

# Developing a Methodology to Allocate AB 118 Program Funds for LDVs

## AB 118 Advisory Committee Meeting

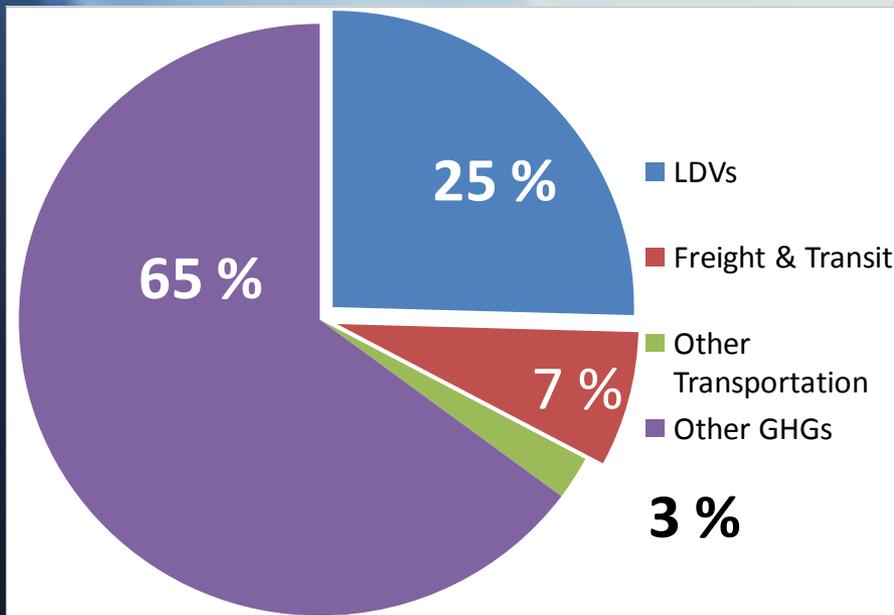
September 2, 2008

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Fuels & Transportation Division

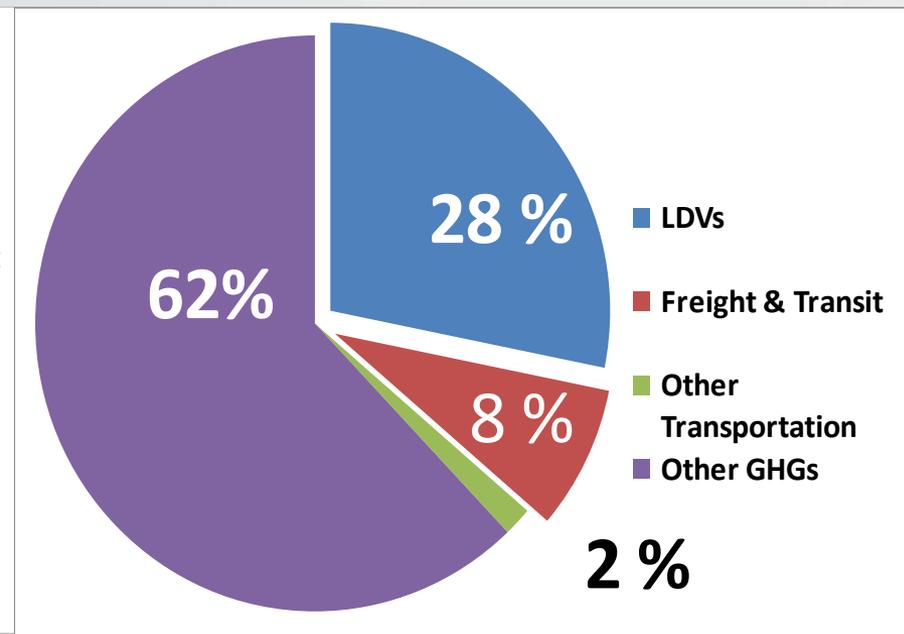


# California's GHG Emissions

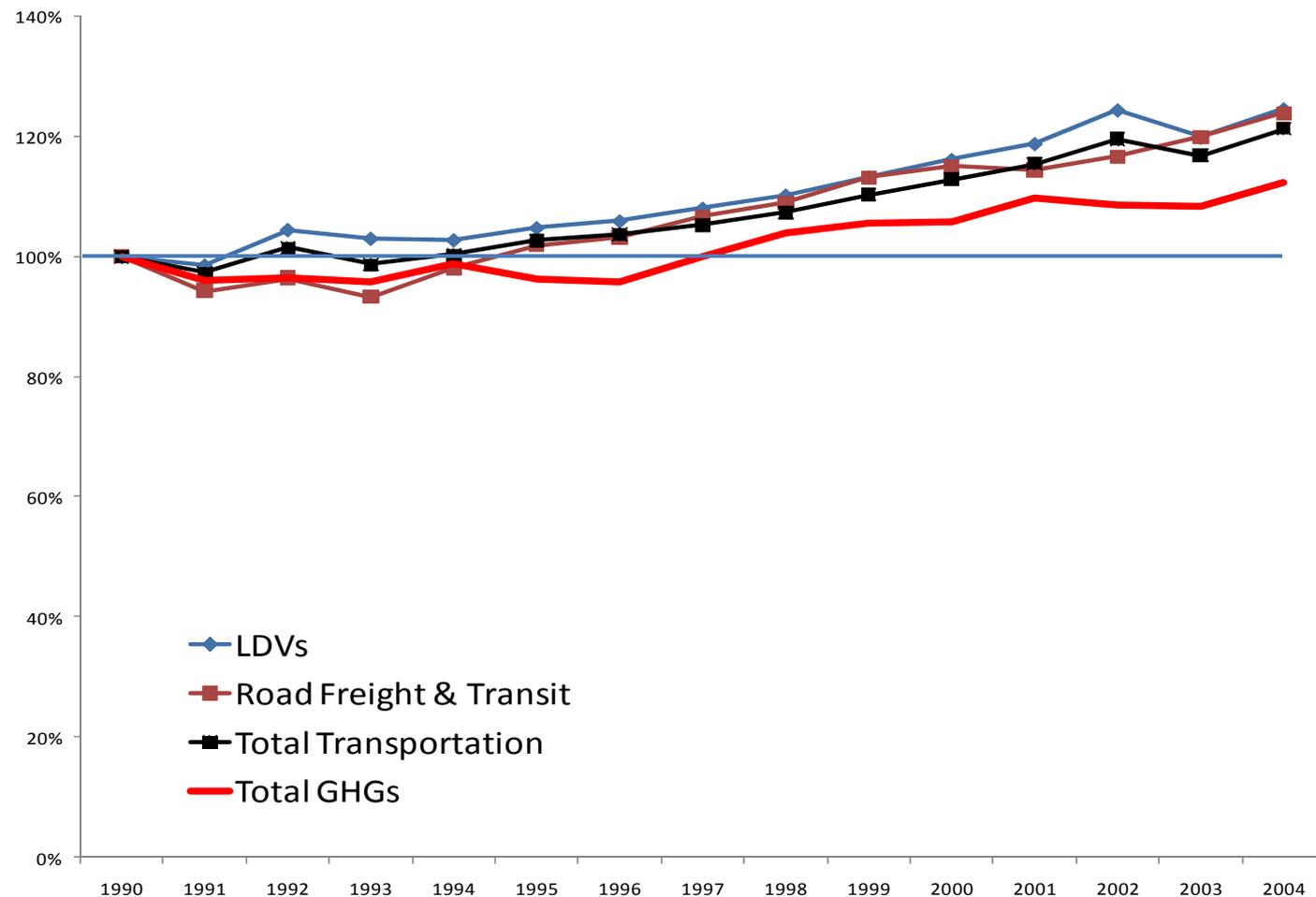
1990



2004



# California's GHG Emissions Trends



# 2050 Vision Analysis

- ❖ Can AB 118 funding be focused to put California's light-duty vehicle fleet on a path towards accomplishing an 80% reduction in greenhouse gas emissions?
- ❖ Challenge: Work backwards from the “2050 Vision” in the State Alternative Fuels Plan to find a starting point that would lead to the outcome expressed in the “2050 Vision”



# 2050 Vision Analysis

❖ Begin with vehicle attributes from 2050

Vision:

- Most vehicles get 60 mpg; electric get 80 mpg
- Electric drive vehicle fuels are 40% of fuel mix; biofuels are 30% and other fuels are 30%
- Per-person VMT reduced from 10,300 under Business-As-Usual to 8,200 under 2050 Vision



# 2050 Vision Analysis

- ❖ Extend CEC-adopted forecast to 2050
  - Population data from DOF
  - Hold miles/gallon fuel economy at 2030 levels from forecast out to 2050
  - Extend per-person VMT from forecast period to 2050 value of 10,300 from BAU under 2050 Vision
  - Likewise, extend new vehicle purchases

