



New Mexico Environment Department
Environmental Protection Division



City of Albuquerque, Environmental Health Department
Air Quality Program

Clean Cars New Mexico

November 3, 2021
4 p.m.

**3rd Public meeting: Proposed Low-Emission and
Zero-Emission Vehicle Standards**

Investing for tomorrow, delivering today



Virtual Meeting Guidelines

- ❑ All participants in the meeting will remain muted throughout the presentation. You will have an opportunity to ask questions or make statements at the end.
- ❑ Use the chat box to ask questions to the hosts or use the raise your hand feature during the question-and-answer period.
- ❑ This presentation and other clean car information available at NMED's Clean Car New Mexico webpage at <https://www.env.nm.gov/the-road-to-clean-cars-new-mexico/>
- ❑ Sign up for updates by joining the Clean Cars New Mexico listserv by letting the hosts know in the chat or signing up at: <https://public.govdelivery.com/accounts/NMED/subscriber/new/>





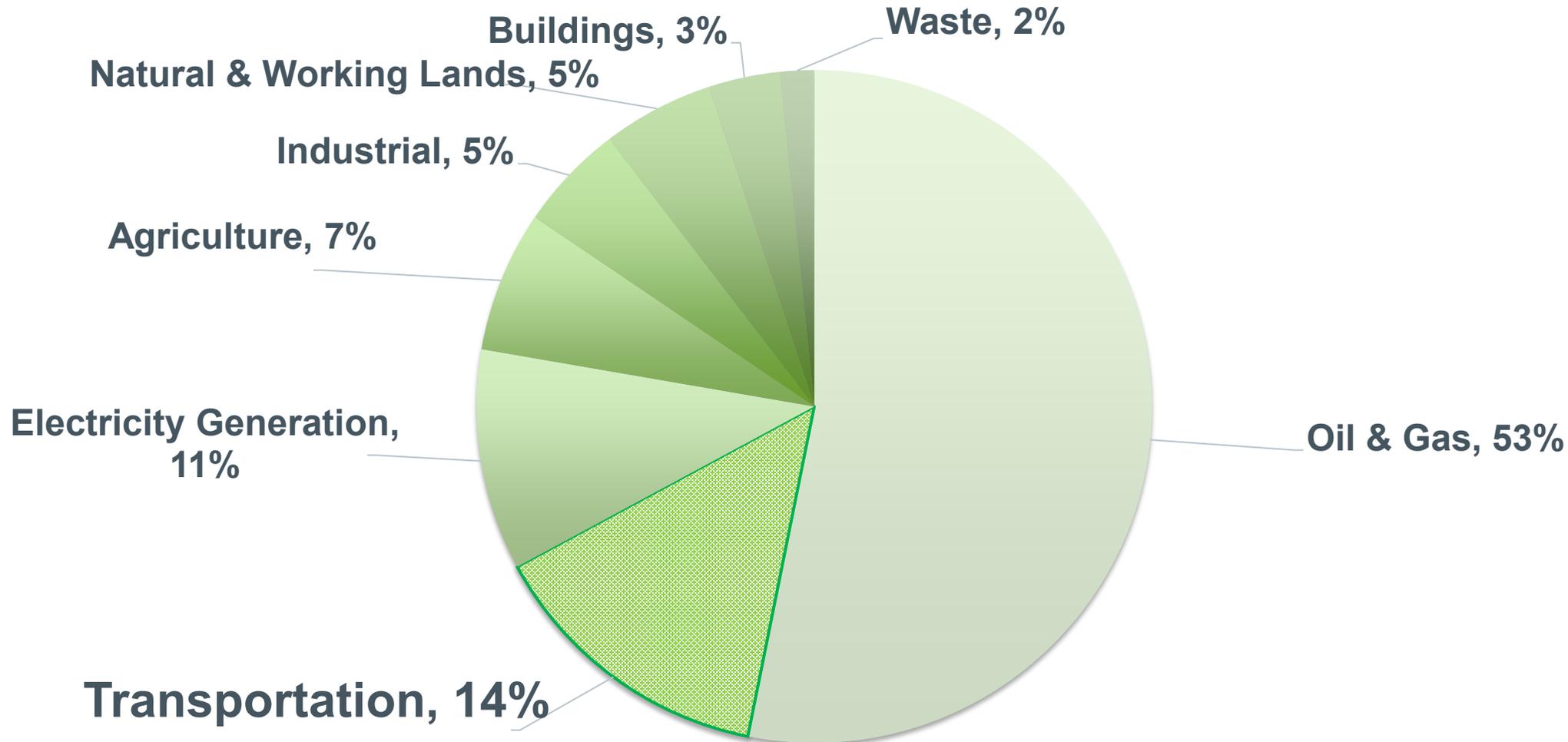
Meeting Agenda

- ❑ **Background Information**
- ❑ **Poll Questions**
- ❑ **Projected Impacts**
- ❑ **The Proposed Clean Car Standard Rules**
- ❑ **New Mexico Environment Department Rulemaking Schedule**
- ❑ **Albuquerque Rulemaking Process and Schedule**
- ❑ **Public Comments and Information Sources**
- ❑ **Your Questions and Comments**





Emissions Reductions: Tackling Transportation



Source: New Mexico 2020 Climate Change Report;

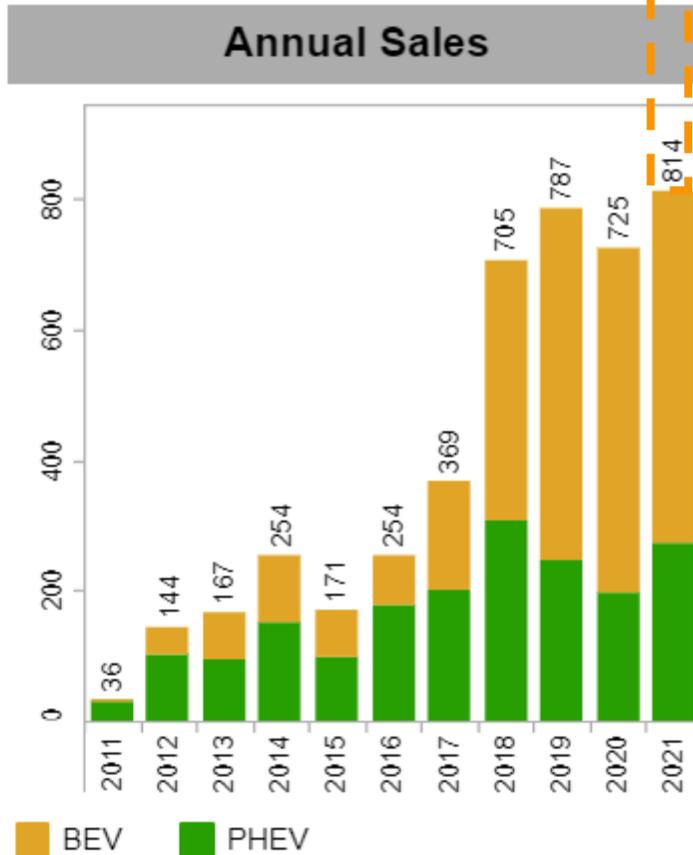
https://www.climateaction.state.nm.us/documents/reports/NMClimateChangeReport_2020.pdf



Plug-In Hybrid and Zero-Emission Vehicles Sales



Source: Auto Alliance Electric Vehicle Sales Dashboard;
<https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard>



Through June 2021

Manufacturer	Fully Electrified	Electrified (Hybrids)
	20 models by 2023 30 models by 2025 All models by 2035	40 models by 2022
	16 models by 2022	24 models by 2022
	8 models by 2023	
	8 models by 2023	22 models by 2022
		25 models by 2025 25% of all sales
	10 models by 2022	
		30 models by 2025
	Full-sized truck by 2022 20 million cars by 2030	



