

ON THE ROAD TO A CLEANER NEVADA

with Clean Car Standards

CLEANER AIR

HEALTHIER
COMMUNITIES

STRONGER
ECONOMY



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Clean Cars Nevada

*On the Road to a
Cleaner Nevada*

CHISPA Nevada Members Listening Session

July 26, 2021

6:00 to 7:30 PM



Clean Cars Nevada Initiative Announced

Clean Cars Nevada

On the Road to a Cleaner Nevada



State of Nevada

CLIMATE INITIATIVE

In June 2020, Governor Sisolak announced Clean Cars Nevada, as part of the State of Nevada Climate initiative

Clean Cars Nevada will help advance the State's climate change and sustainability goals, reduce harmful air pollution from cars and light-duty trucks on Nevada roads, and strengthen the economy.

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Director



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What is Clean Cars Nevada?

Clean Cars Nevada is Proposing the Evaluation and Potential Adoption of Two New Regulatory Programs

-  Low Emission Vehicle (LEV) Program - Meet emission requirements that reduce greenhouse gases, criteria air pollutants, and hazardous air pollutants.
-  Zero Emission Vehicle (ZEV) Program - Introduction of clean vehicle technology in Nevada.





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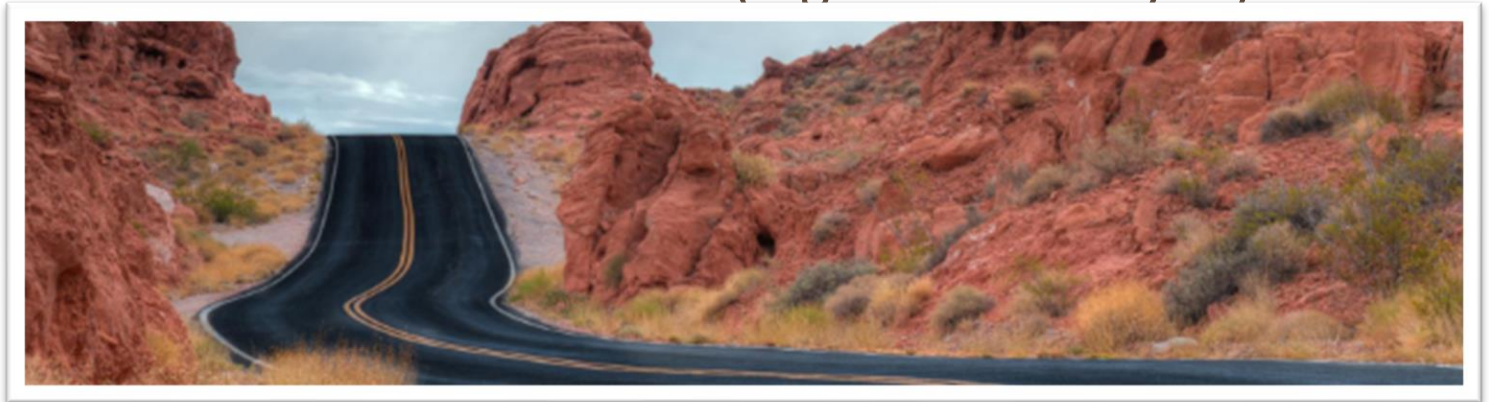


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Why Clean Cars Nevada?

Clean Cars Nevada Will Address Three Air Program Challenges

1. Greenhouse Gas (GHG) Emission Reduction Goals.
2. Criteria Air Pollutants (Ground-level Ozone, Particulate Matter, Carbon Monoxide, Lead, Sulfur Dioxide, and Nitrogen Dioxide) and Attainment with the National Ambient Air Quality Standards (NAAQS).
3. Hazardous Air Pollutants (e.g. Formaldehyde).





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Why Clean Cars Nevada?

Senate Bill No. 254 (2019):

- Requires percentage reduction in GHG emissions statewide compared to 2005:
 - 28% by 2025
 - 45% by 2030
 - Zero or near-zero by 2050

Executive Order 2019-22:

- Directs Executive Branch to advance Nevada's climate goals.
- State Climate Strategy-framework for policymakers to evaluate various climate policies and programs to achieve GHG emission reduction goals.