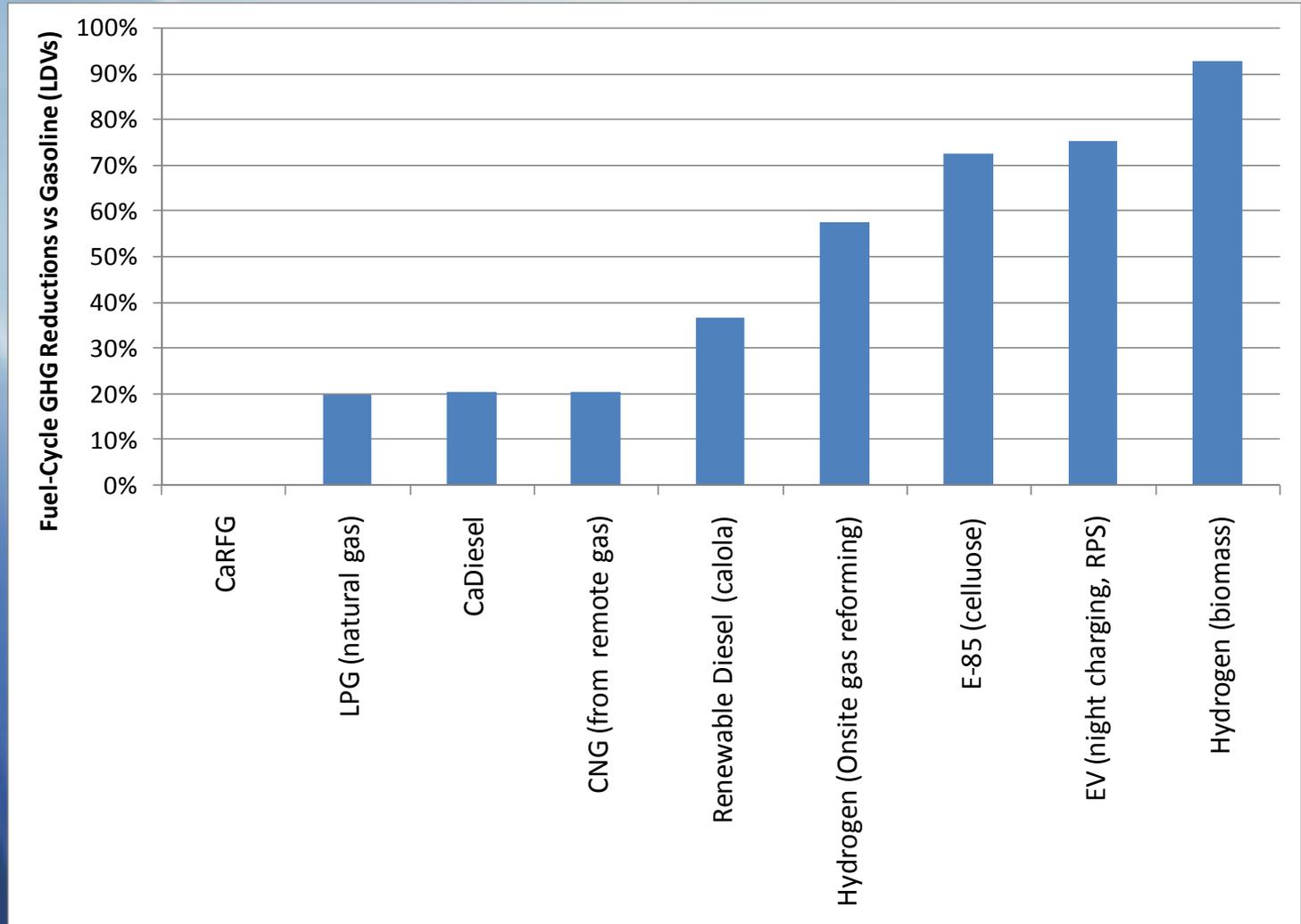


# 2050 Vision Analysis

- ❖ Break new vehicles into 3 groups:
  - Low Carbon (LC) vehicles at 60 mpg and 10% carbon reduction
  - Ultra-Low Carbon (ULC) vehicles at 60 mpg and 80% carbon reduction
  - Super-Ultra-Low Carbon (SULC) vehicles at 80 mpg and 90% carbon reduction



# Fuel Cycle GHG Reductions for LDVs



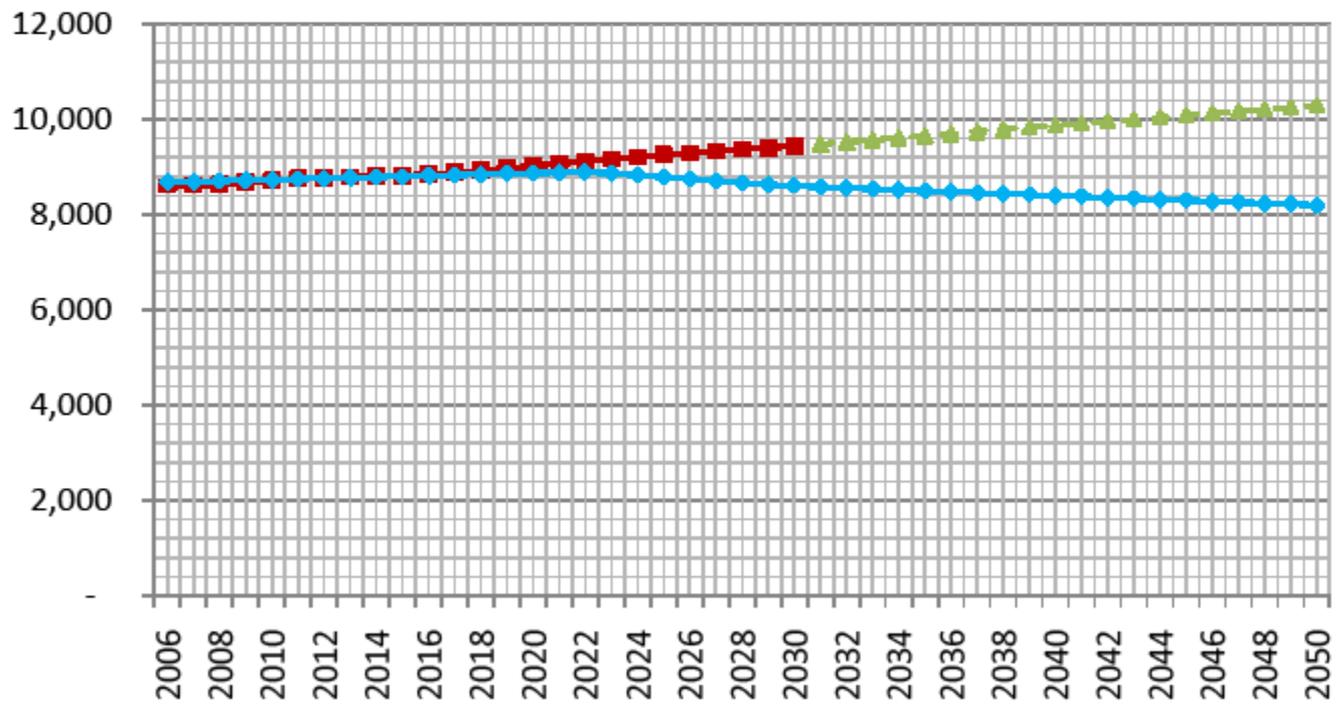
# 2050 Vision Analysis

- ❖ Add Alternative Fuel Vehicles to the mix using “Story Lines” from State Alternative Fuels Plan, updated by staff.
- ❖ Non-petroleum alternative fuels restricted to replacing gasoline and diesel in LC vehicles
- ❖ Biofuels used for ULC and SULC vehicles
- ❖ Electric drive vehicles for SULCs