Acronyms Used in this Presentation



- ❑ **NMED = New Mexico Environment Department**
- ❑ **LEV= Low-Emission Vehicle**
- ❑ **ZEV = Zero-Emission Vehicle**
- ❑ **GHG = greenhouse gas; often GHGe = greenhouse gas emissions**
- ❑ **Regulated Air Quality Emissions:**
 - ❑ **PM 2.5 = Particulate Matter of size 2.5; create harmful smog**
 - ❑ **SOx = Oxides of Sulfur; create harmful smog**
 - ❑ **VOCs= volatile organic compounds**
- ❑ **ICE= Internal Combustion Engine; for example, gasoline or diesel powered on-road vehicles**



Audience Live Poll



- How did you hear about this meeting?**
- On a scale from 1 to 5, how would you characterize your support of clean car standards for New Mexico?**
- What additional information would you like to know about the clean car rules?**

Technical Analysis

Projected Impacts

- ZEV Sales
- Emissions
- Cost
- Consumer Choice
- Dealerships

Introduction

My role in New Mexico

- Providing technical support for NMED adoption of Advanced Clean Cars 1
- Funded by US Climate Alliance

My background

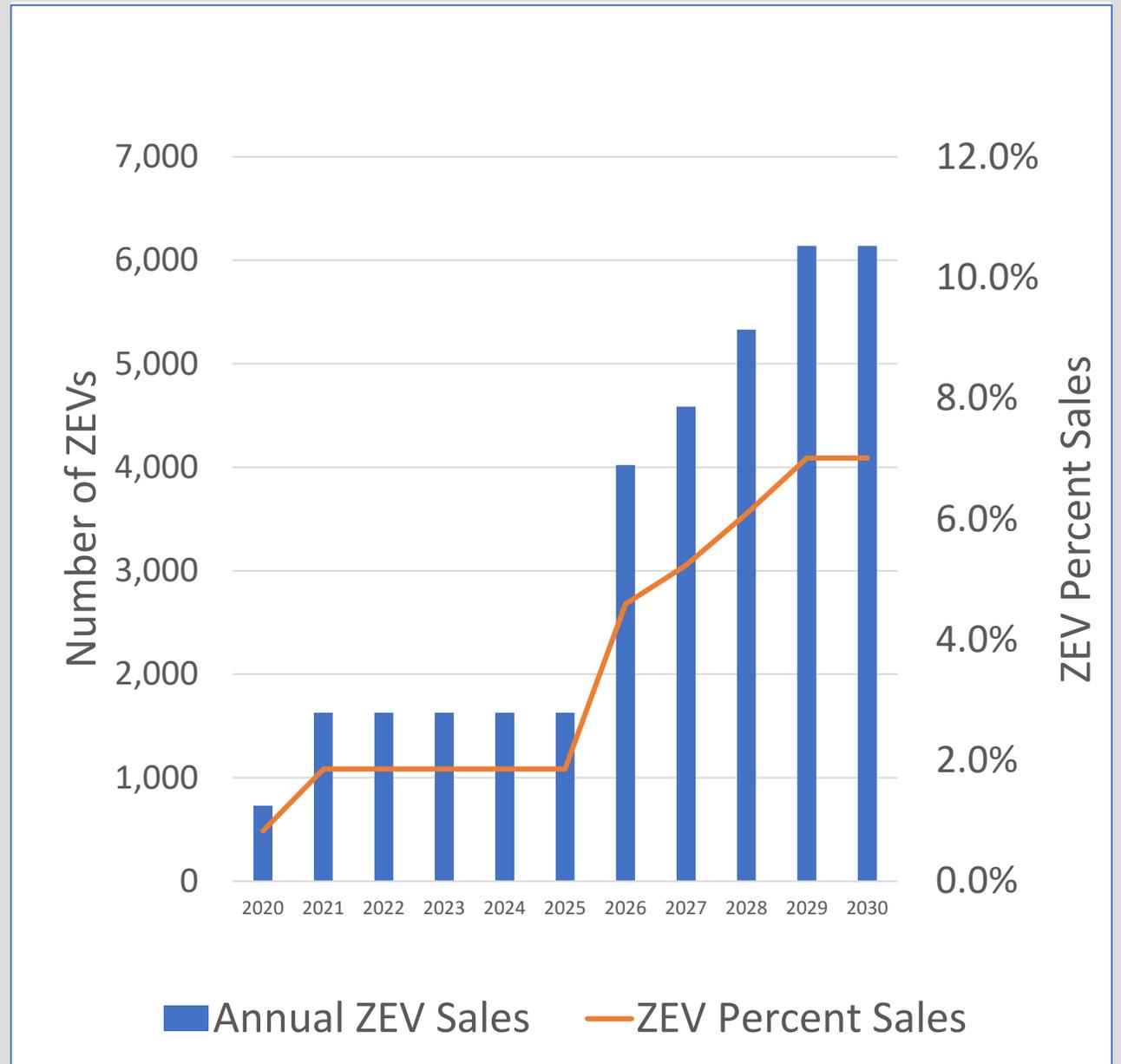
- Senior staff at California Air Resources Board, now retired
- While at CARB, team leader for two ZEV rulemakings and adoption of first tailpipe GHG standards, then managed startup of climate program

Related consulting work

- Technical support, not advocacy
- Projecting impacts of ACC 1 adoption in multiple states
- Evaluating ACC 2 proposals in California and impact on Section 177 states
- Supporting workgroup that is developing recommendations to improve equity outcomes from the ACC 2 ZEV regulation
- Funded by Natural Resources Defense Council

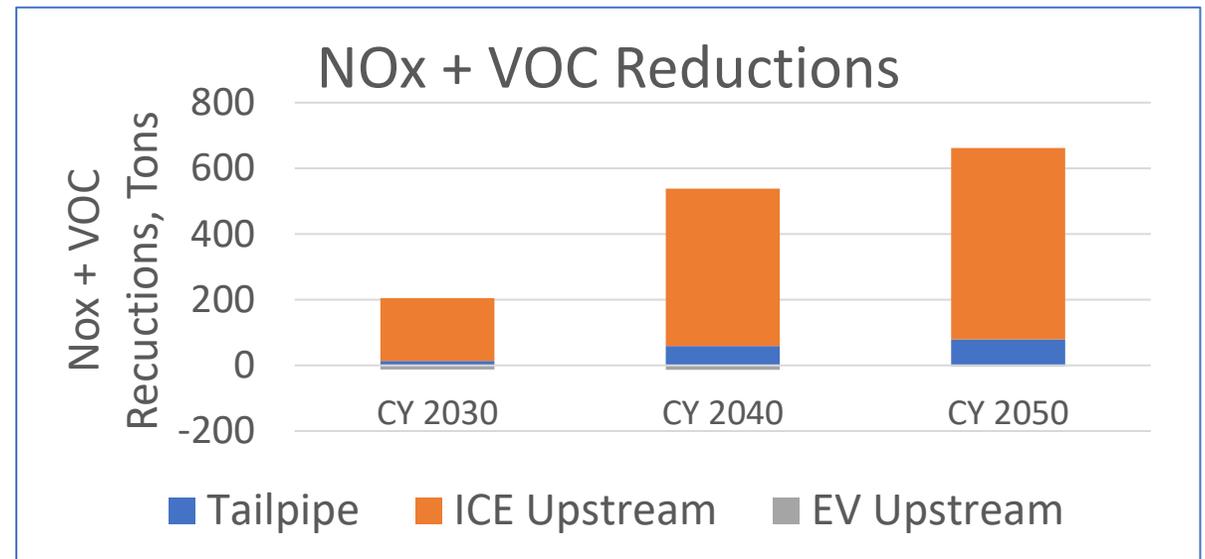
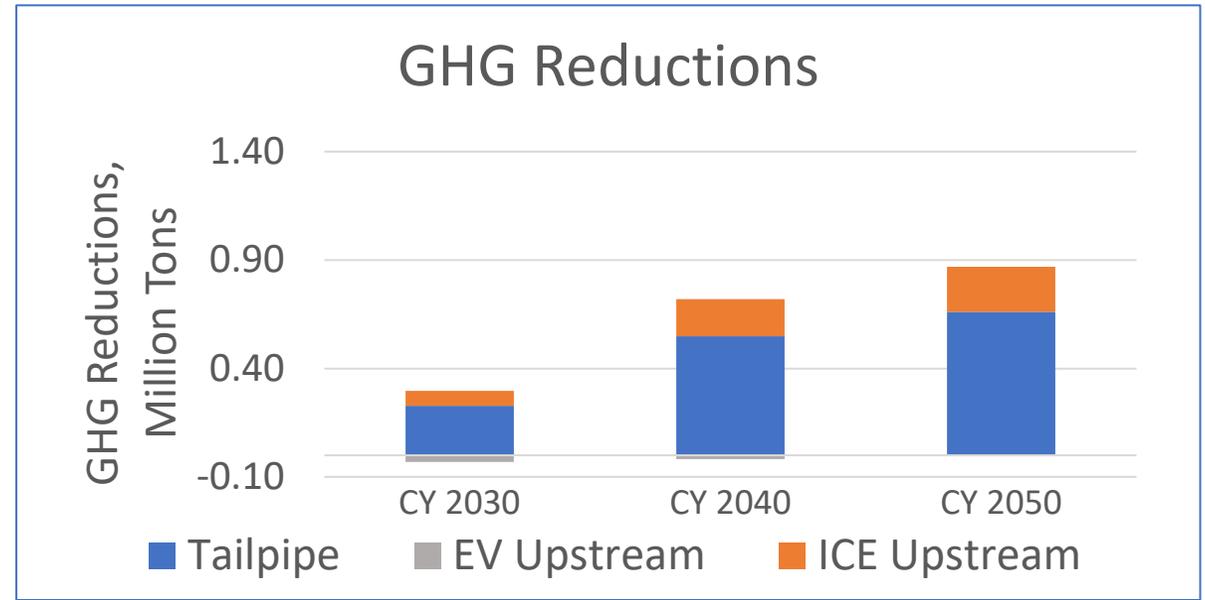
ZEV Sales

