

Mexico City, July 9, 2014

California's Advanced Clean Cars Program

A coordinated set of GHG, criteria, and ZEV regulations

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 **Air Resources Board**

“We will go to Mexico next. California can’t do this alone.” - Governor Brown’s 2014 State of the State Address



2014 Mexico Mission



California-Mexico Mission July 2014

Governor Brown to Lead Trade and Investment Mission to Mexico

Governor Brown to Lead Trade and Investment Mission to Mexico

Governor Brown will be joined by a diverse delegation of California government, business, economic development, investment and policy leaders on the Mission, which will be organized by the California Chamber of Commerce.

Governor's Office, April 29, 2014

Delegate Application (Waiting List Only)

May 2014

This summer, Governor Edmund G. Brown Jr. will lead an historic trade and investment mission to Mexico. Along with senior members of his administration, Governor Brown will travel to Mexico City from Sunday, July 27th to Wednesday, July 30th, to build on the momentum initiated last year in China – expanding our focus to California’s neighbor and largest export market.

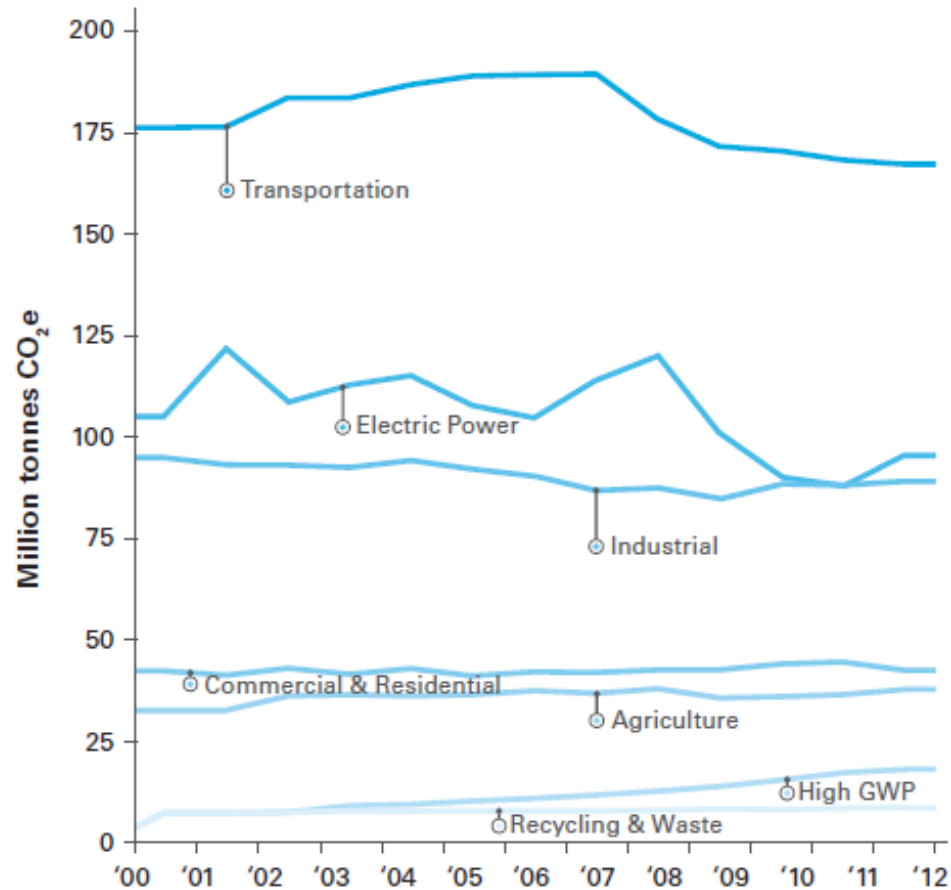
Given our border relationship and long-standing historical, cultural and economic ties, Mexico is a natural partner to further expand two-way trade and investment, and strengthen cooperation on global climate change. Delegates will visit with high ranking officials in Mexico City, tour California companies and projects in Mexico, and lead events to promote California to potential Mexican investors.