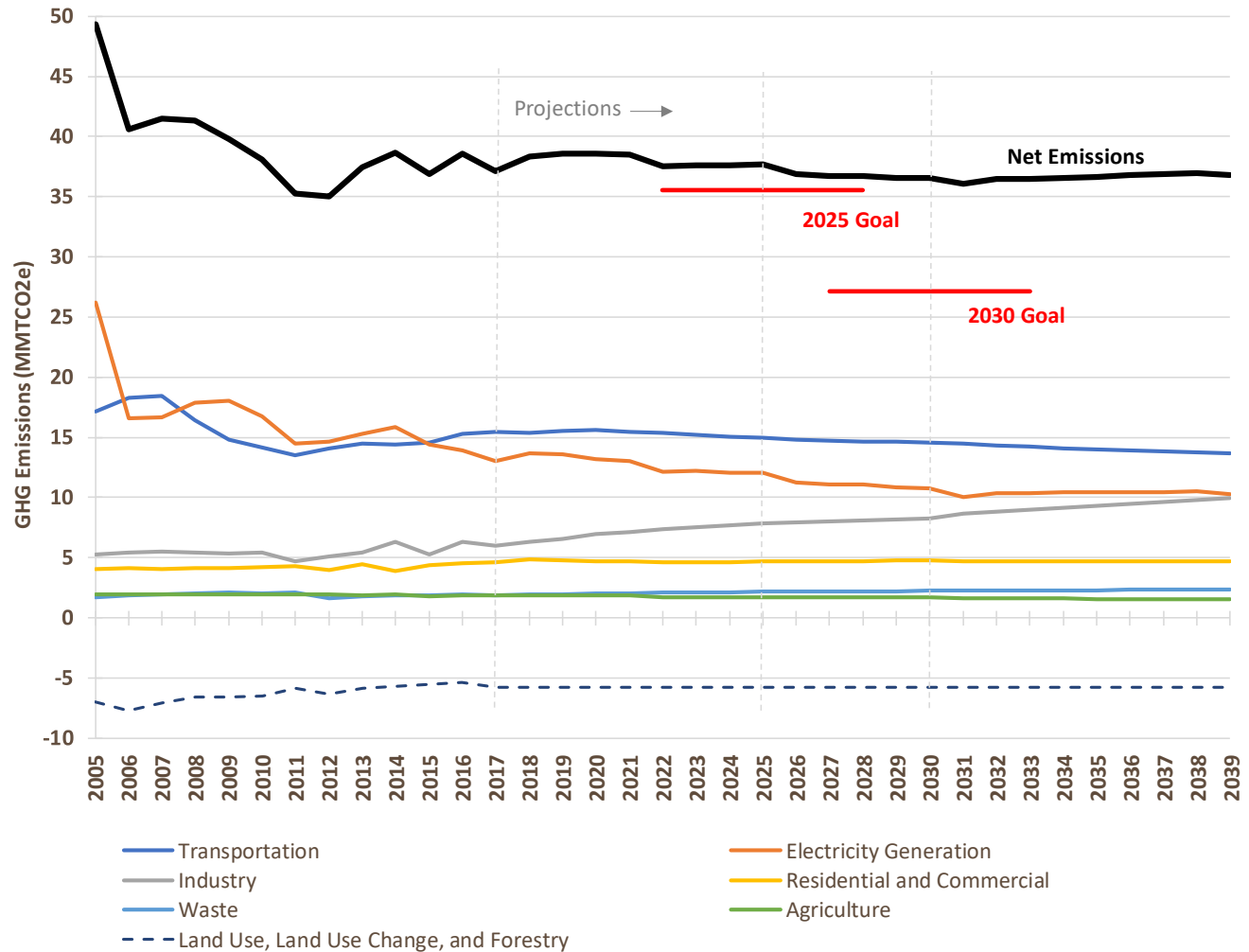


GHG Emissions and the Transportation Sector

Nevada's Statewide Inventory of GHG Emissions and a 20-Year Projection

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Air Pollutants and the Transportation Sector

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Primary Air Pollutants from Motor Vehicles

Carbon Monoxide (CO)

Nitrogen Dioxide (NO₂)

Particle Pollution (PM) – PM_{2.5} and PM₁₀

Hydrocarbons (VOCs)

Secondary Air Pollutants from Motor Vehicles

Ozone (O₃)