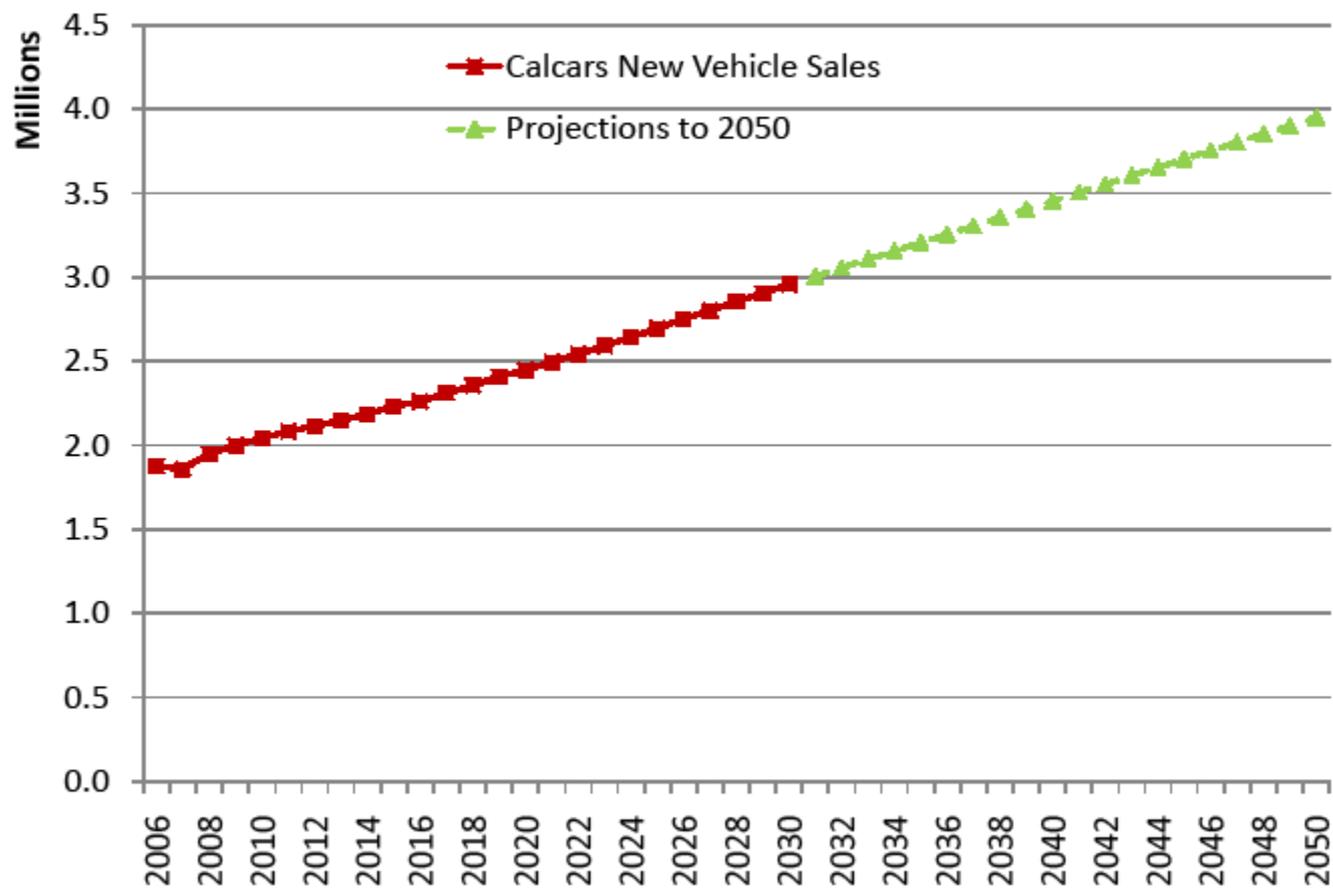


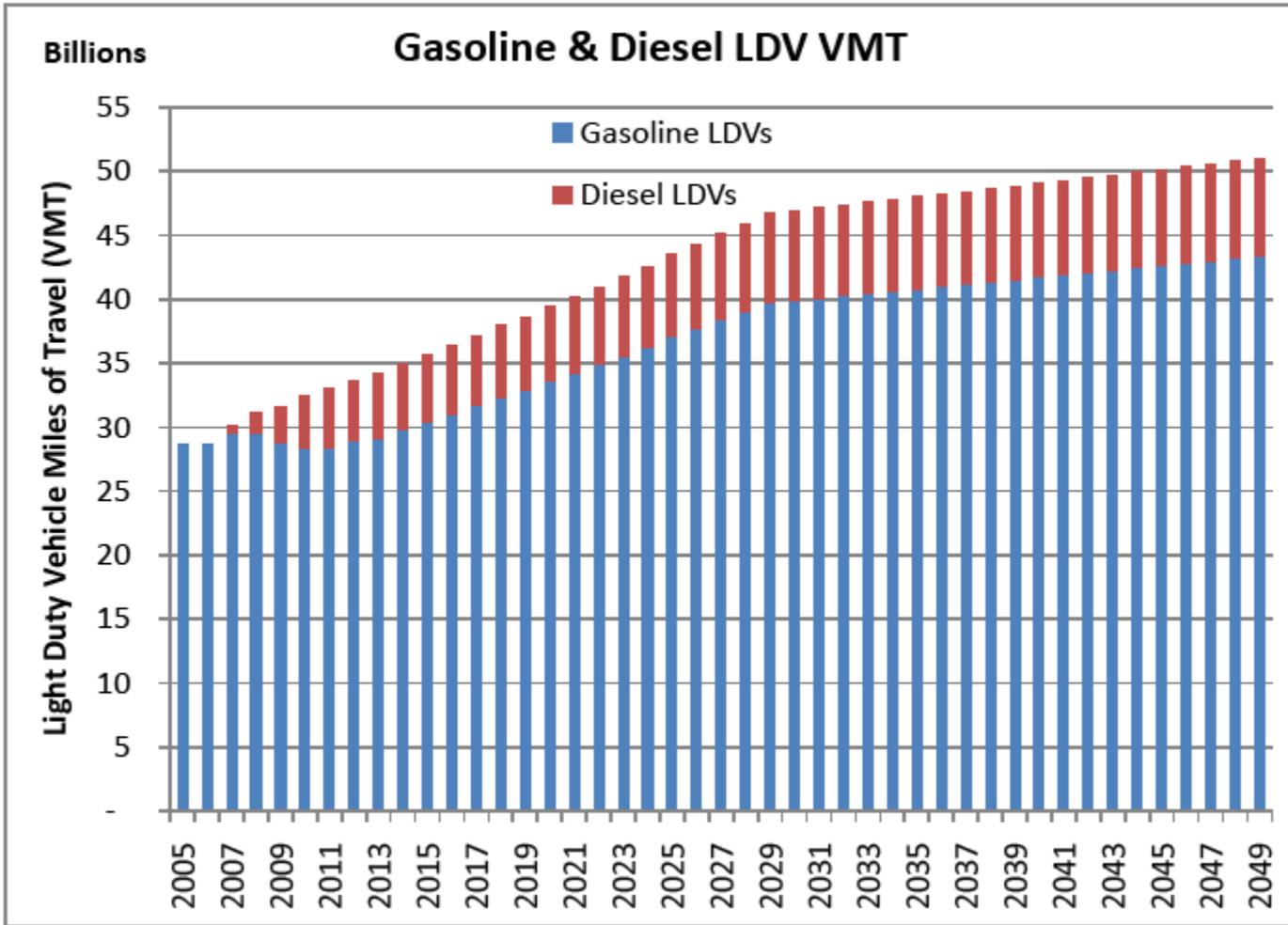
## California VMT/Capita

- Total VMT/Capita (CalCars)
- ▲ VMT/Capita Projected Under BAU
- ◆ Total VMT/Capita (AB 1007 "2050 Vision")