California is squarely focused on addressing the threat of climate change

- We need to protect our natural and built environment
- Commitments for healthy air and less GHG pollution
- We need to transform our fuels, vehicles, and the way we move people and goods
- Policies, regulations, and public-private investments working in concert



Transportation is largest emission source

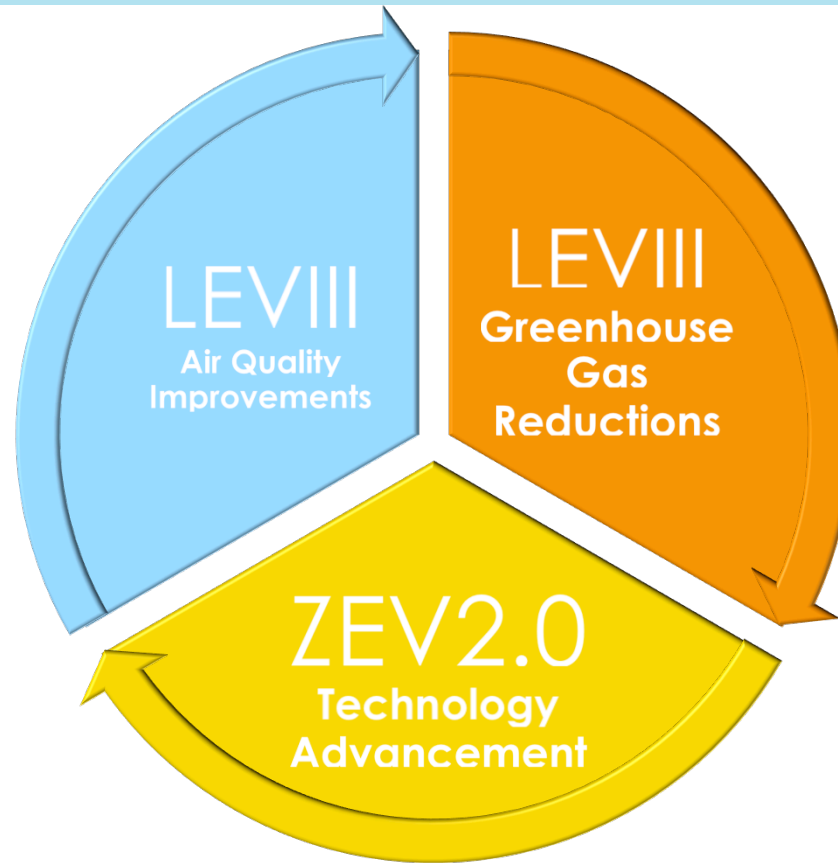


How did we get here?

- 2002: California Assembly Bill 1493 calls for CARB to develop car GHG emission standards
- 2004: CARB adopts first set of rules in U.S. for MY 2009-2016
- 2010: U.S.EPA adopts California car GHG standards
- 2011: Obama Administration announces agreement between auto makers, California, Federal Government on one national GHG standard for cars
- Jan 2012: CARB adopts 2017-2025 GHG standards
- One national program is created.
Oct. 2012: U.S.EPA/NHTSA adopt same standards