Air Pollutants and the Transportation Sector

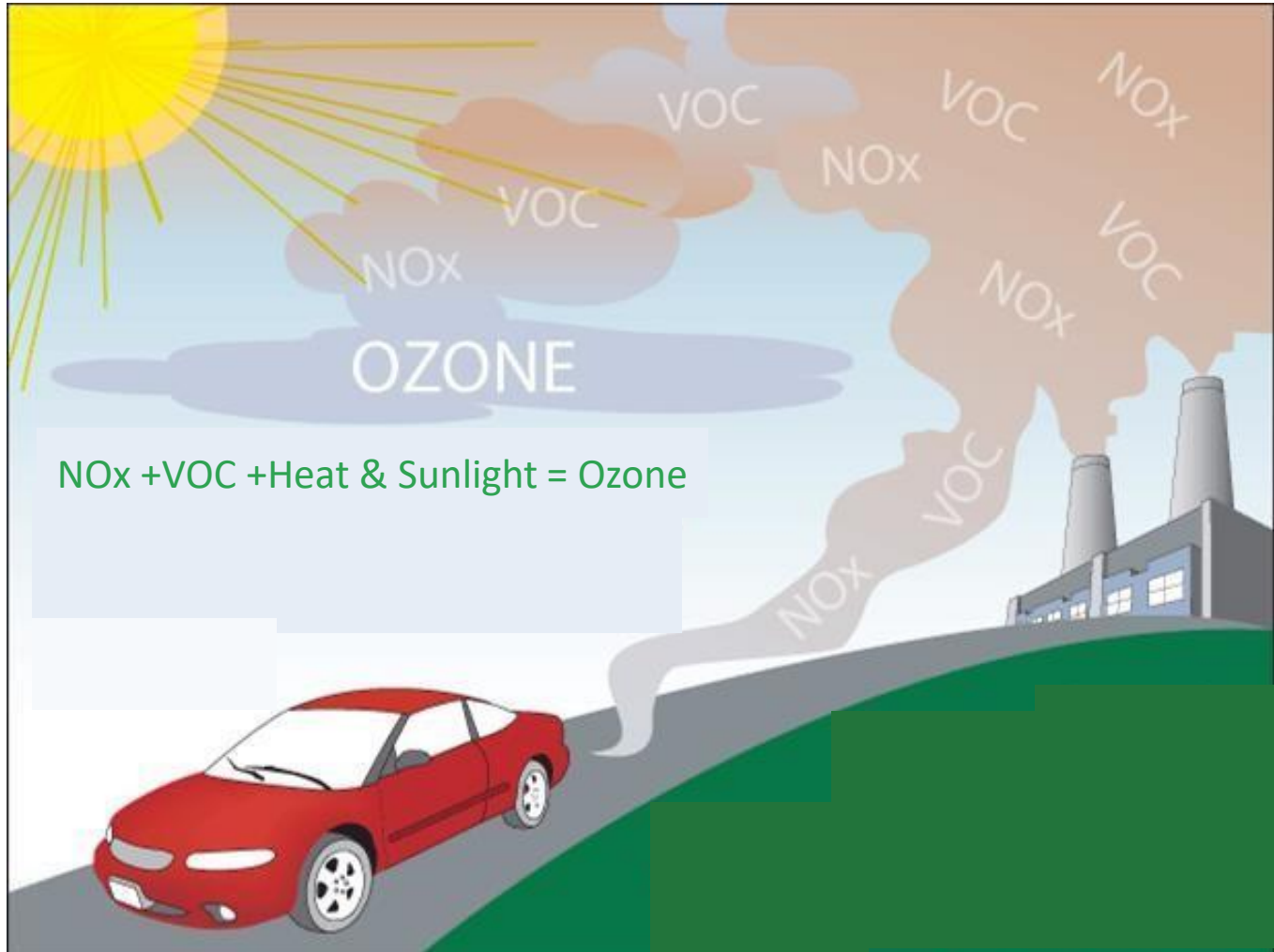
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Air Pollutants and the Transportation Sector

Most of Nevada is currently in attainment with the State and National Ambient Air Quality Standards (NAAQS), however:

- In Clark County, the Las Vegas Valley was designated marginal nonattainment for ozone in 2018.
- Washoe County is currently designated in attainment for ozone; however, recent ozone levels are close to nonattainment.
- In Carson City & Douglas County, ozone levels are also close to the standard.

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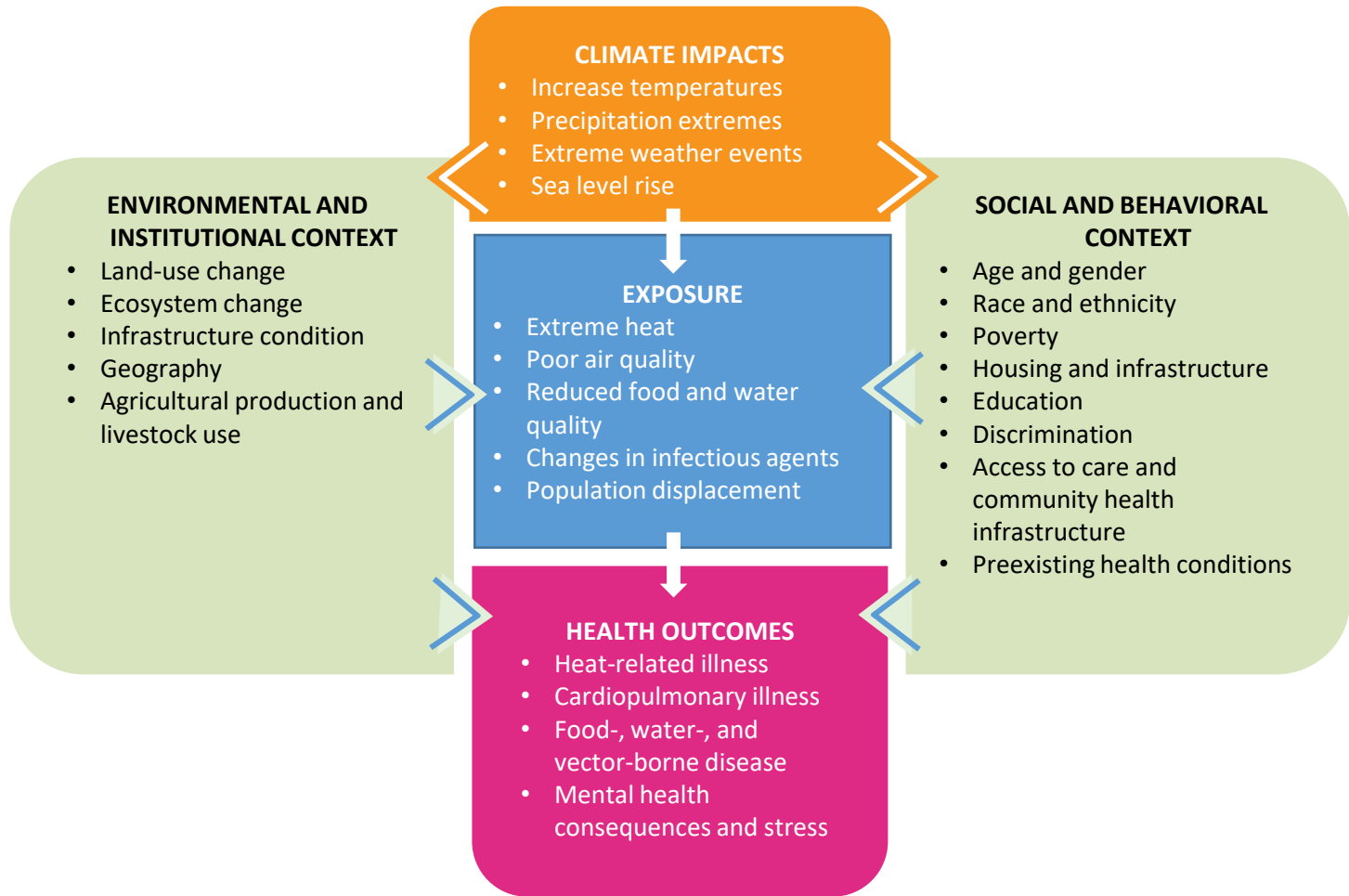