- About 7 percent annual ZEV sales (6,200 vehicles) when fully implemented
- This scenario assumes
 - Exact compliance by all manufacturers
 - Early credits from model years 2023-2025 used to smooth 2026-2029 ramp



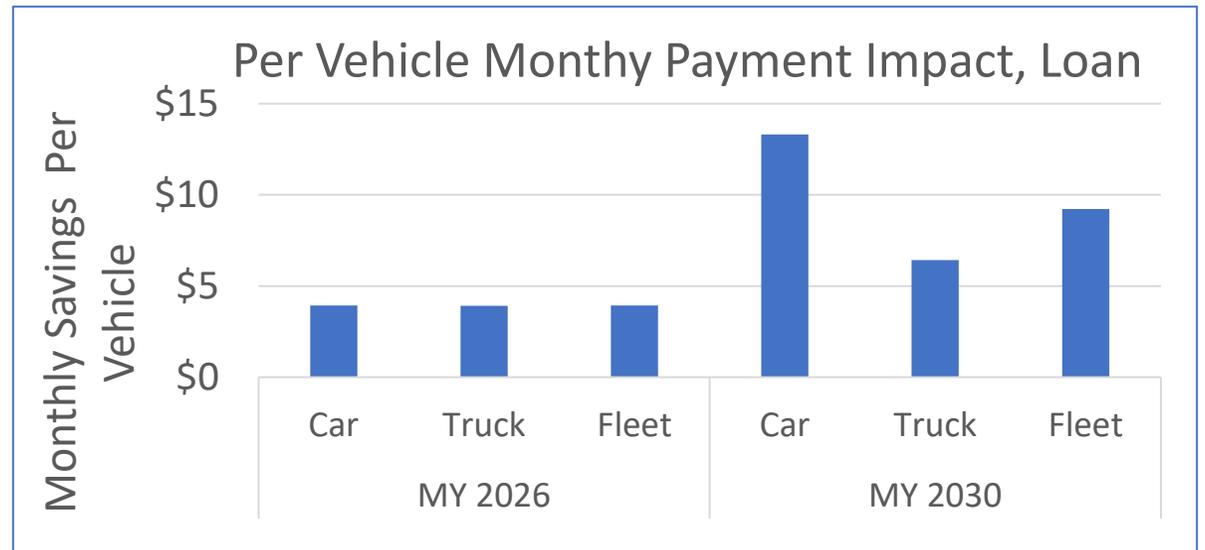
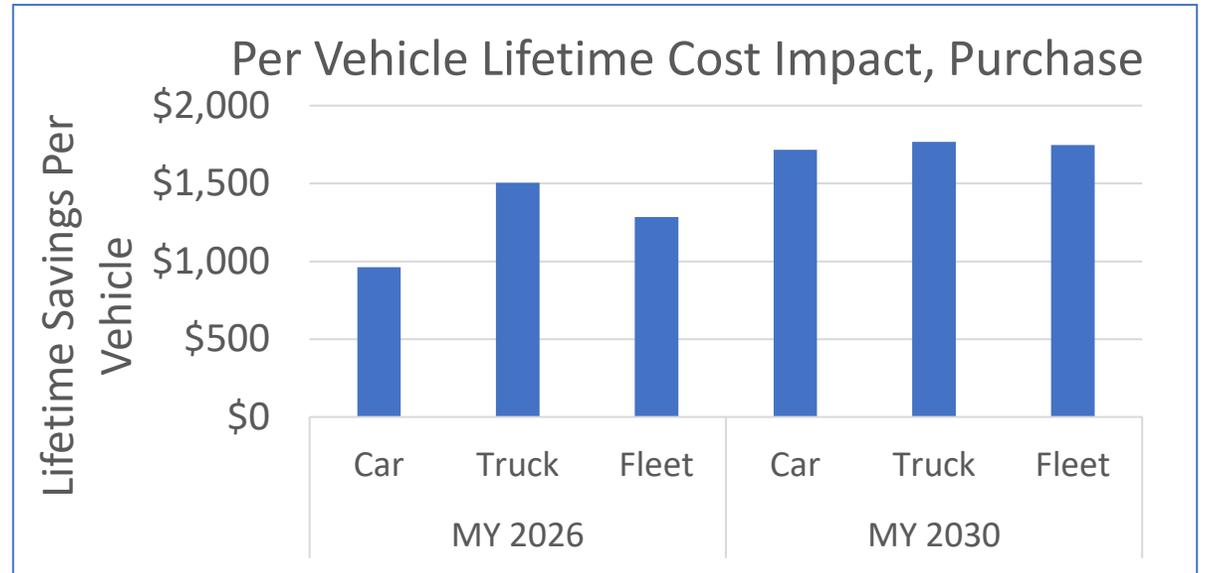
Emission Reductions

- Significant reductions in greenhouse gases and smog-forming pollutants
- Will also reduce health-damaging emissions of particulate matter and toxic air contaminants
- Net reduction is sum of:
 - Reduced tailpipe and upstream emissions from combustion engines
 - Increased ZEV upstream emissions