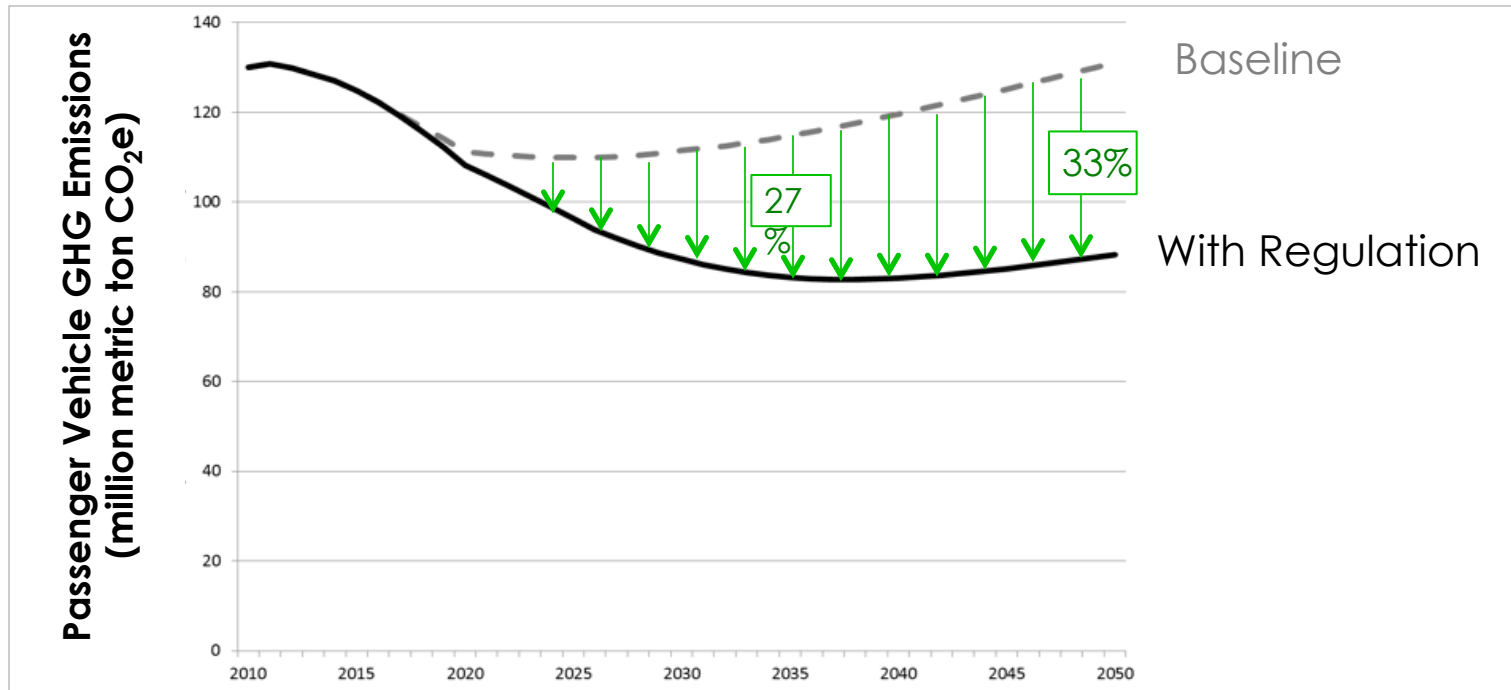


What is the Adv. Clean Cars Program?



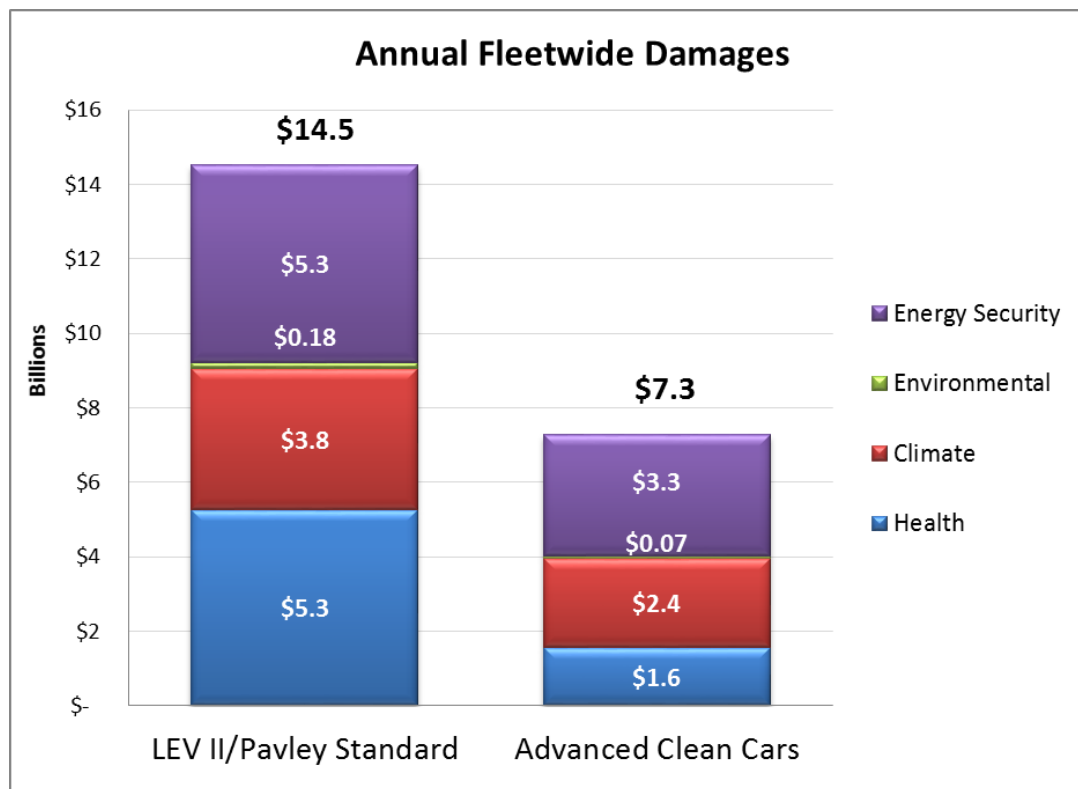
Coordinated approach to meeting air quality and GHG goals from light duty vehicles

