb. 2, 2022), https://blogs.edf.org/climate411/wp-content/blogs.dir/7/files/2022/02/EDF-MDHD-Electrification-v1.6_20220209.pdf

[68] Jameson Dow, 2025 *Ford E-Transit electric costs the same or less than the gas version*, Electrek (Oct. 23, 2024), https://electrek.co/2024/10/23/2025-ford-e-transit-costs-the-same-as-the-gas-version-upfront/.

[69] Jon Linkov, *Most and Least Loved Car Brands*, Consumer Reports (Dec. 5, 2024), https://www.consumerreports.org/cars/car-reliability-owner-satisfaction/most-and-least-liked-car-brands-a1291429338/.

[70] *The Future of Fleets: Path to EV Adoption*, Cox Automotive (July 2024), https://www.coxautoinc.com/wp-content/uploads/2024/07/2024-Path-to-EV-Adoption-Fleet-Study-Summary.pdf.

[71] *Id.*

Truck drivers love driving electric. Locally, the WasteNot Compost CEO attested that drivers are excited to work for the company because of their all-electric fleet.[72] On the national level, for four years, the North American Council for Freight Efficiency (NACFE) has held demonstrations of zero-emission trucking operations with real routes and drivers.[73] Their testimonies highlight the widespread benefits of electrification: less noise, better visibility, more comfortable, and convenient, not to mention the drastically cleaner air with no diesel odors.[74]

*These rules bring market certainty for manufacturers and utilities, supporting businesses and preparing our grid.*

The gradual ramp up of sales targets in the Standards provides manufacturers with clear, long-term goals to achieve and allows complementary businesses, such as charging providers, to scale without risk. Fleet operators can prepare depot charging operations as they plan acquisitions and work with utilities on interconnection. Market certainty also saves ratepayers money, regardless of their vehicle ownership. As utilities plan investments in the grid, predicting the load of EVs, especially MHD EVs, is essential to keeping costs low. Utilities save money when they are able to proactively build to meet MHD EV needs.[75] Several studies have found that grid investments for EVs will have a downward pressure on rates.[76] The gradual ramp up of the ACT and ACCII provides utilities with that roadmap.

IV. Clean Car and Truck Standards are necessary to achieve existing state goals.

*The Standards are necessary to meet Illinois' transportation decarbonization goals.*

The Climate and Equitable Jobs Act kickstarted the transition to zero-emission vehicles in Illinois through its impactful Beneficial Electrification plans for utilities, EV purchase rebates, EV charger rebates, and support for charging infrastructure, especially in environmental justice communities. Illinois is about 13 percent of the way to CEJA's goal of 1 million EVs by 2030,

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[72] *Supra* note 25.
[73] *Run on Less*, North American Council for Freight Efficiency, available at https://runonless.com/electric/.
[74] See *Drivers Love Electric*, NACFE, available at https://runonless.com/videos/drives-love-electric/; see also *Run on Less: Drivers*, NACFE, available at https://runonless.com/videos/drivers/.
[75] *Pro-Active Grid Investment Assessment Medium- and Heavy-Duty Vehicle Transportation Electrification*, Black & Veatch (*prepared for Environmental Defense Fund*) (Nov. 6, 2024), https://library.edf.org/AssetLink/1sf1n64na1m7b636rs127w4wqvs11d4e.pdf.
[76] See *Distribution Grid Electrification Model Findings*, California Public Utilities Commission Public Advocates Office (Aug. 1, 2024), https://www.publicadvocates.cpuc.ca.gov/press-room/reports-and-analyses/distribution-grid-electrification-model-findings; Yanning Li and Alan Jenn, *Impact of electric vehicle charging demand on power distribution grid congestion* (Apr. 22, 2024), PNAS 121(18), https://www.pnas.org/doi/10.1073/pnas.2317599121; Sarah Shenstone-Harris, et al., *Electric Vehicles Are Driving Rates Down for All Customers*, Synapse Energy (Jan. 2024), https://www.synapse-energy.com/sites/default/files/Electric%20Vehicles%20Are%20Driving%20Rates%20Down%20for%20All%20Customer%20Update%20Jan%202024%2021-032.pdf.

thanks in no small part to rapidly growing EV adoption.[77] However, more action is needed to bring vehicle supply and availability to Illinoisans who want to make the switch. As previously mentioned, EVs have tremendous consumer benefits. But limited options when manufacturers are prioritizing states that have already adopted the Standards risks leaving Illinoisans behind. Besides, Illinois has been awarded hundreds of millions of dollars in federal investments. Many state entities are planning and executing ZEV deployments that, with early crediting, can already meet some of the requirements under these rules. Greater vehicle supply and availability will only further enhance those successes by providing more options, and more options, by nature of supply and demand, will build a healthy used market with lower prices.