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Health Challenges from Air Pollutants

Climate Change and the Health Pathway



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After: <https://www.epa.gov/climate-indicators/understanding-connections-between-climate-change-and-human-health>



Health Challenges from Air Pollutants

Smog Formation from Criteria Air Pollutants and Hazardous Air Pollutants



Source: <https://www.reviewjournal.com/news/las-vegas-valley-gets-f-for-ozone-pollution/>

Smog can make it difficult for some people to breathe, triggering lung diseases such as asthma, emphysema, and chronic bronchitis, which may lead to premature death.

Source: <https://www.epa.gov/greenvehicles/light-duty-vehicle-emissions>

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Authority to Adopt Clean Car Regulations

The federal Clean Air Act allows states to adopt motor vehicles emissions standards that are identical to California.

Nevada law (NRS 445B.760) provides authority to the State Environmental Commission to prescribe standards for emissions from mobile internal combustion engines.

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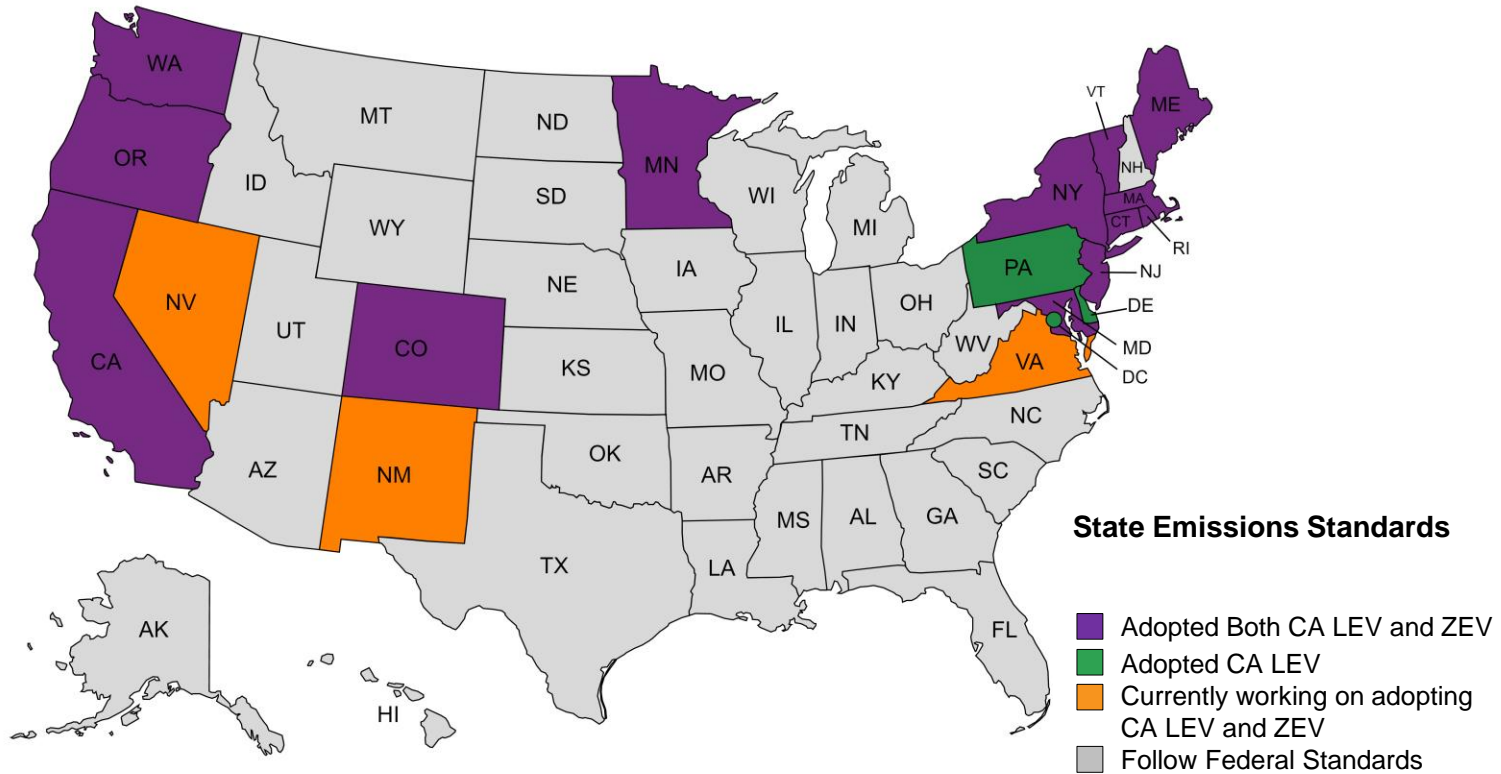