Cumulative 870 MMTCO₂e reductions through 2050



- Major impact as low-GHG vehicles replace older vehicles
- GHG reduction in California: 27% in 2035 and 33% by 2050

Benefits of the ACC Program

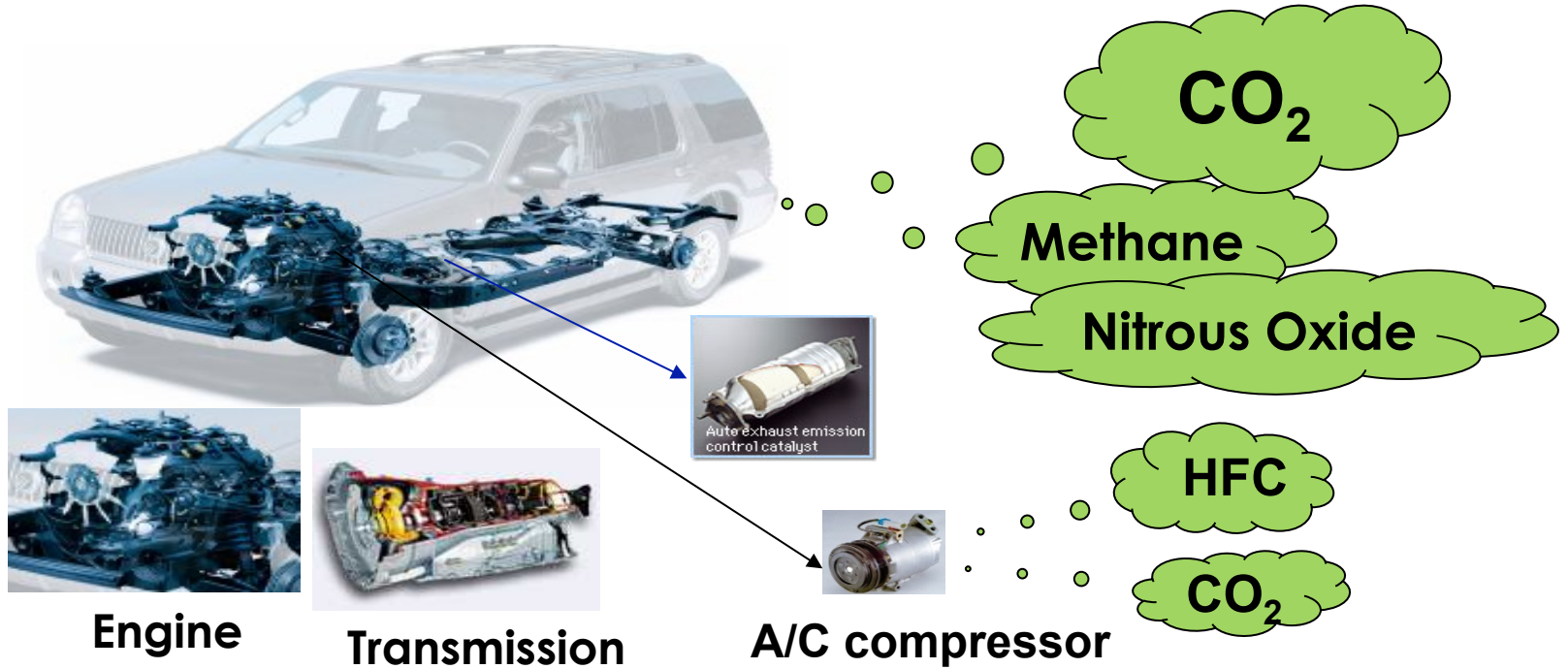


~\$7 billion in avoided health and other damages