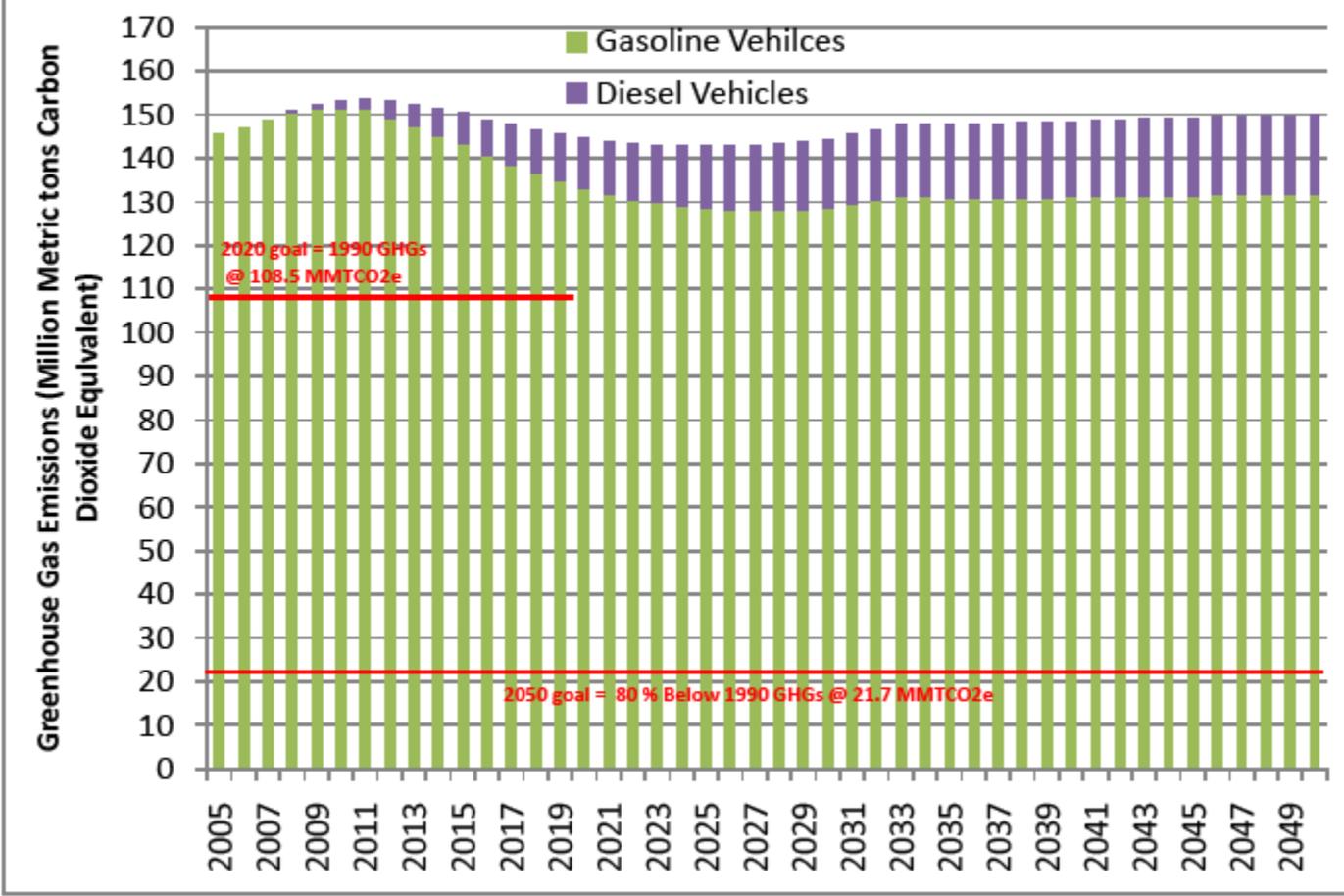


### CalCars New Vehicle Sales & Projections to 2050

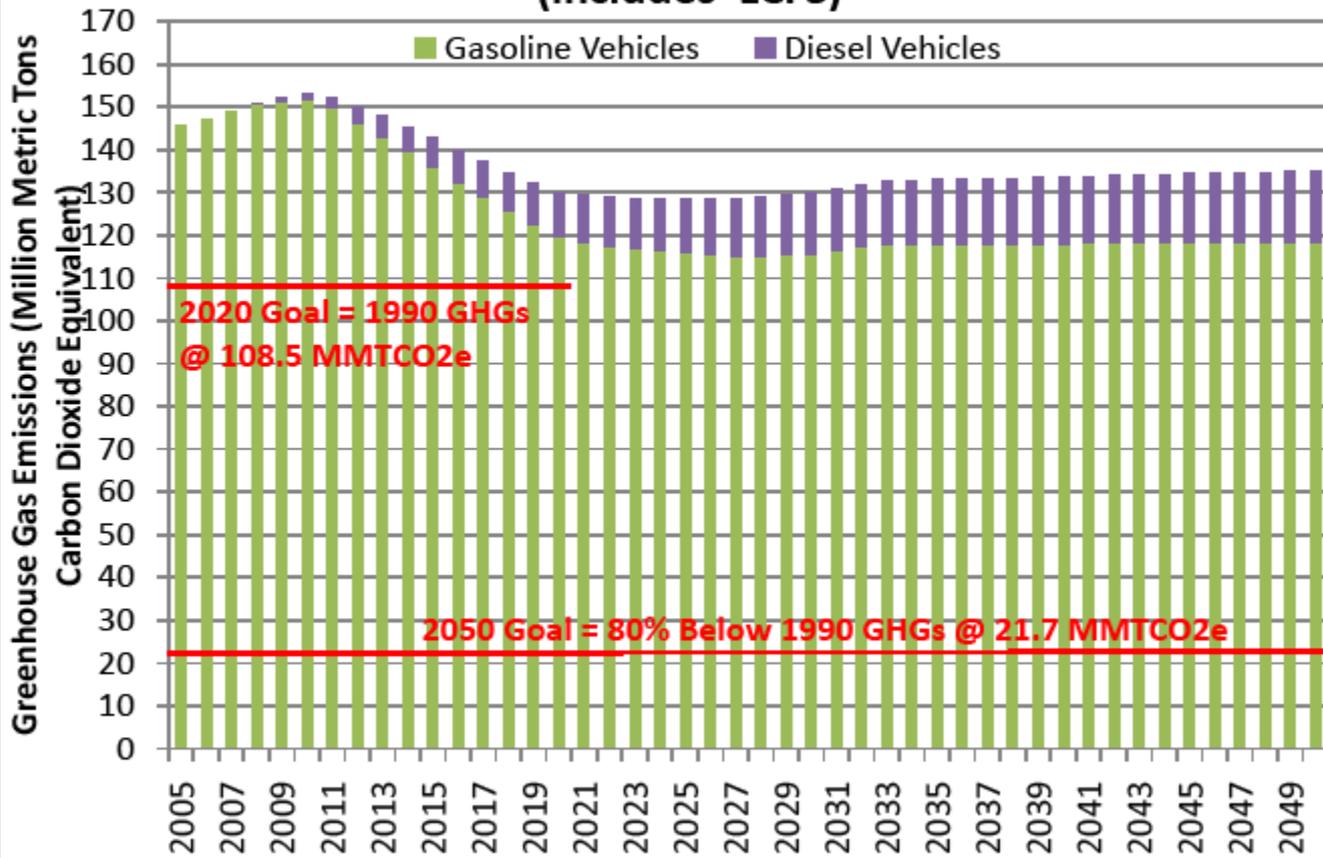




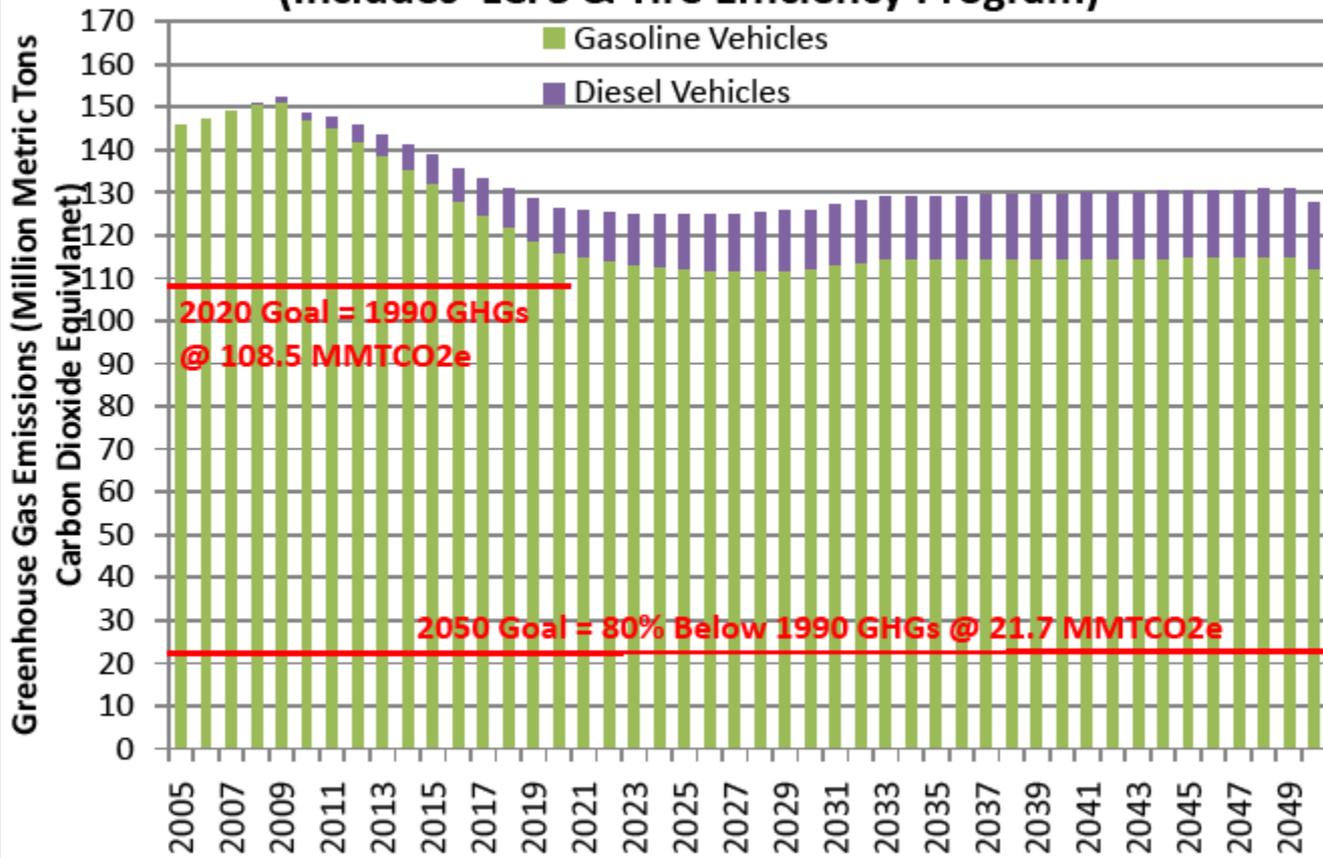
### California LDV GHG Emissions -- Business As Usual (BAU)