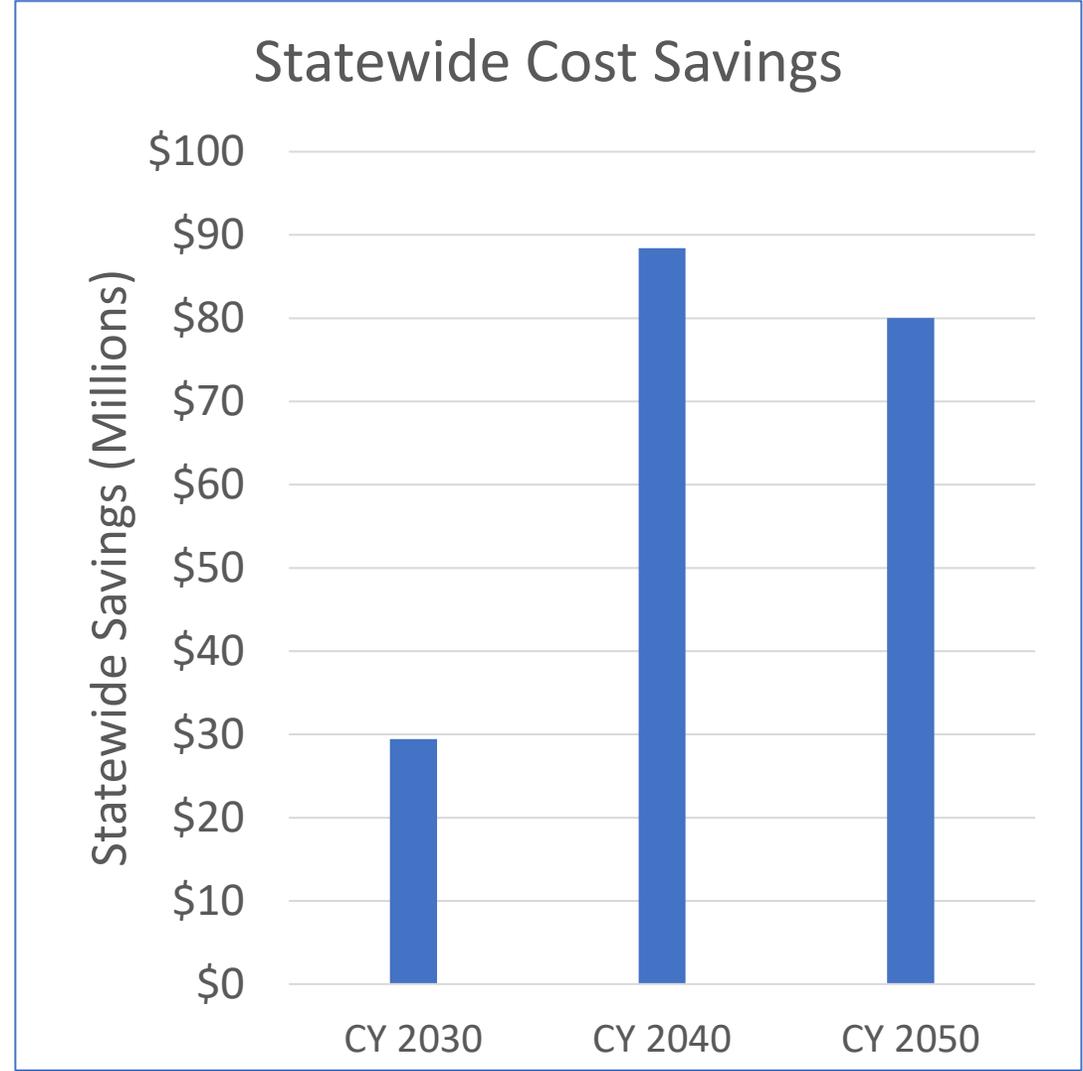
Consumer Cost Savings

- Lifetime consumer savings about \$1,300 for average MY 2026 vehicle, about \$1,750 for MY 2030
- LEV
 - Additional upfront cost, all years
 - Reduced lifetime fuel cost
- ZEV
 - Additional upfront cost in early years, reduced upfront cost later
 - Reduced lifetime fuel and maintenance cost
 - Estimate does not include any purchase incentives



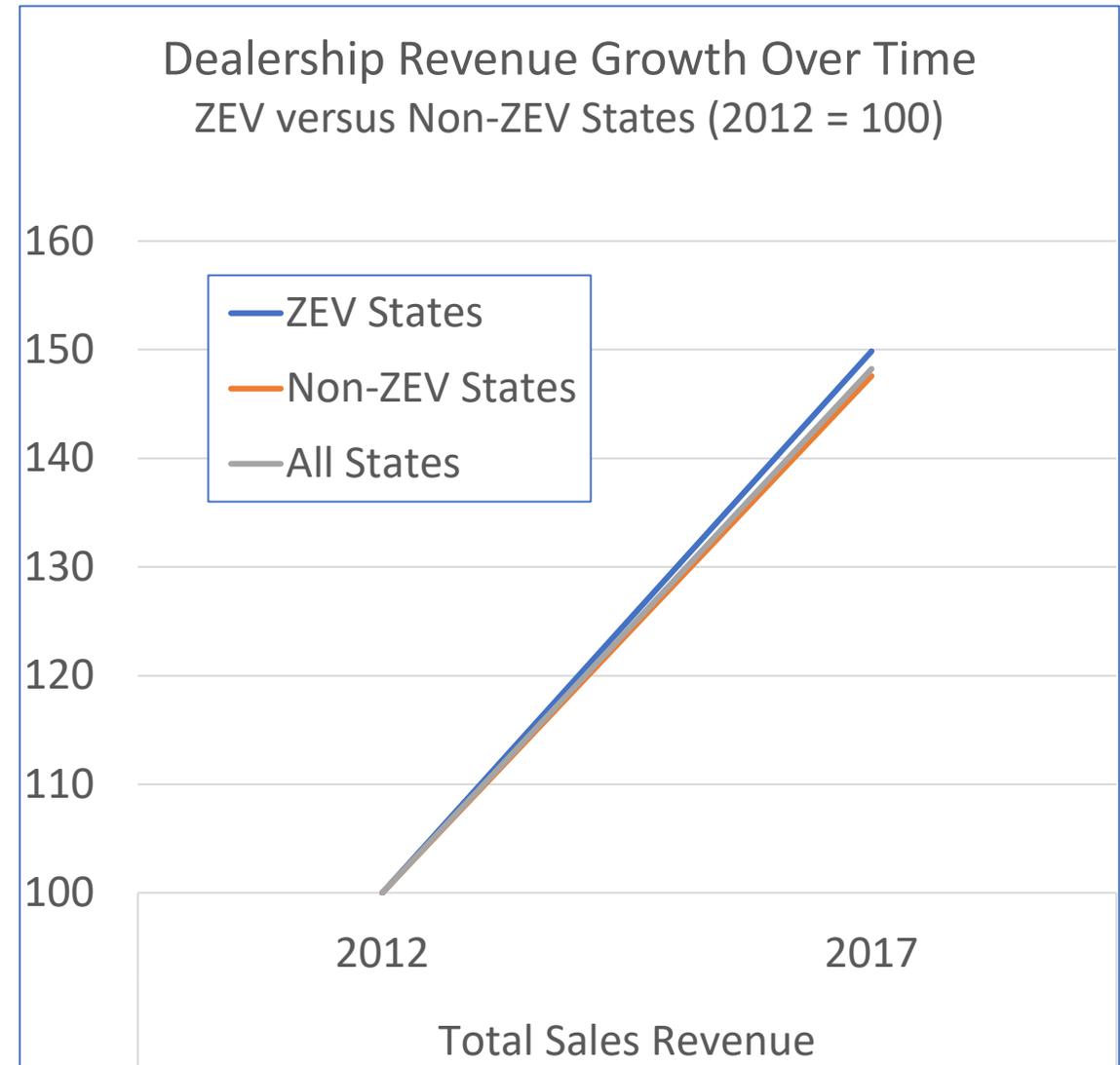
Statewide Cost Savings

- Annual statewide savings about \$30 million in 2030, almost \$90 million in 2040
- Statewide savings are per-vehicle savings multiplied by number of vehicles