Source: American Lung Association

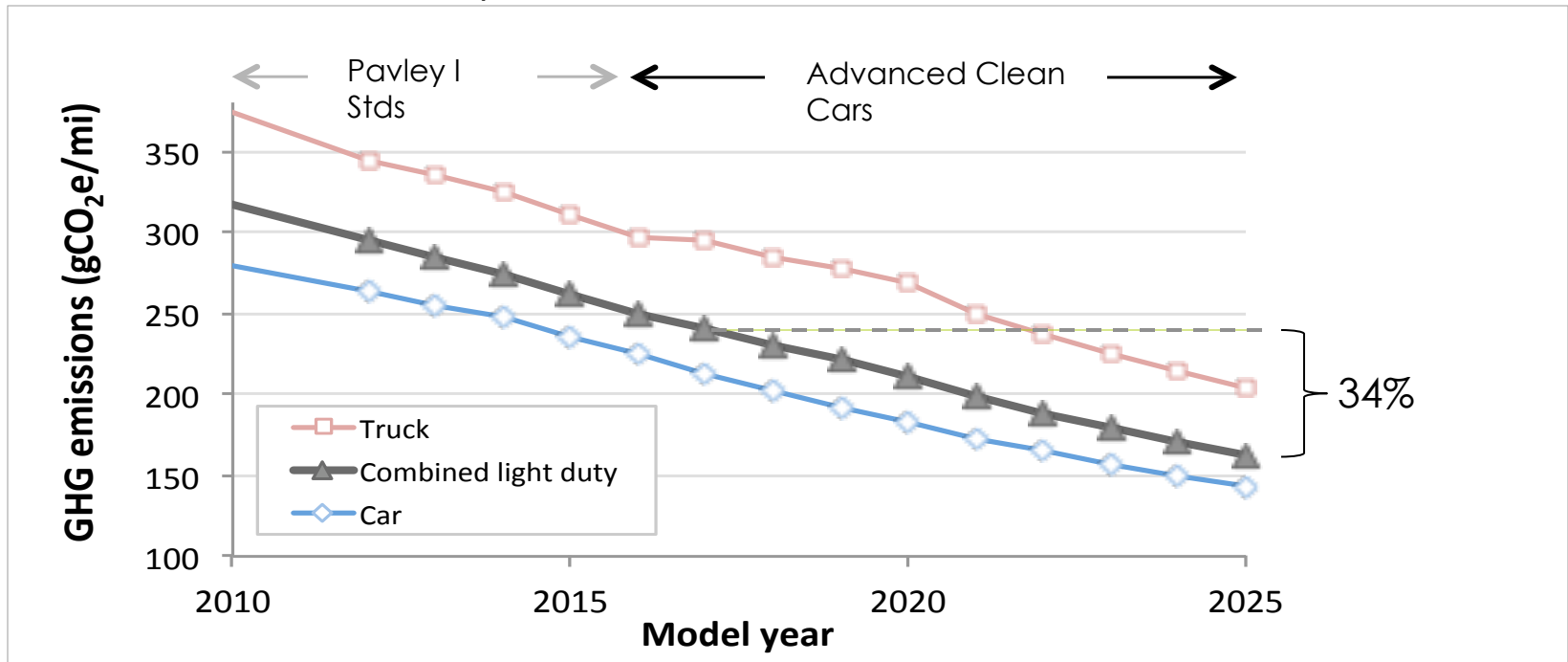
Based on EPA regulatory analysis of health endpoints/costs for CAA and NAAQS, federal estimates of societal costs of carbon emissions, and federal estimates of macro-economic impact of importing oil, disruptions in supply.