## California LDV GHG Emissions (includes LCFS)

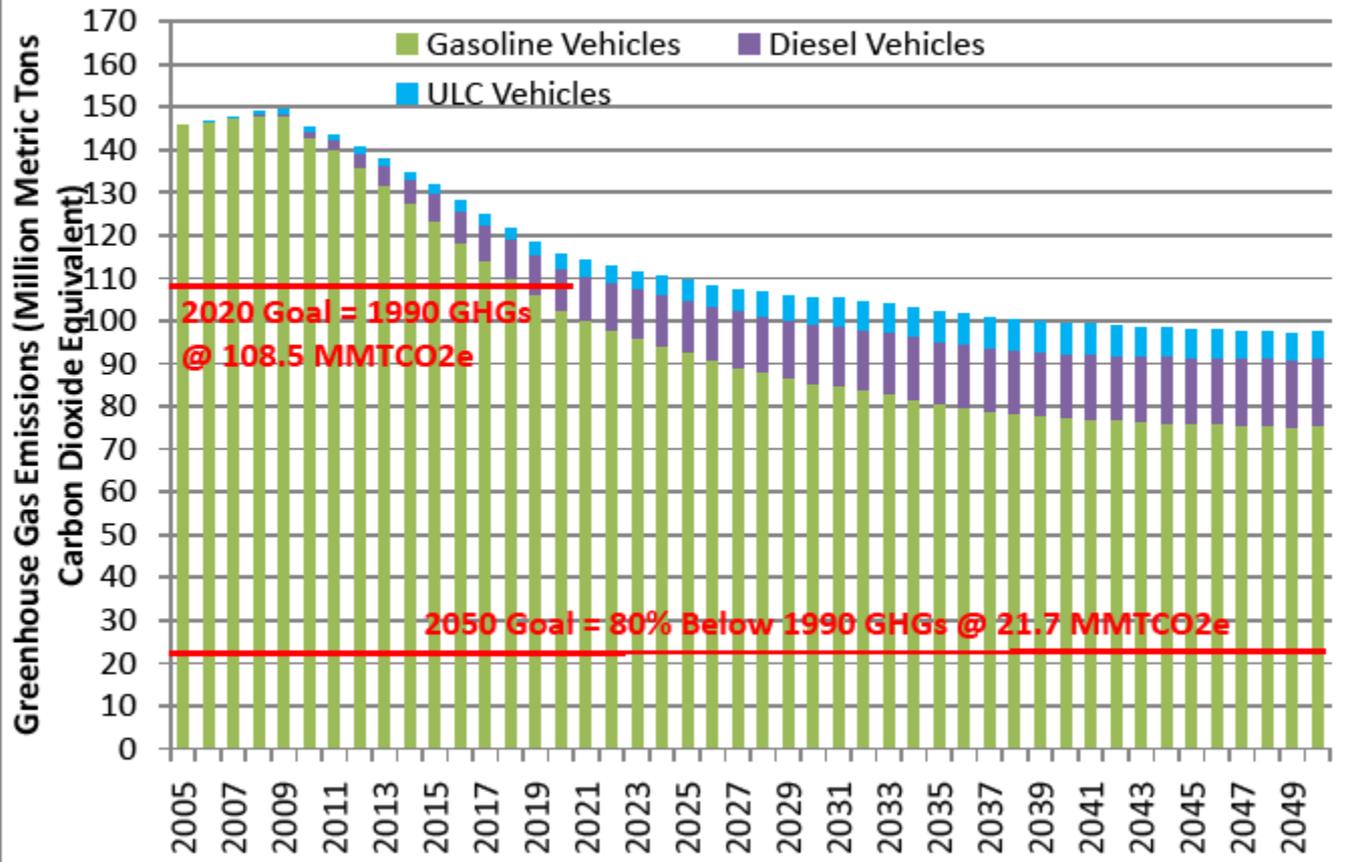


## California LDV GHG Emissions (Includes LCFS & Tire Efficiency Program)



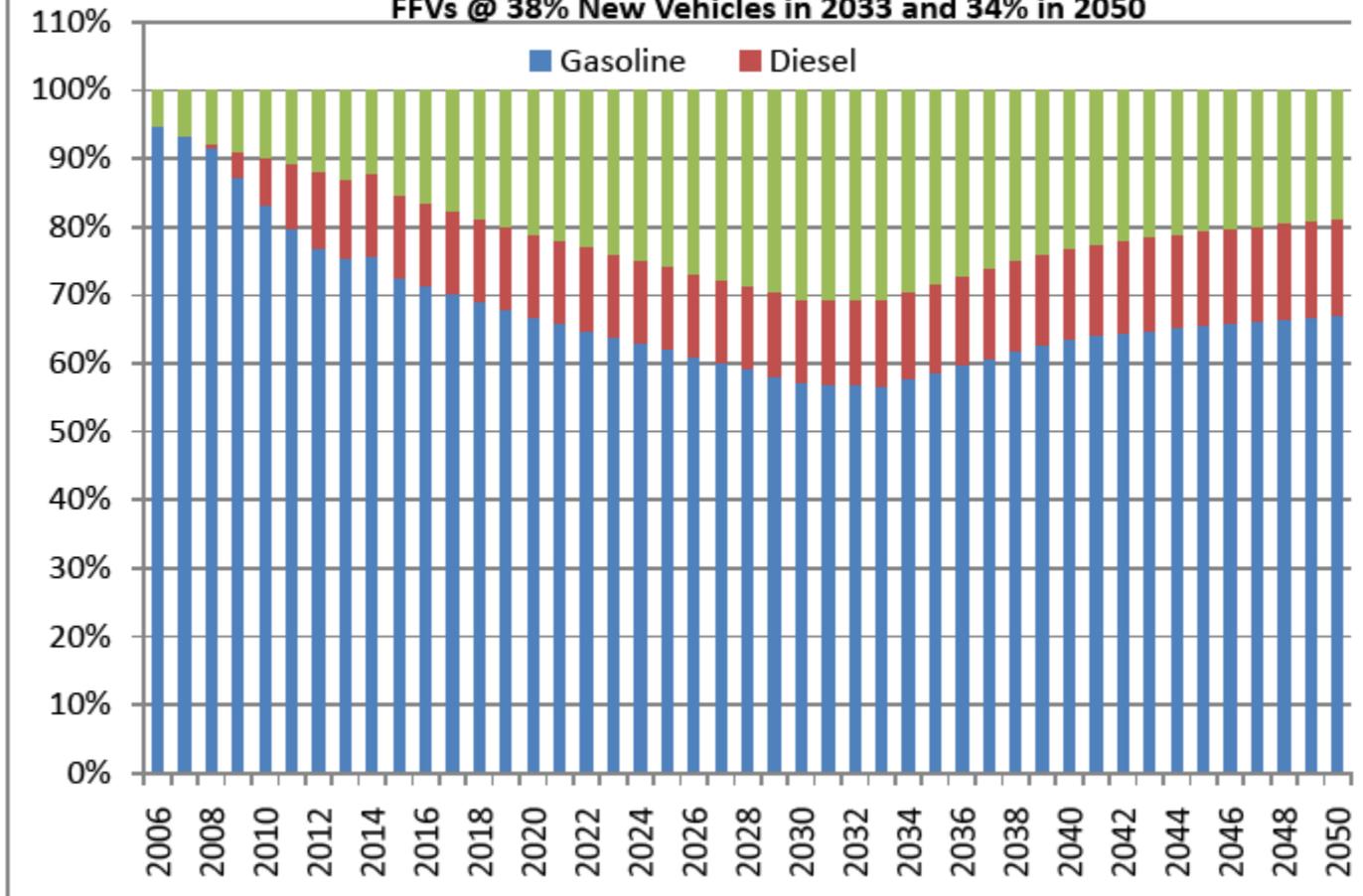
## California LDV GHG Emissions

(includes LCFS, Tire Efficiency Program, Ultra-Low Carbon Vehicles)