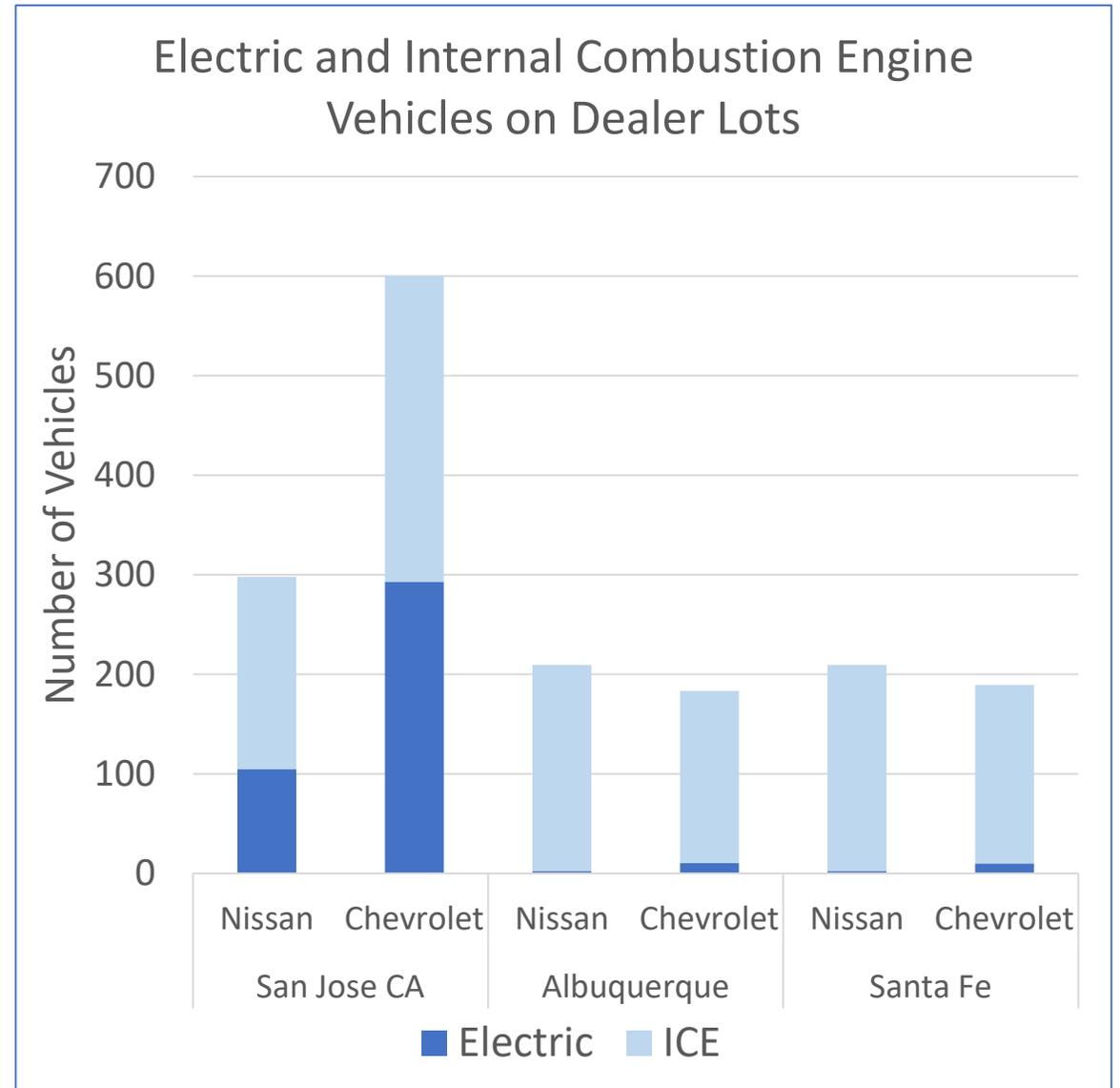
Impact on Dealers

- Regulation applies to automakers, not dealers
- No evidence of adverse impact on dealership operations (trading across states) or sales leakage
- No evidence of adverse impact on dealership revenue in ZEV vs. non-ZEV states



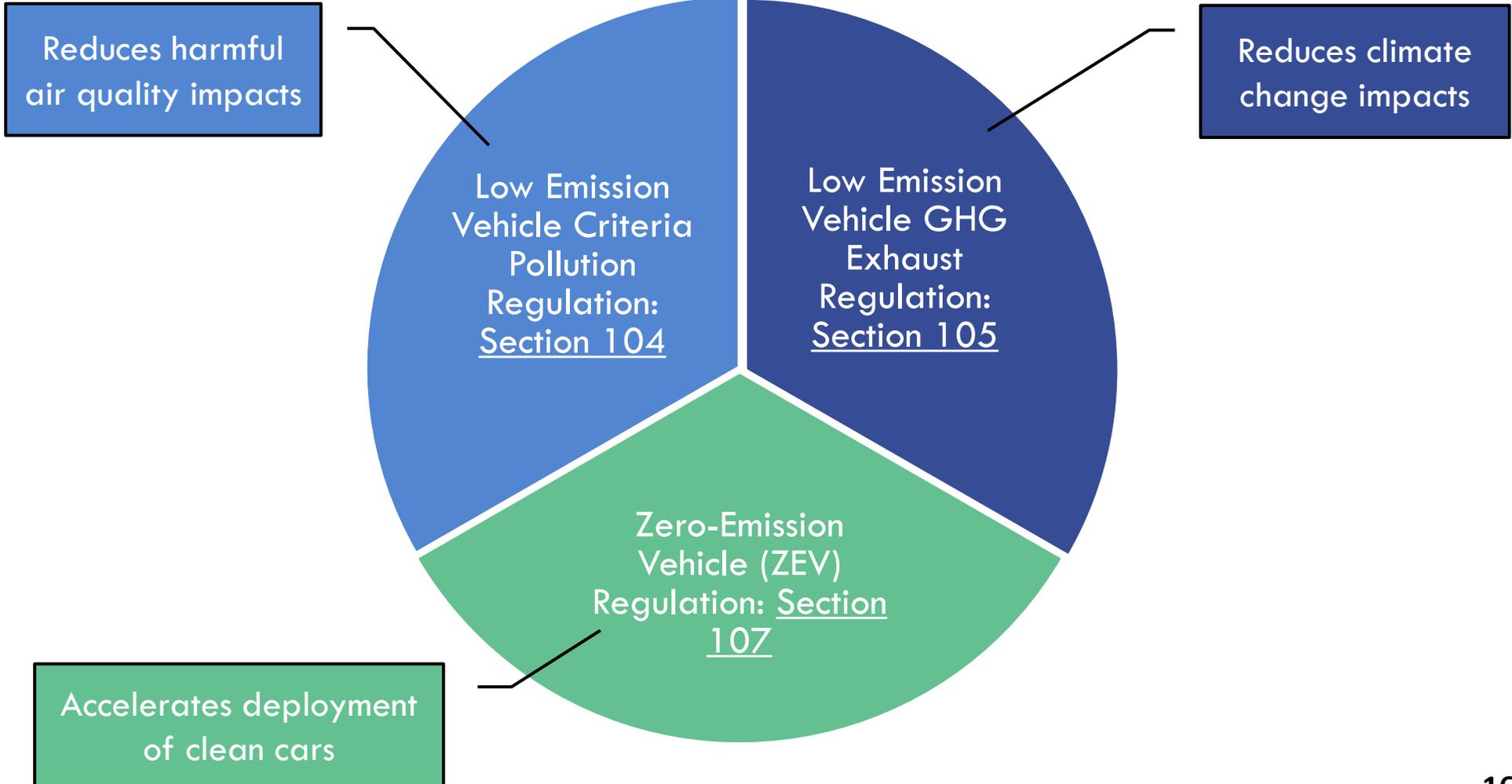
Consumer Choice

- Some popular ZEV models are only available in ZEV states
- ZEVs that are sold nationally tend to have greater availability in ZEV states
- Combustion engine vehicles will be the same, just cleaner and more efficient