GHG Standards are not Fuel Economy Standards



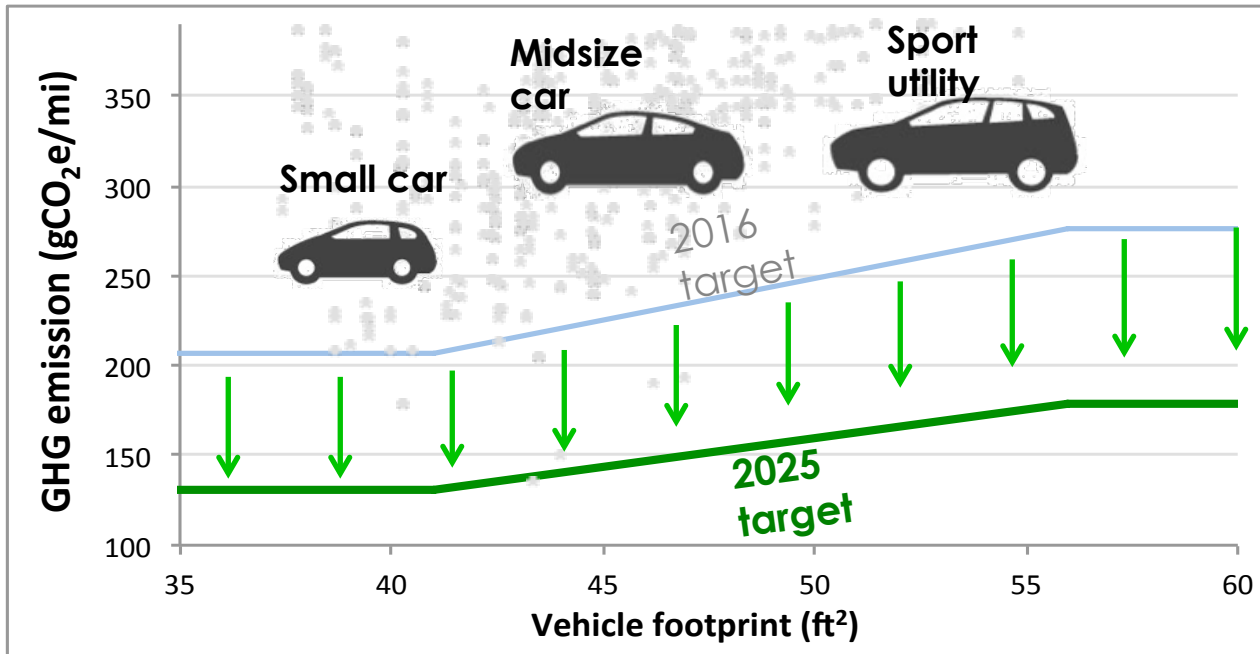
GHG Standards

- Phase-in: 2017-2025 model year
- 2025 target: 166 gCO₂e/mile
- 4.6%/year GHG reduction
- Total reduction of 34%
- Separate car and truck standards



Flexible Footprint-Indexed Standards

All vehicles must reduce GHG emissions by about the same percent



Why footprint-based?