Authority to Adopt Clean Car Regulations

States that have Adopted California's Vehicle Standards under Section 177 of the Federal Clean Air Act

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What Do These Regulations Apply To?

Proposed Programs Apply to the Following Vehicle Types:



“Passenger car”



“Light-duty truck”



“Medium-duty passenger vehicle”



“Medium-duty vehicle”



NOT regulated: school buses, transit buses, tractors, construction equipment, big trucks



What Do These Regulations Apply To?

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LEV Program

The LEV program would require new (MY 2025) passenger cars, light-duty trucks, medium-duty passenger vehicles, and medium-duty vehicles sold in Nevada to meet stricter emissions requirements that reduce:

- 🌿 Greenhouse gases (GHGs);
- 🌿 Criteria Air Pollutants such as carbon monoxide (CO) and nitrogen oxide (NO_x);
- 🌿 Volatile Organic Compounds (VOCs); and
- 🌿 Hazardous Air Pollutants (HAPs)



What Do These Regulations Apply To?

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ZEV Program

How the ZEV program would work:

- 🌿 ZEV credit % requirement based on average annual sales.
- 🌿 Car Manufacturers generate ZEV credits through introduction of clean vehicle technology.
- 🌿 These clean vehicle technologies include full battery-electric, hydrogen fuel cell, and plug-in hybrid-electric vehicles.



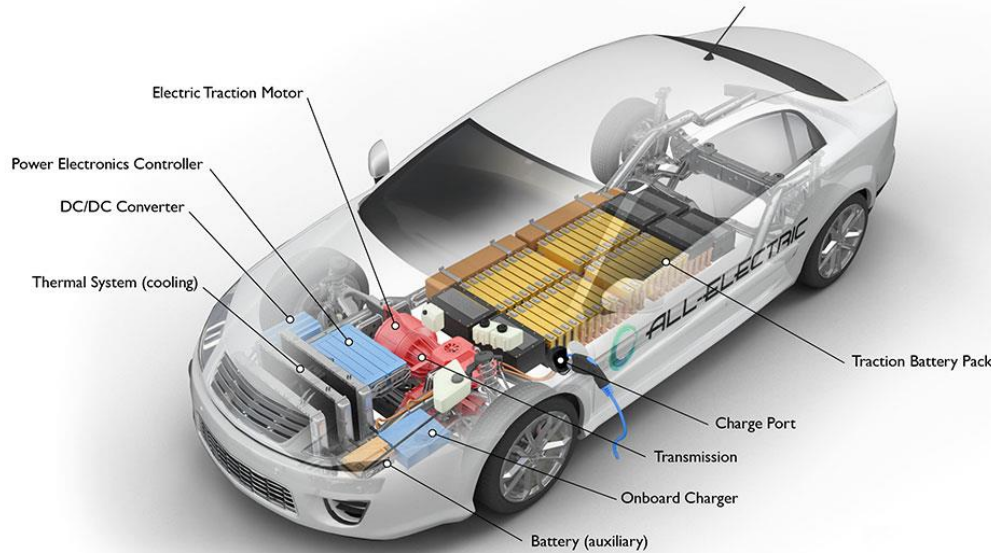
Electric Car and a Plug-in Hybrid Car



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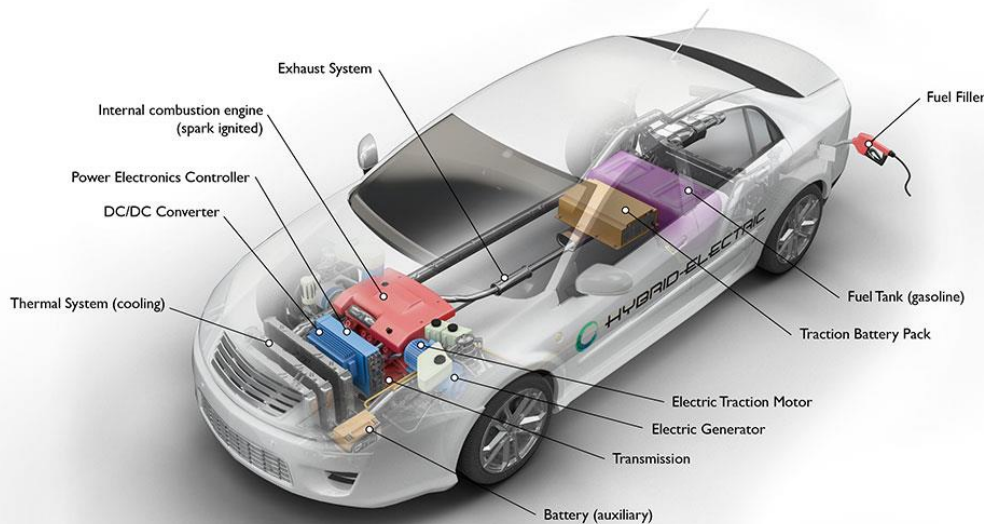
All-Electric Vehicle