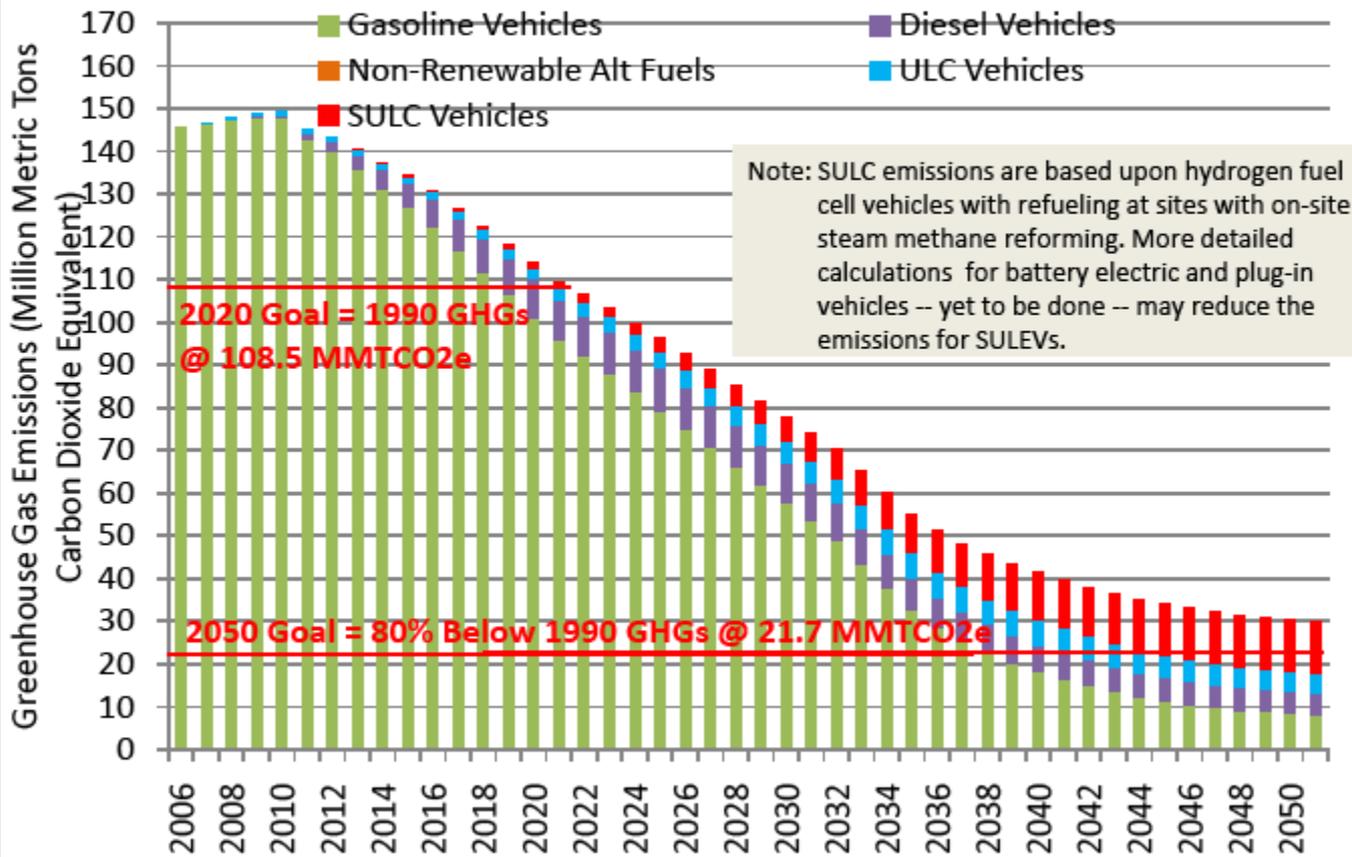
## New Vehicle Percent of Total Fuel Use by Fuel Type

FFVs @ 38% New Vehicles in 2033 and 34% in 2050



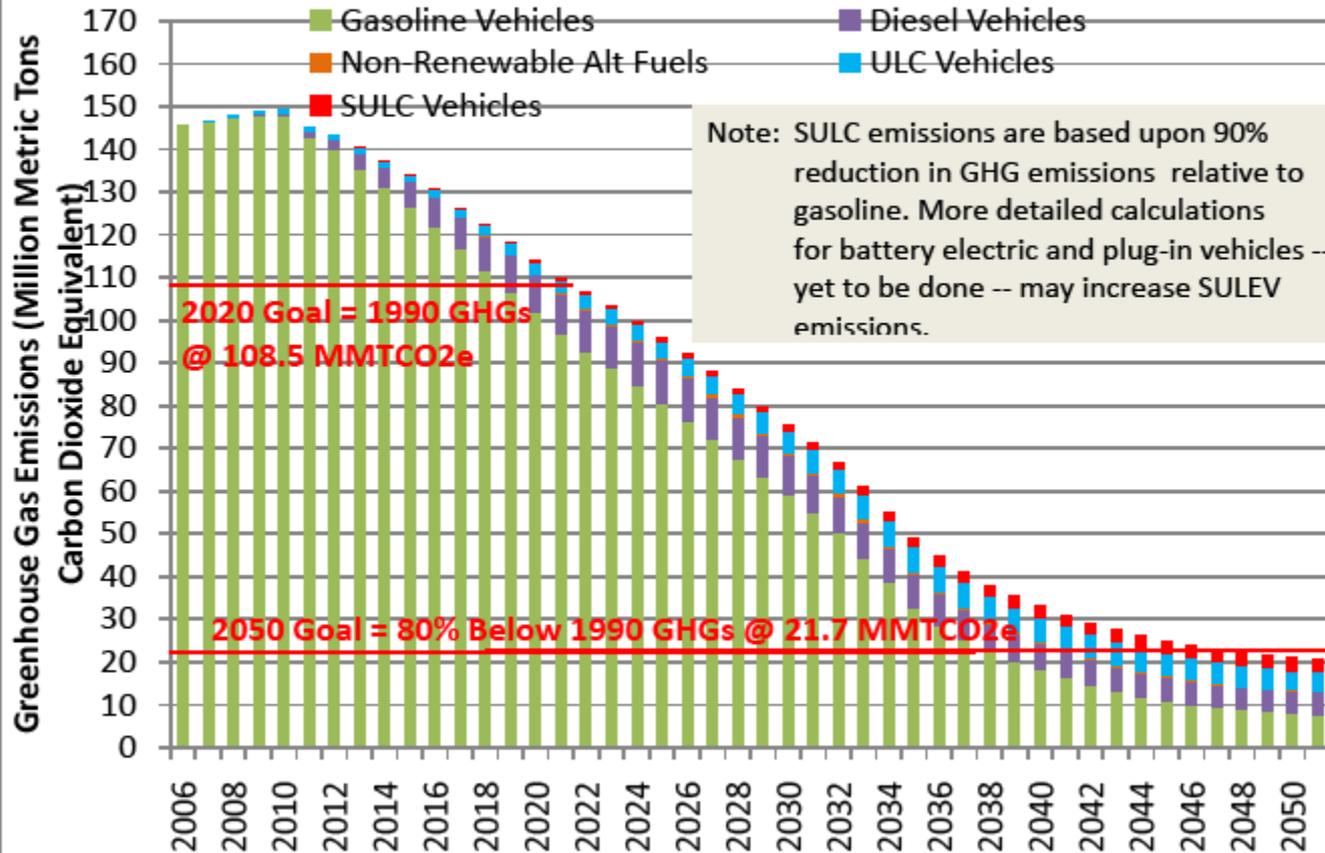
## California LDV GHG Emissions

(includes LCFS, Tire Efficiency Program, ULC & SULC Vehicles & VMT Reductions)