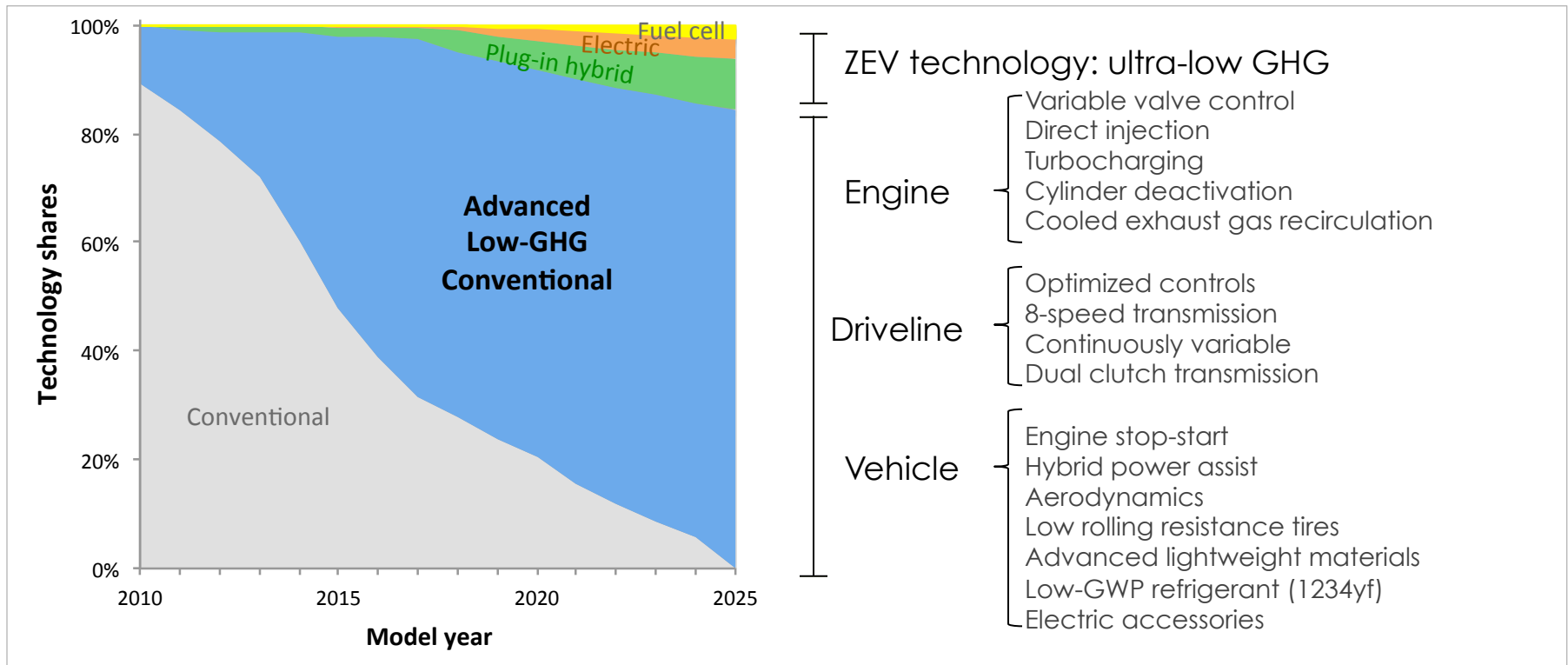
- Preserve all vehicle types in marketplace
- Address manufacturer competitiveness
- Promote light-weighting

Note: There are corresponding footprint-indexed standard targets for light trucks