afdc.energy.gov

- Has only electric motor
- Plug in to charge batteries
- Zero emissions
- Gets highest program credits

Hybrid Electric Vehicle



afdc.energy.gov

- Has both gasoline engine and electric motor
- Plug in to charge batteries or fill with gasoline
- Has some emissions
- Gets less program credits

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Vehicles in Nevada

- 2,000,000 – Light-Duty Vehicles Registered in Nevada
 - 60% registered in Clark, 17% registered in Washoe, and the remainder are registered throughout the rest of the state
- 119,356 – Average Annual New Light-Duty Vehicles Sales from 2015-2020
- Passenger Cars make up 35%, Light-Duty Trucks 65% of New Registrations for Light-Duty Vehicles
- 3% – Average Fraction of New Light-Duty Vehicles Sales in Nevada that are electric and hybrid.
- Estimated sales percentage of electric and hybrid vehicle for MY2025 is approximately 9%

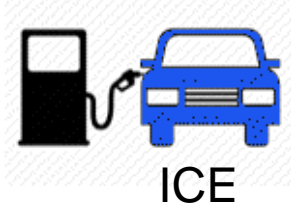
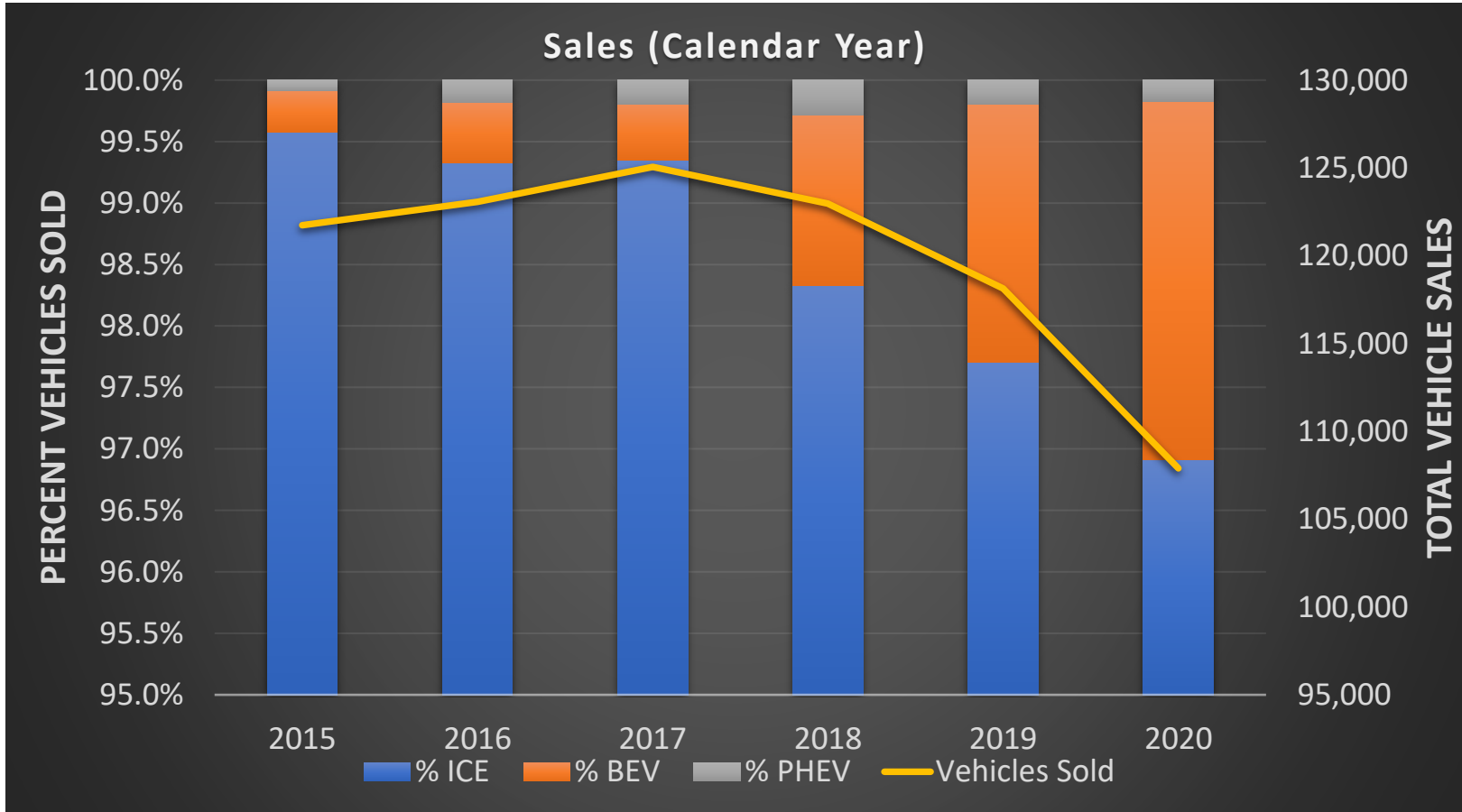