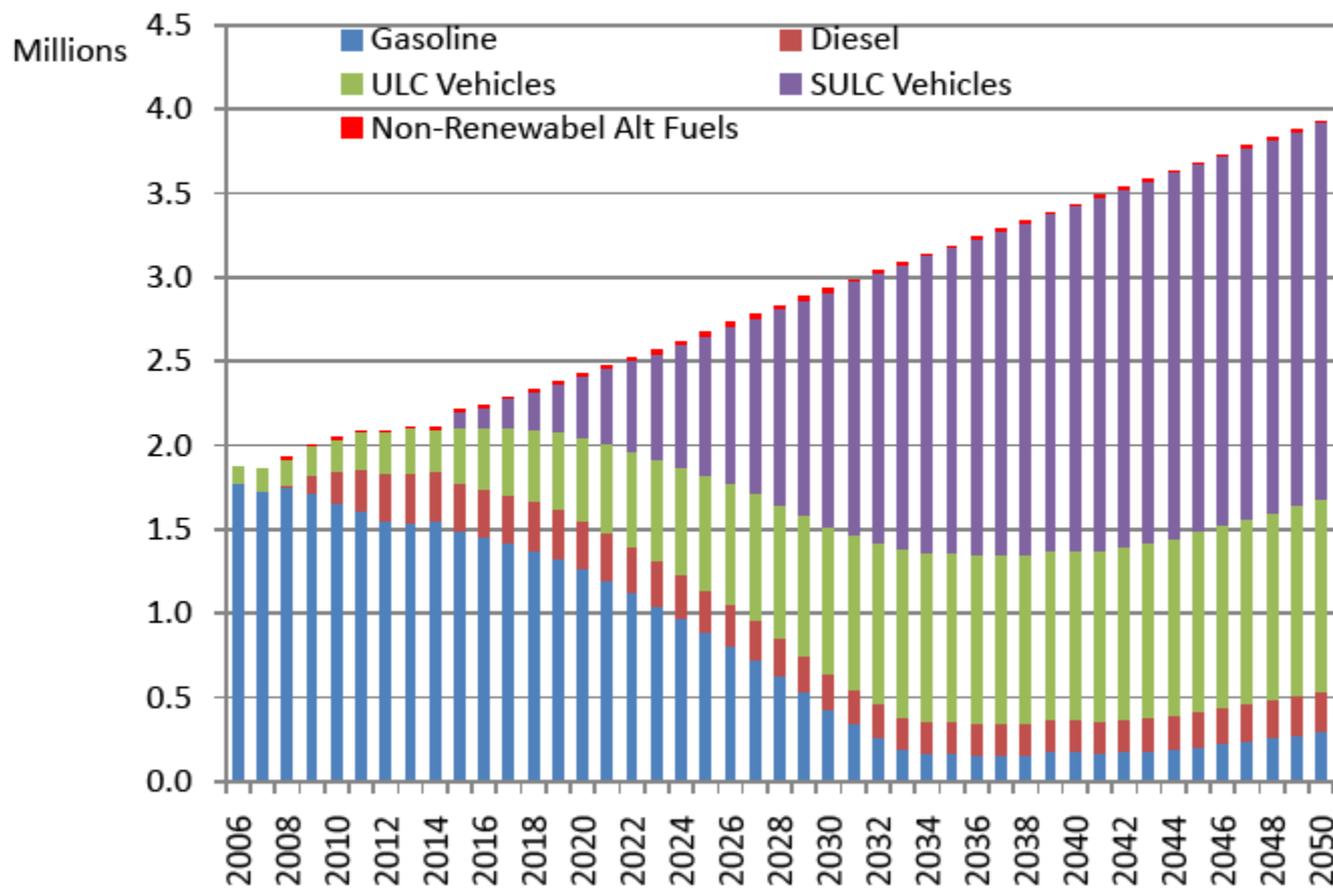


## California LDV GHG Emissions

(includes LCFS, Tire Efficiency Program, ULC & SULC Vehicles & VMT Reductions)

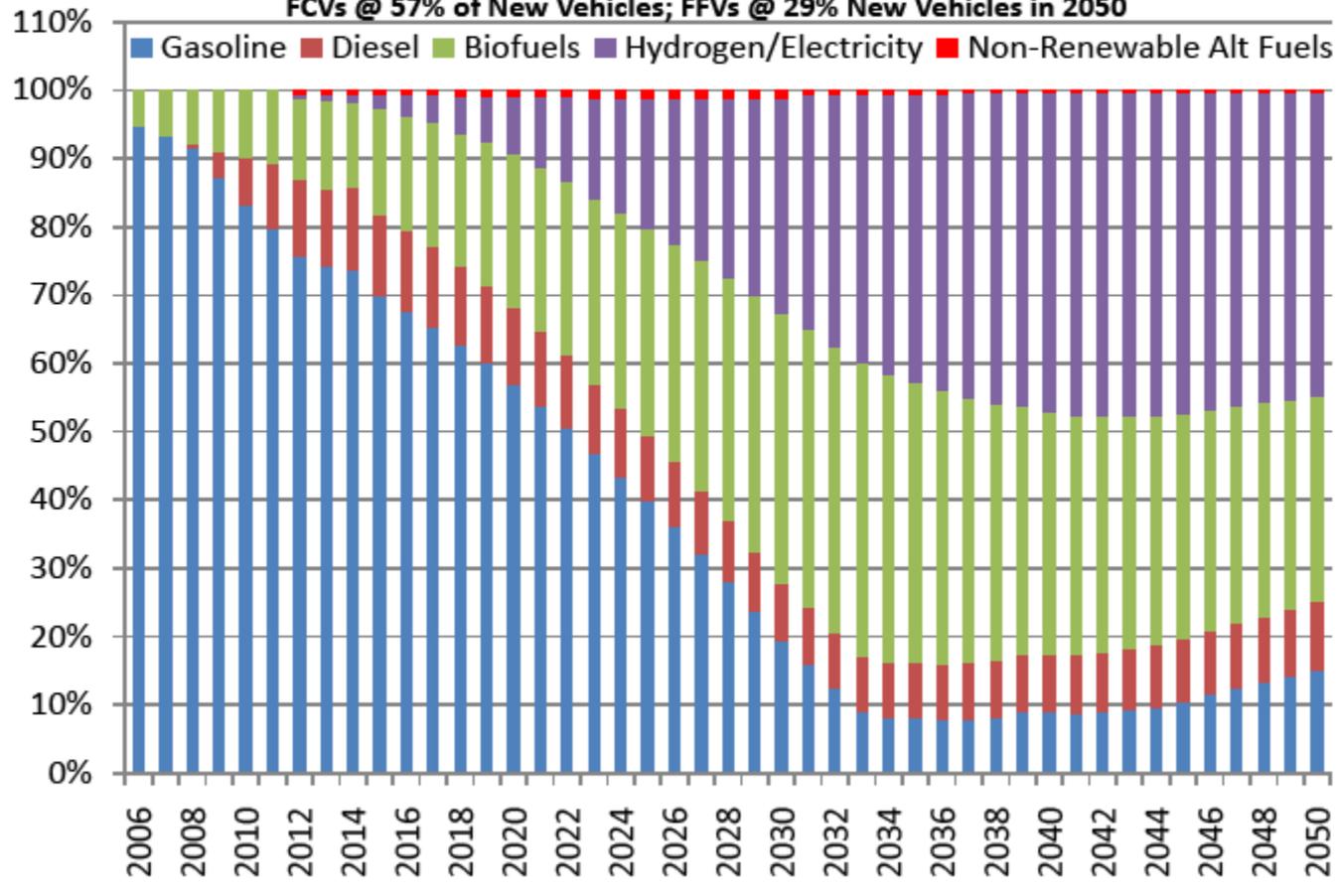


## New Vehicle Sales Per Year in California



## New Vehicle Percent of Total Fuel Use by Fuel Type

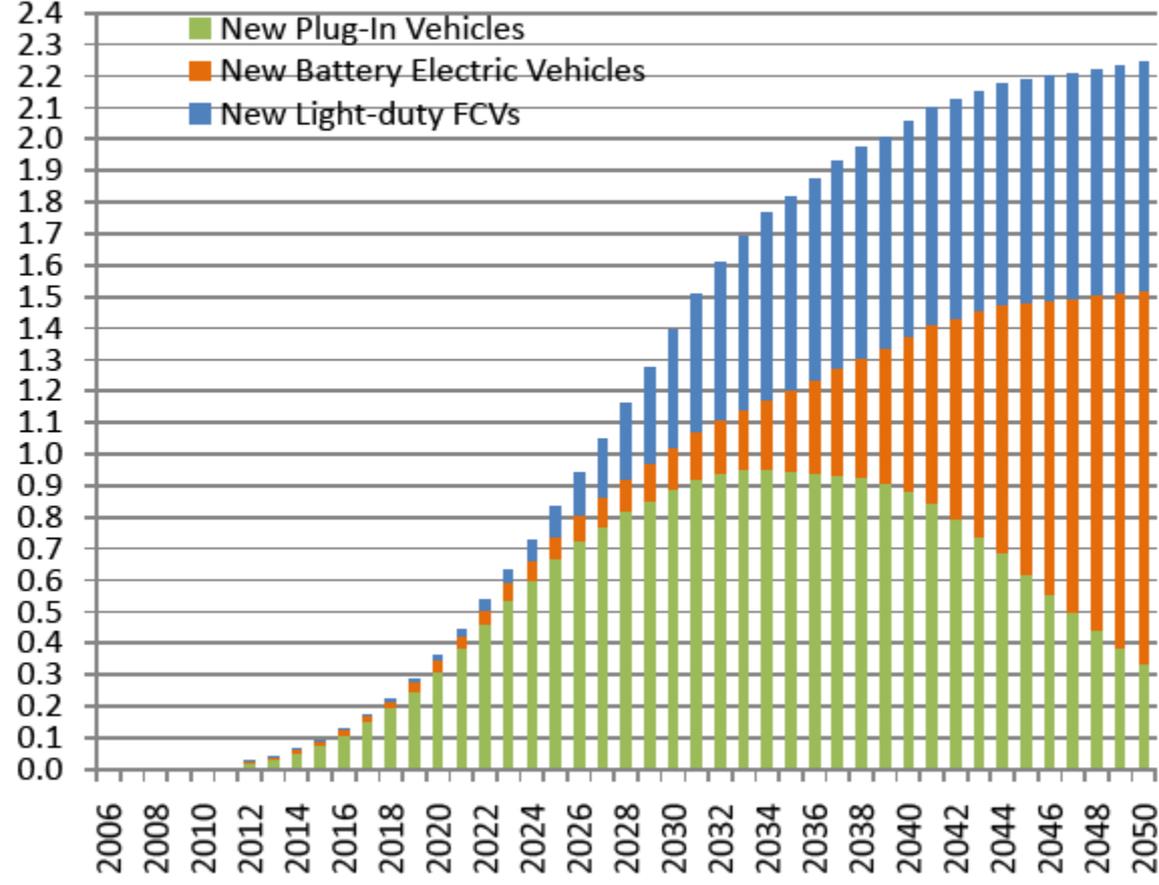
FCVs @ 57% of New Vehicles; FFVs @ 29% New Vehicles in 2050