Three Components in the Rules

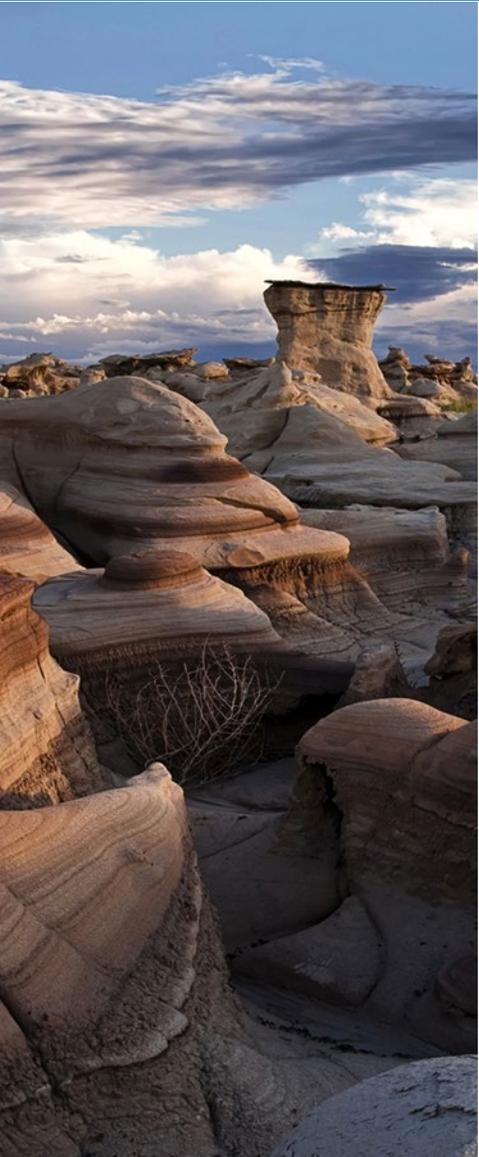
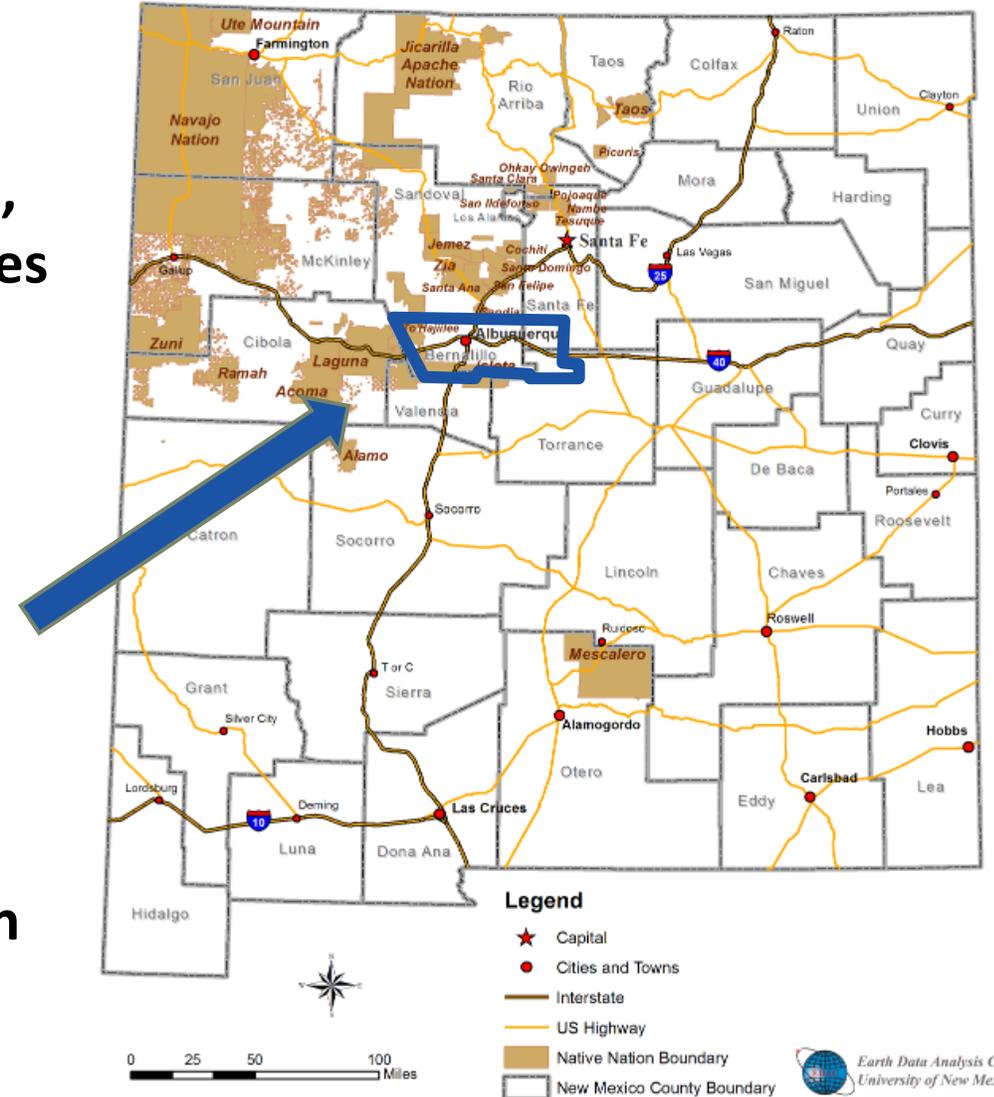




Where Do the Regulations Apply?

The New Mexico Requirement Area:

- The area in which the requirements, compliance, and enforcement applies
- Combines the area under the jurisdiction of State Environmental Improvement Board (EIB) and Albuquerque Bernalillo County Air Quality Control Board
- Ensures that NM + Bernalillo County meet the requirements of the federal Clean Air Act
- Does not apply to lands of sovereign nations

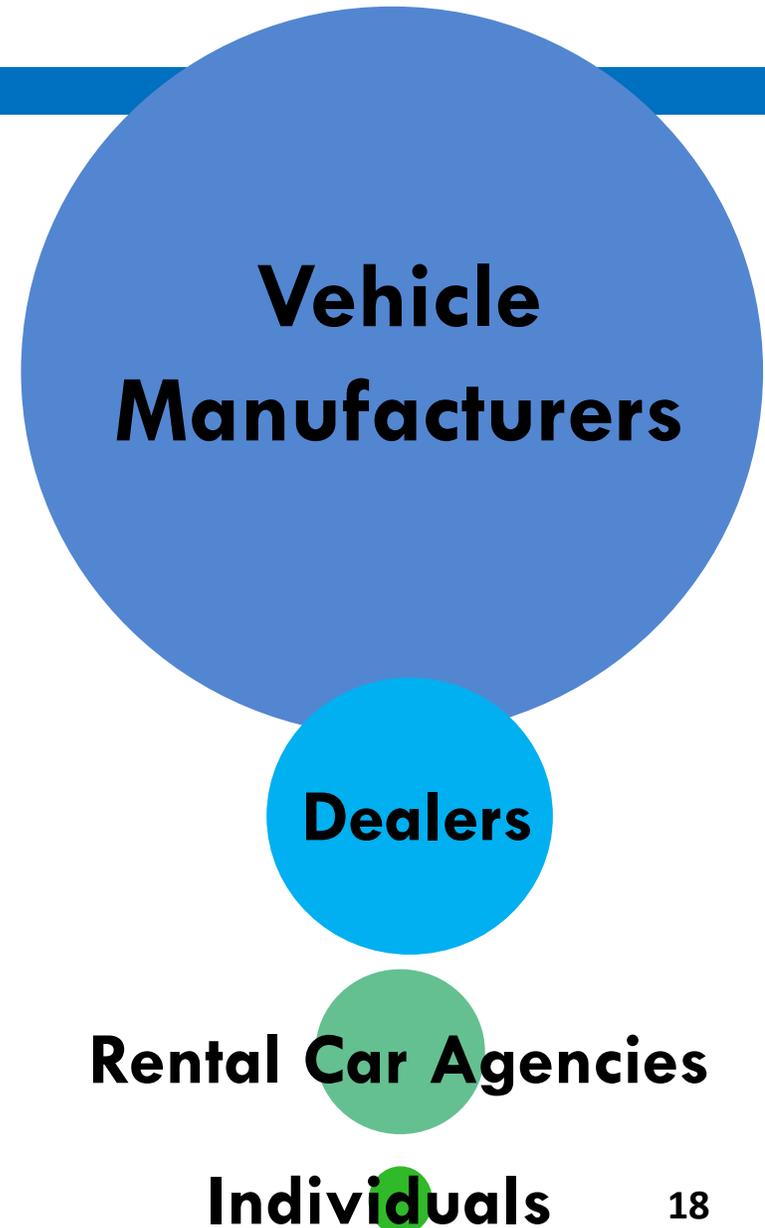




Who Is In the Scope of the Rules?



