

# Decarbonization of heavy-duty vehicles

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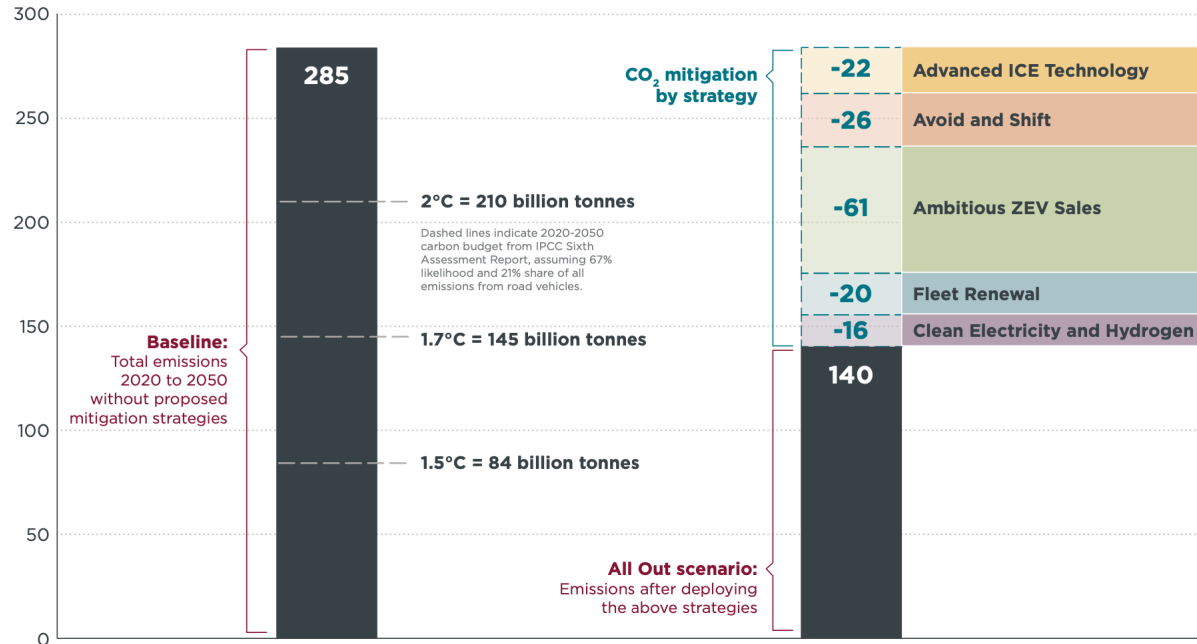


Our mission is to improve the environmental performance and energy efficiency of road, marine, and air transportation, in order to benefit public health and mitigate climate change.

# Zero emission vehicles are the most important lever to meet transport decarbonization goals

## Mitigation potential of ambitious but feasible strategies

Cumulative well-to-wheel CO<sub>2</sub> transportation emissions (billion tonnes) projected from 2020 to 2050