Total Light Duty Sales in Nevada and Sales Percentage of BEV and PHEVs

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Emissions Benefits of Clean Cars Nevada

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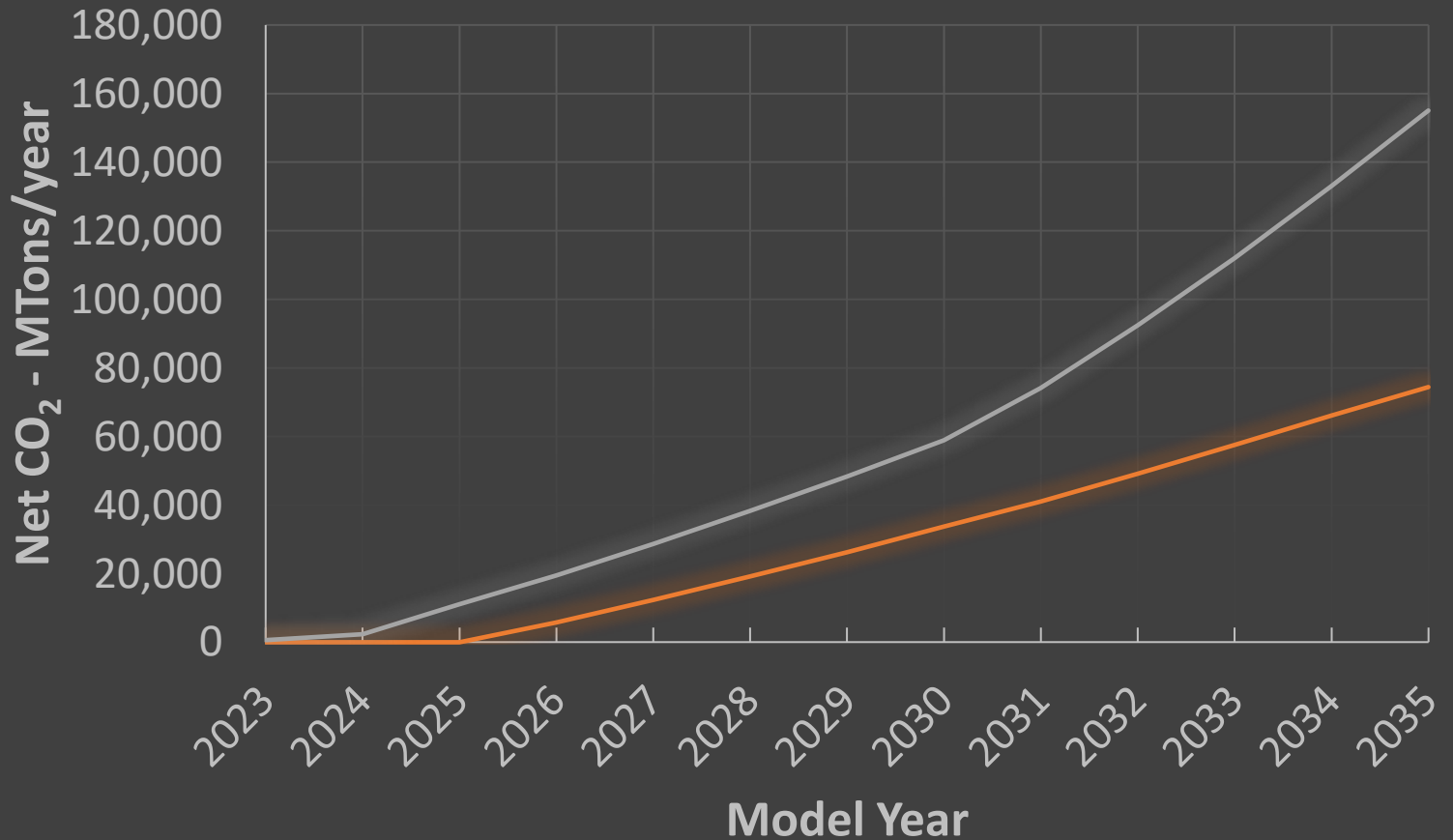
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CO₂ – Annual Emission Avoidance