- Manufacturers that deliver new vehicles for sale or lease in New Mexico have the greatest obligation under the rule
- Dealers can only sell clean cars that meet the requirements of the rules
- Car rental agencies can only rent clean cars in New Mexico Requirement Area that meet the requirements of the rules
- Individuals can only register vehicles that meet the requirements of the rules





What Vehicles Are In the Scope of the Rules?



- **New vehicles** defined as having 7,500 miles or fewer
- **Vehicles** include passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty motor vehicles or motor vehicle engines
- **New vehicles** that are delivered for sale, offered for sale, sold, imported, delivered, purchased, rented, leased, acquired, received, or registered in the NM Requirement Area

Vehicles not included in the scope:

- ✗ Existing vehicles
- ✗ Used vehicles for sale
- ✗ Off-road vehicles or equipment, like farm equipment
- ✗ Heavy-duty vehicles, like semi-trucks



What are the Exemptions from the Rules?

Examples of Exemptions (Section 103)

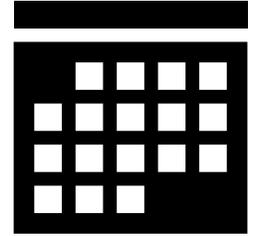
- ❑ **Previously registered used vehicles**
- ❑ **A New Mexican who acquired a vehicle through inheritance, divorce, or merger, court proceeding, etc.**
- ❑ **A New Mexican who acquired a vehicle out-of-state to replace vehicle that was stolen while out of state or damaged beyond reasonable repair while out of state**
- ❑ **A dealership selling a non-compliant vehicle if that vehicle will be registered out-of-state**





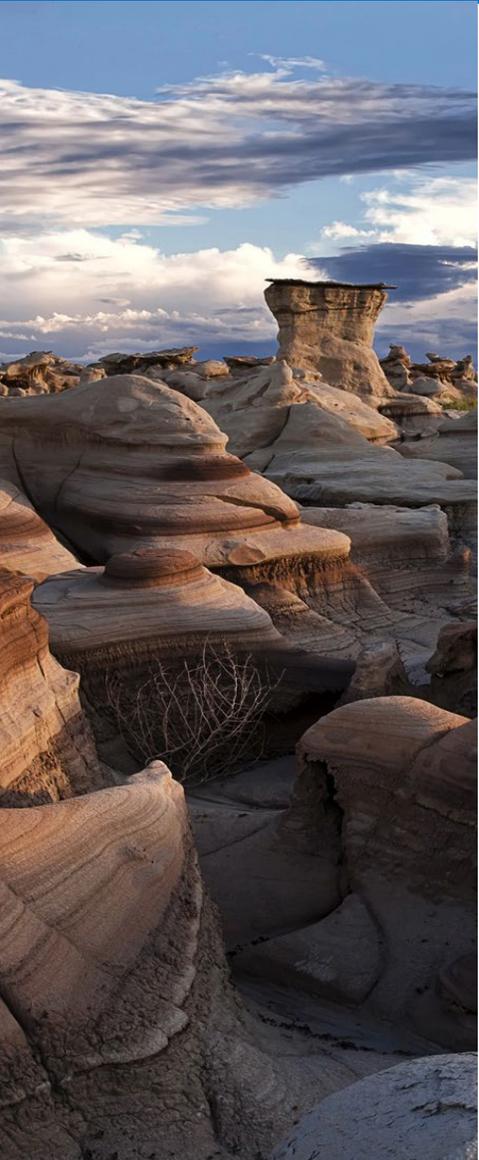
When Do The Rules Take Effect?

- ❑ **First compliance year - Model Year 2026; applies to any new models whose production begins during calendar year 2025**
- ❑ **Effective date of the rules: August 1, 2022 (anticipated)**
- ❑ **Early action credits can be earned after the effective date of the rules**





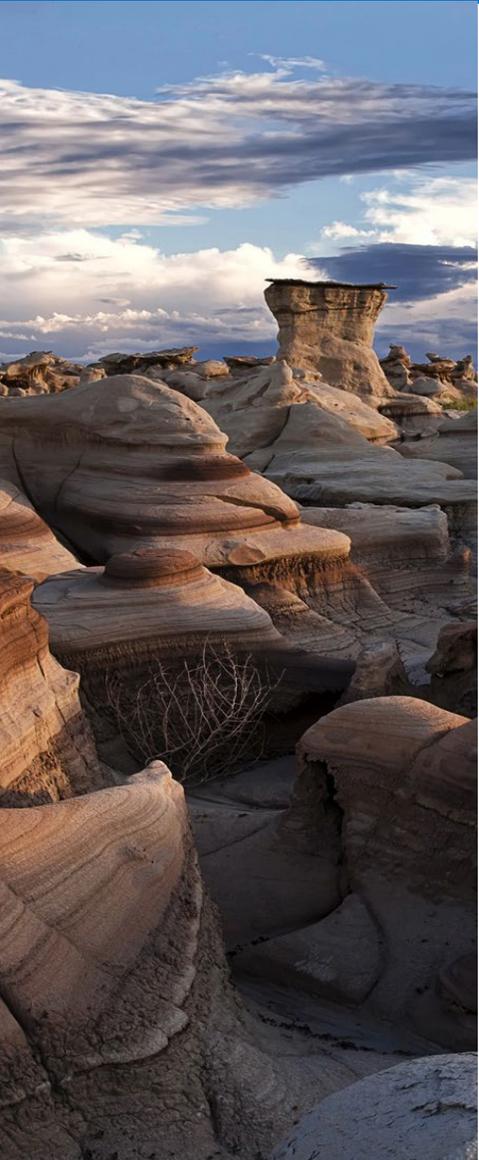
Low-Emission Vehicle (LEV) Standards (Sections 104 and 105)



- ❑ **Smog-forming exhaust emissions (Non-methane organic gas plus oxides of nitrogen)** - each manufacturer must meet a fleet average in the NM Requirement Area (Section 104)
- ❑ **Greenhouse gas exhaust emissions-** each manufacturer must meet a fleet average in the NM Requirement Area (Section 105)
- ❑ **Requirements vary depending if the manufacture is small, intermediate, or large as determined by sales in California**



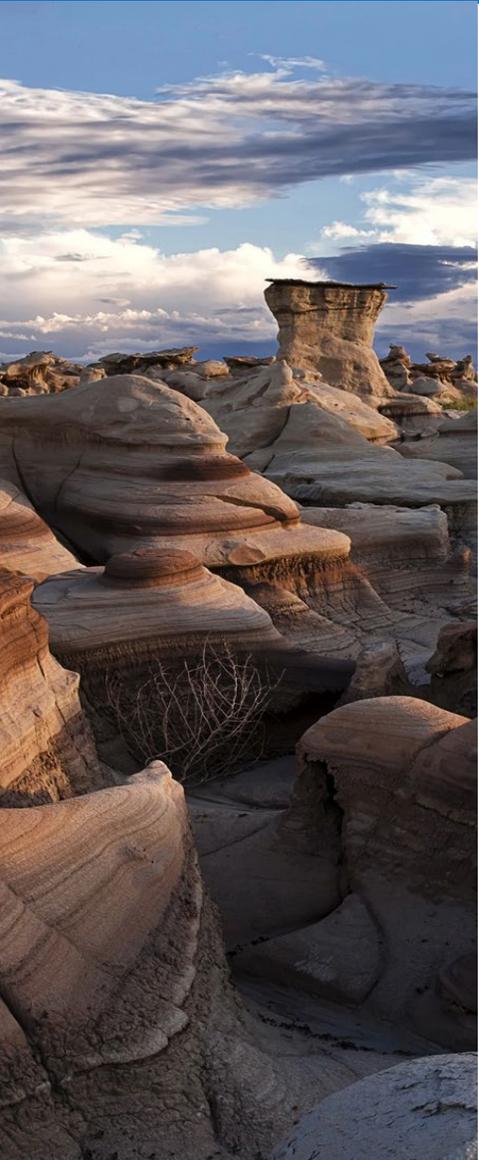
Zero-Emission Vehicle (ZEV) Credit Requirement (Section 107)