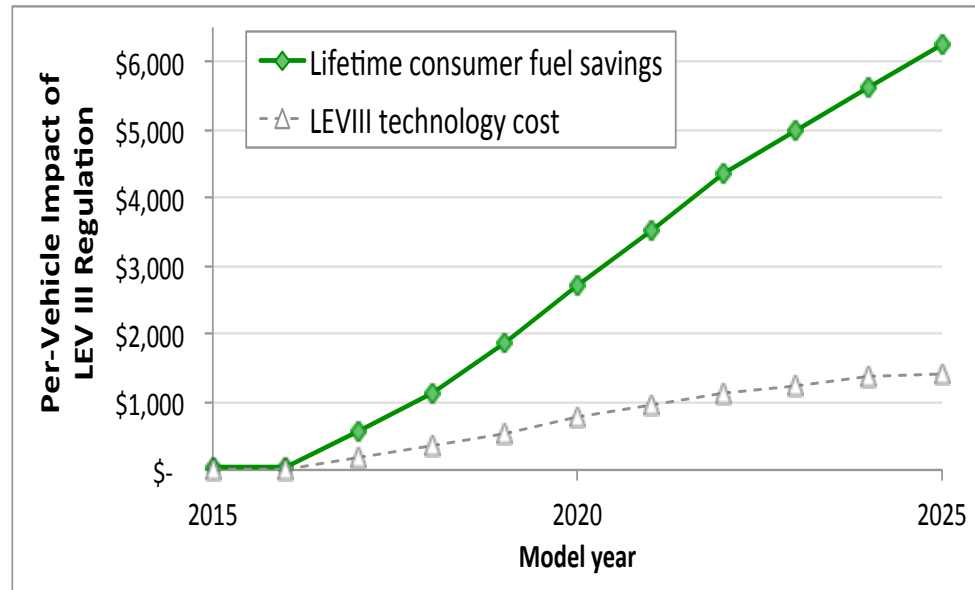
Credit opportunities and flexibilities

- Off-cycle emission reductions
 - Recognizes reductions achieved outside of test cycles
- Truck hybridization
- A/C efficiency improvements and low GWP refrigerants
- Company sales-weighted averaging
- Footprint-indexed targets
- Separate car and truck standards
- Credit banking (5-year carryforward, 3-year carryback)

Existing technologies used more extensively



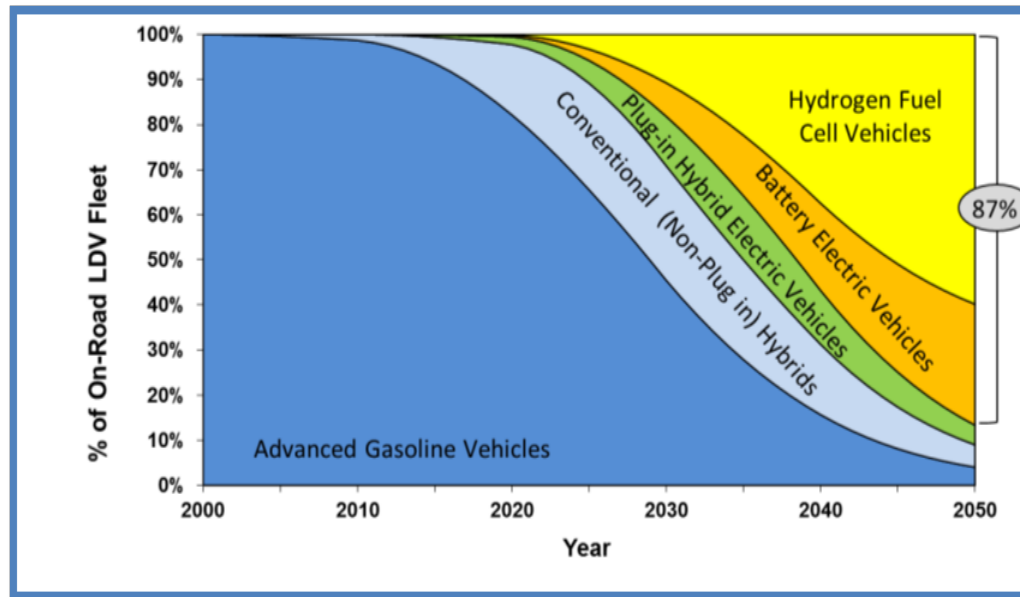
Consumer savings exceed technology costs



- Average 2025 vehicle consumer savings
- Consumer savings greatly outweigh the cost (by 3-to-1 margin)
- “Off the lot” savings from the first month
- Overall payback within first vehicle purchaser

The end goal is zero

- 2025: 1 out of 7 new vehicles is a ZEV (CARB's ZEV2.0 Mandate)
- Post-2025 continue at GHG reductions of ~5% per year and frame the path to 2050
- ~2040: all new vehicles sold are ZEVs
- ~2050: 9 out of 10 vehicles on the road are ZEVs



Hydrogen and electricity, the “no compromise” alternative to fossil fuel combustion



- California is investing heavily in incentives and infrastructure for ZEVs
- California has committed support for 100 H2 fueling stations
- ZEV Policy promotes specifically BEVs and FECVs