— Minimum Compliance — Anticipated Compliance





Emissions Benefits of Clean Cars Nevada

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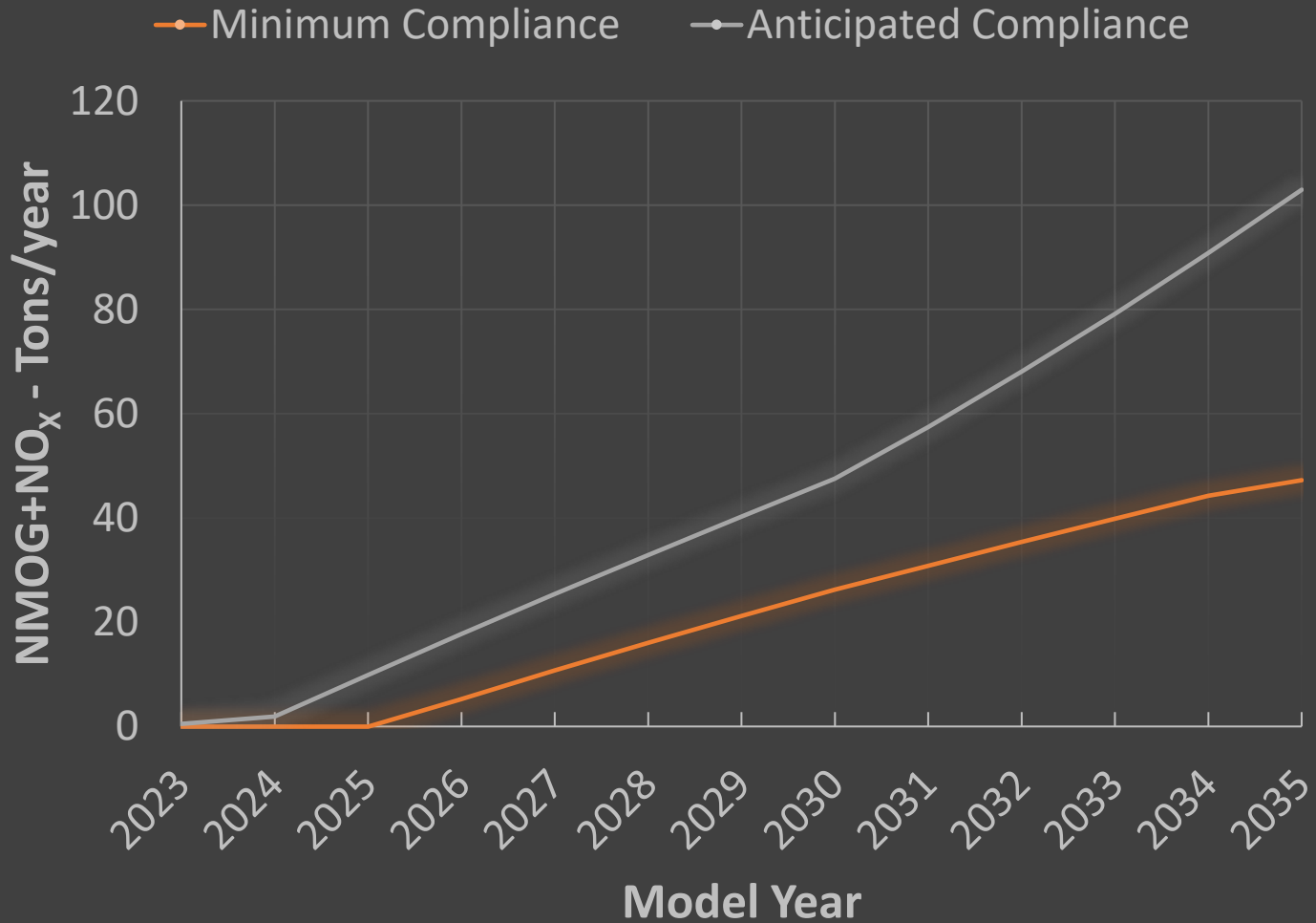
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Smog-Forming Pollutants Avoidance





Costs of Ownership of ZEVs (BEVs and PHEVs)

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- Purchase price of electric and hybrid vehicles are projected to equal conventional vehicles within the next 5-7 years
- Electric and plug-in electric vehicles depreciate at similar rates as standard vehicles
- Maintenance and repair costs for electric and plug-in electric are lower compared to standard vehicles
- **Given Nevada's higher average gasoline prices and lower electric rates, cost savings for electric vehicles are significant**



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Next Steps for Clean Cars Nevada



- Regulation Workshop on July 28, 2021
- State Environmental Commission Hearing on September 1, 2021
- Legislative Commission review of regulation – late 2021
- Clean Cars Nevada applies to vehicle model year 2025 with sales starting in 2024



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Where to Find Out More



Visit NDEP Clean Cars Website for updates
<http://ndep.nv.gov/air/clean-cars-nevada>



E-mail at CleanCarsNevada@ndep.nv.gov



Sign up for Clean Cars Nevada listserv on NDEP Website



Join a program-specific email list to follow NDEP's regulatory actions and public notices

GET NOTICES >

Select a topic below for program-specific news and updates.

Board for Financing Water Projects

VW Settlement - Nevada Mitigation Fund

Nevada Recycling Program

Nevada Brownfields Program

Air Quality Info and Notices

Nevada Federal DOE Facility Oversight

Environmental Outreach & Education

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