- ❑ ZEVs include battery electric and plug-in hybrid vehicles
- ❑ For the first compliance model year 2026, the ZEV credit requirement is 22%, which translates to the delivery of approximately 7-9% of qualifying vehicles
- ❑ Manufacturers report deliveries to California's ZEV credit bank
- ❑ Applies to intermediate- and large-volume manufacturers, as determined by California sales



Built-in Flexibility in the Zero-Emission Vehicle Requirement

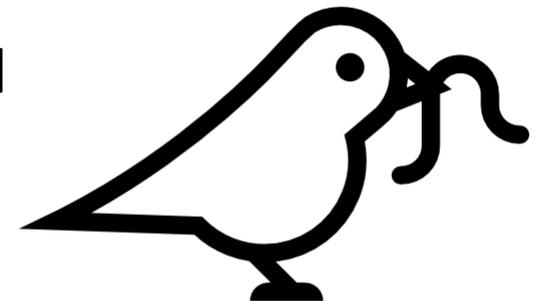


- **Manufacturers have multiple ways to meet their obligation:**
 - ▣ **Develop and deliver ZEVs**
 - ▣ **Purchase credits from other manufacturers**
 - ▣ **Carry back or use previously banked credits**
 - ▣ **Carry forward banked credits for future years**
- **The requirements do not dictate exact numbers, vehicle types, or locations**



Options for New Mexico: Early Action Credits (Section 108, A&B)

- Manufacturers may receive credits for new qualifying battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) delivered for sale in the NM Requirement Area before compliance period begins (model year 2026).
- Proposing that early action credits can begins with vehicles delivered for sale on August 1, 2022.
- Will increase the early availability of electrified vehicles in New Mexico





Options for New Mexico: Onetime Credits (Section 108, C)



- ❑ Also known as “proportional” credits
- ❑ Available in model year 2027 and intended for use in future more stringent California standards
- ❑ Give manufacturers credits to use instead of delivering qualifying vehicles
- ❑ Each manufacturer receives credits based on the balance of their California ZEV credit bank, scaled to NM-specific overall sales
- ❑ Will help vehicle manufacturers transition into a future with more stringent standards
- ❑ Equalizes the New Mexico program with others already underway in other states
- ❑ The draft rules are modeled after the Nevada approach, which was developed through discussions among the manufacturers, dealers, and environmental advocates



Options for New Mexico: Registration and Fees (Section 113)

- ▣ Each large- or intermediate-volume auto manufacturer is required to register
- ▣ Annual registration fee is assessed by dividing the annual program costs of \$200,000 proportionally among the registered manufacturers
- ▣ Manufacturers seeking to earn early action ZEV credits pay an annual registration fee of \$10,000





Clean Car Standards *Do*:

Clean Car Standards *Do Not*:



- ✓ Significantly reduce greenhouse gas emissions
- ✓ Apply only to new light- and medium-duty vehicles for sale in New Mexico
- ✓ Improve air quality for New Mexicans
- ✓ Expand purchase options for New Mexico consumers

- ✗ Apply to existing vehicles or used vehicles for sale
- ✗ Apply to off-road or heavy-duty vehicles or equipment, like farm equipment and semi-trucks
- ✗ Require emissions testing
- ✗ Require anyone to purchase an EV
- ✗ Ban the sale of SUVs or pickup trucks
- ✗ Increase taxes or costs to consumers



NMED Rulemaking Schedule



Public Engagement Sessions and Outreach:
July-November 2021

NMED Files Rulemaking Petition: December
1, 2021

Environmental Improvement Board Considers
NMED Petition: December 17, 2021

Regulatory Boards Hold Joint Hearing
(Proposed): May 2, 2022



Albuquerque Proposed Rulemaking Schedule



Public Engagement Sessions and Outreach:
July-November 2021

Air Quality Program Files Rulemaking
Petition: January 2021

Albuquerque Bernalillo County Air Quality
Control Board Considers AQP Petition:
February 2021

Regulatory Boards Hold Joint Hearing
(Proposed): May 2, 2022



We Want To Hear From *You*



- ❑ Provide comments and feedback on the discussion draft rules by November 18, 2021, 5 pm to cleancarsnm@state.nm.us
- ❑ Participate in public meetings like this one
- ❑ Invite us to present to your organization
- ❑ Provide public comment during the formal rulemaking process
- ❑ Provide testimony during the rulemaking hearing in May



Stay Informed



- Sign up for our email listserv for updates and meeting information in English and Spanish at <https://public.govdelivery.com/accounts/NMED/subscriber/new>
- Visit our websites:
 - ▣ NMED Clean Cars New Mexico at <https://www.env.nm.gov/the-road-to-clean-cars-new-mexico/>
 - ▣ City of Albuquerque Clean Cars I Regulation Documents at <https://www.cabq.gov/airquality/regulation-development/clean-cars-i-regulation-documents>
- Follow us on social media: @NMEnvDept, f=NMEnvironmentDepartment



Contact Us

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Questions? Comments?



**Please (virtually)
raise your hand or
type into the chat!**

Methodology

Baseline Comparison

- SAFE II versus current Advanced Clean Cars 1
- MY 2026 start
- LEV and ZEV standards continue unchanged 2026 through 2050
- Statewide impacts—New Mexico Requirement Area

Does Not Incorporate

- Biden administration strengthening of future vehicle standards
- CARB revisions to Advanced Clean Cars for MY 2026 and beyond

Modeling Tools

- ZEV sales model (Shulock Consulting)
- LEV/ZEV emission and cost model (Meszler Engineering Services)

Assumptions and Data Sources

(From RMI New Mexico Energy Policy Simulator)

- New Mexico Transportation Fuel Prices

Gasoline (gallon)	2020	2025	2030	2035	2040	2045	2050
Retail	\$3.03	\$3.10	\$3.29	\$3.42	\$3.59	\$3.63	\$3.68
PreTax	\$2.68	\$2.48	\$3.02	\$3.20	\$3.33	\$3.47	\$3.63
Tax	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35	\$0.35

Electricity (kWh)	2020	2025	2030	2035	2040	2045	2050
Retail	\$0.095	\$0.105	\$0.103	\$0.101	\$0.098	\$0.097	\$0.098

- New Mexico Electricity Generation Sources

	2020	2025	2030	2035	2040	2045	2050
Coal	31.4%	20.8%	18.9%	0.0%	0.0%	0.0%	0.0%
Natural Gas	38.9%	27.2%	22.3%	20.6%	13.5%	6.9%	6.7%
Nuclear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residual Oil	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Biomass	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Hydroelectric	0.5%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%
Geothermal	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Wind	22.0%	32.9%	35.0%	38.2%	39.7%	40.3%	39.8%
Solar	7.0%	18.6%	23.3%	40.7%	46.3%	52.3%	53.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Assumptions and Data Sources

- Total Sales
 - 85,100 per year
 - 2018 actual, Alliance for Automotive Innovation
- Car/Truck Split
 - 40% cars, 60% trucks
 - Derived from 2020 actual, Alliance for Automotive Innovation
- ZEV “Business as Usual” Sales
 - 1,628 per year
 - First 6 months of 2021, multiplied x 2, Alliance for Automotive Innovation
- ZEV Availability on Dealer Lots
 - Cars.com and Autotrader.com data, accessed November 1, 2021