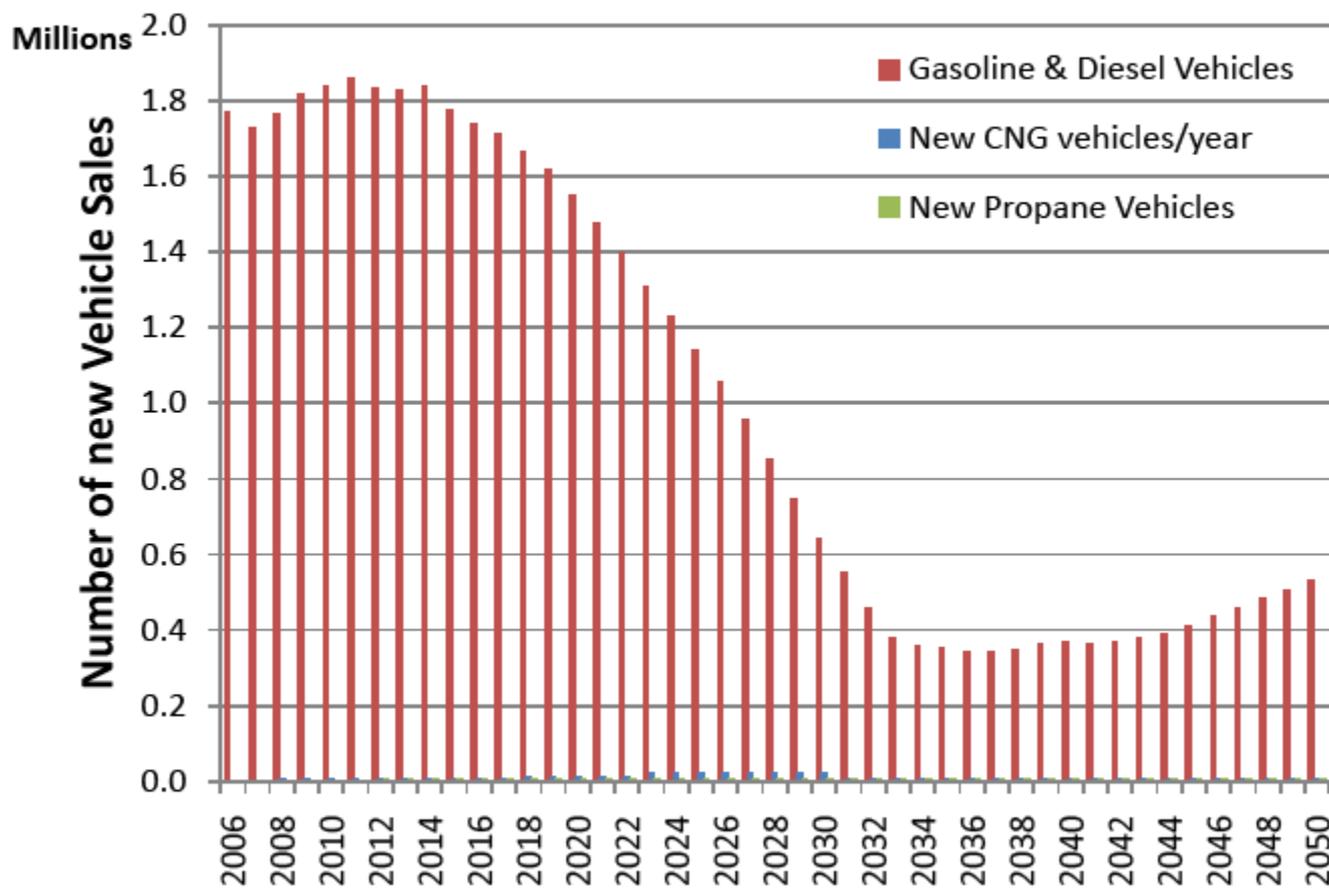
# Electric Drive Storylines

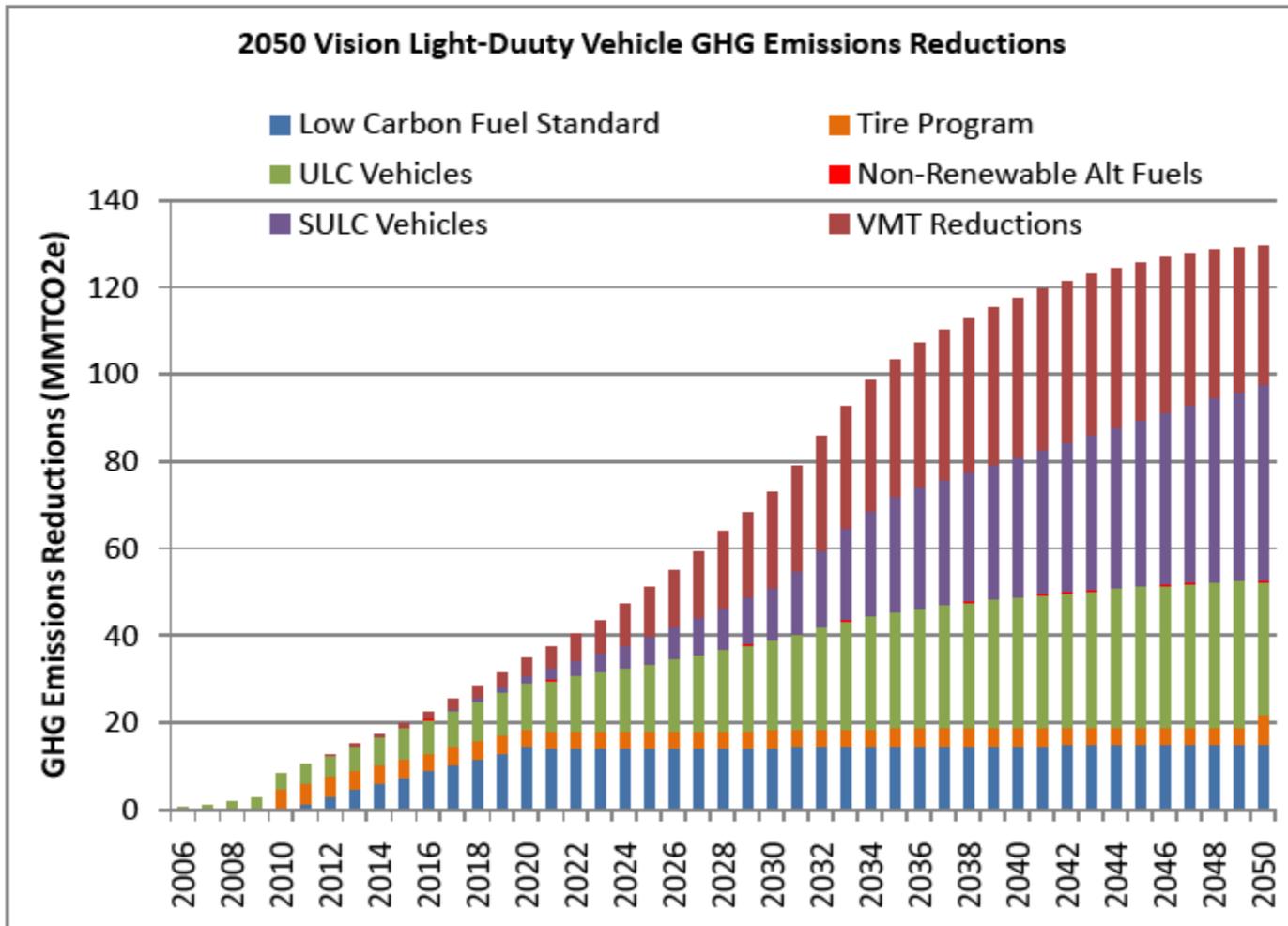
Millions

Number of new Vehicle Sales



**CNG Storyline--Displacement of Gasoline & Diesel LDVs By CNG LDVs**





# Thank You For Your Attention!

Any Remaining Questions???

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