*Supporting ZEVs supports Illinois' economy.*

Illinois is in the top ten of EV manufacturing states by investment with $9.6 billion creating at least 9,900 new jobs over the last ten years.[78] The 2021 Reimagining Energy and Vehicles Act bolstered Illinois' manufacturing economy in support of CEJA's 1 million EVs by 2030 goal.[79] It has attracted vehicle and battery component manufacturing to Illinois with competitive incentives, site selection support, supply chain, and workforce programs.[80] However, none of these programs guarantee that ZEVs are actually sold in the state. Illinois consumers and fleets do not have guaranteed abundant supply and diverse choices of vehicles, losing out on the cost savings and convenience ZEVs offer. This is especially exasperating given so many vehicles are built in our very own state. The Standards would change that, giving any Illinoisans who choose to get a ZEV the opportunity to do so and keep our clean air benefits in our state.

*Illinois has a right and responsibility to exercise its sovereign state judgment on appropriate actions to reduce pollution.*

A basic tenet of the American federalist system is the state's authority to govern issues of local concern, a right ratified in the Tenth Amendment of the United States Constitution. Under the Clean Air Act, Congress explicitly allowed the waiver of federal preemption for vehicle emissions standards for the state of California.[81] It did so recognizing California's uniquely dangerous air quality and their early action to address pollution.[82] The Clean Air Act also gave states other than California the right to adopt California's standards as long as they were identical

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[77] See *Electric Vehicles in Illinois*, Illinois Secretary of State, available at https://www.ilsos.gov/departments/vehicles/statistics/electric/2025/electric021525.pdf. As of February 15, 2025, Illinois Secretary of State recorded 129,611 EVs registered in Illinois.
[78] *Supra* note 13.
[79] *Reimagining Energy and Vehicles (REV) Illinois Program*, Illinois Department of Commerce & Economic Opportunity, available at https://dceo.illinois.gov/businesshelp/rev.html.
[80] *Grow Your Business by Calling Illinois Home*, Electrify Illinois, available at https://ev.illinois.gov/grow-your-business.html.
[81] 42 U.S.C. §7543(b)
[82] *California and the Clean Air Act (CAA) Waiver: Frequently Asked Questions*, Congressional Research Service (Aug. 30, 2024), https://crsreports.congress.gov/product/pdf/R/R48168 at 2.

and provided manufacturers a two-year lead time.[83] Air quality is, by its nature, a local concern. In Illinois, twelve counties are in the top 9 percent of all counties at risk of health, societal, and economic impacts of diesel pollution.[84] A Northwestern study found that the ACT would lead to 50 percent of MHD vehicles being zero-emissions by 2050, and the air quality impacts of the reduction in nitrogen dioxide and particulate matter would save 500 lives and prevent 600 new cases of childhood asthma every year in the Chicagoland area alone.[85] The effects are particularly impactful in areas with higher percentages of low-income households and people of color.[86] In a proximity mapping analysis of Illinois communities living in proximity to warehouses, notoriously truck-attracting facilities, EDF found that 1 in 5 Illinoisans, or 2.8 million people, live within one-half mile of a warehouse which cumulatively generate at least 645,000 polluting truck trips a day.[87] Although environmental justice communities, frontline communities that are the most exposed to air pollution and its harms, make up only 1.3 percent of the state's surface area, 42 percent of all warehouses are located in those communities. Although air pollution does not know borders, this kind of density in sources of air pollution has a disparate, disproportionate impact on local communities all over Illinois which this Board has a responsibility to protect.

The current Presidential administration's attempts to roll back progress on ZEVs are irrelevant to Illinois' actions. The State has a clear right and responsibility to exercise appropriate sovereign judgment to protect the public health and wellbeing of its residents. In this case, the clearest, most impactful opportunity is through Clean Car and Truck Standards.

Sincerely,

Neda Deylami

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[83] 42 U.S.C. §7507

[84] *The Dirty Dozen: The Impacts of Diesel Engine Pollution in Illinois*, Respiratory Health Association (May 2022), https://resphealth.org/wp-content/uploads/2022/05/Dirty-Dozen-Impact-of-Diesel-Engine-Pollution-in-Illinois.pdf at 2.

[85] *Air quality and health impacts of transition to zero tailpipe emission medium and heavy-duty vehicles (MHDVs) in the Chicago region*, Environmental Defense Fund, https://library.edf.org/AssetLink/j2ox6ijo6wpl08y713fg81o3ufn0m066.pdf

[86] *Id.*

[87] Supra note 2.