# Heavy-duty vehicles are diverse



Source: Bulldog Magazine

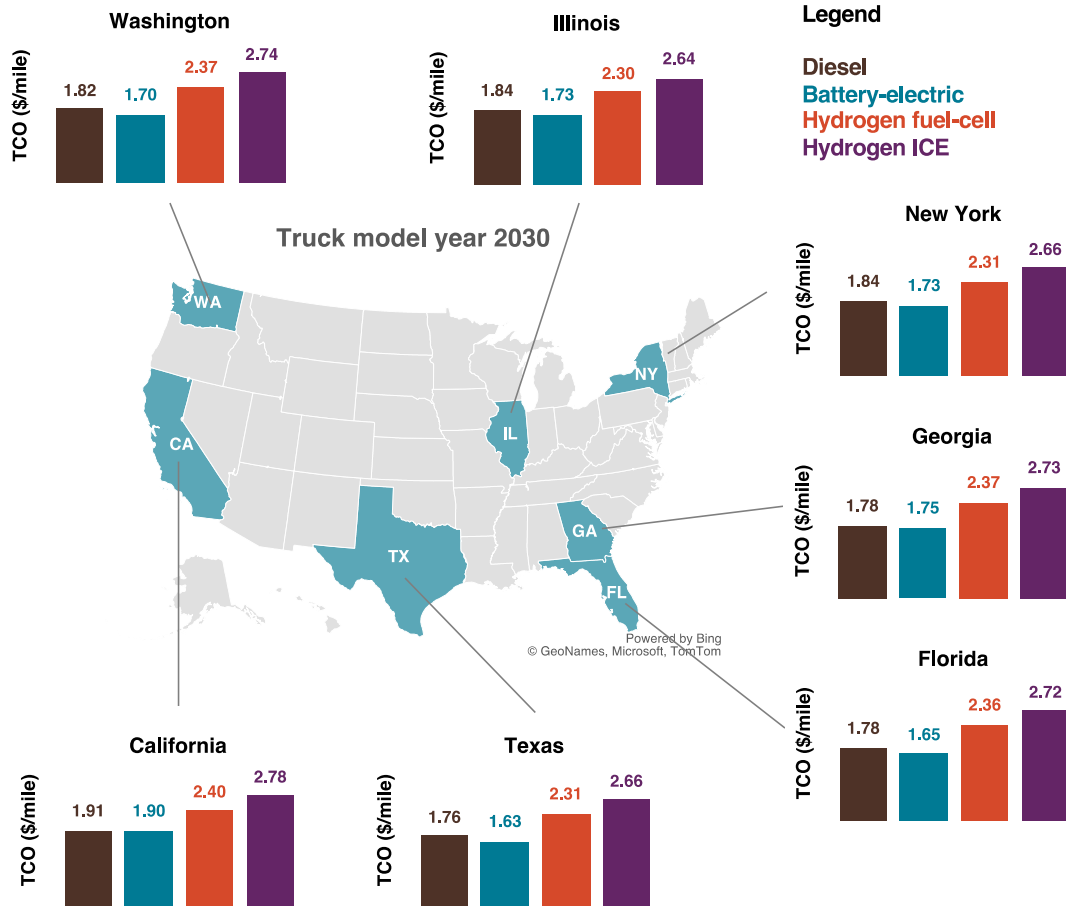


Source: Blue Bird



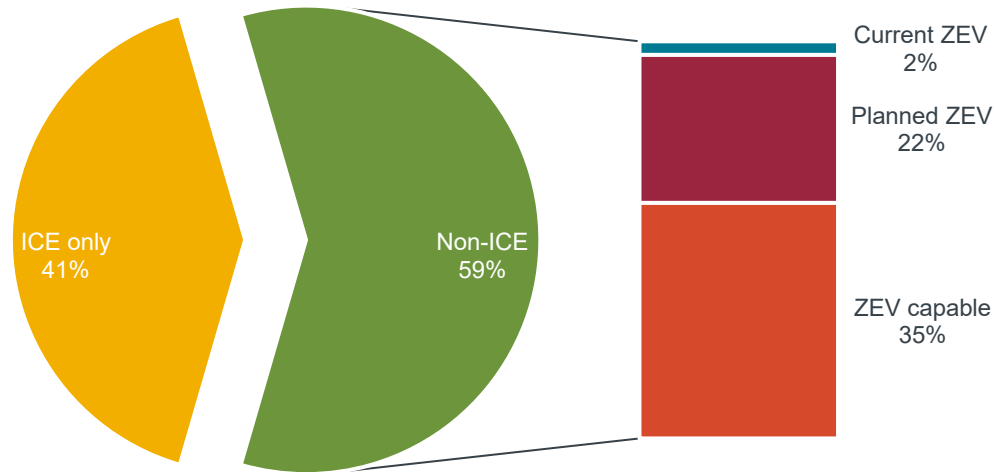
Source: NACFE

# Battery-electric long-haul trucks are expected to record the lowest TCO by 2030 in most states

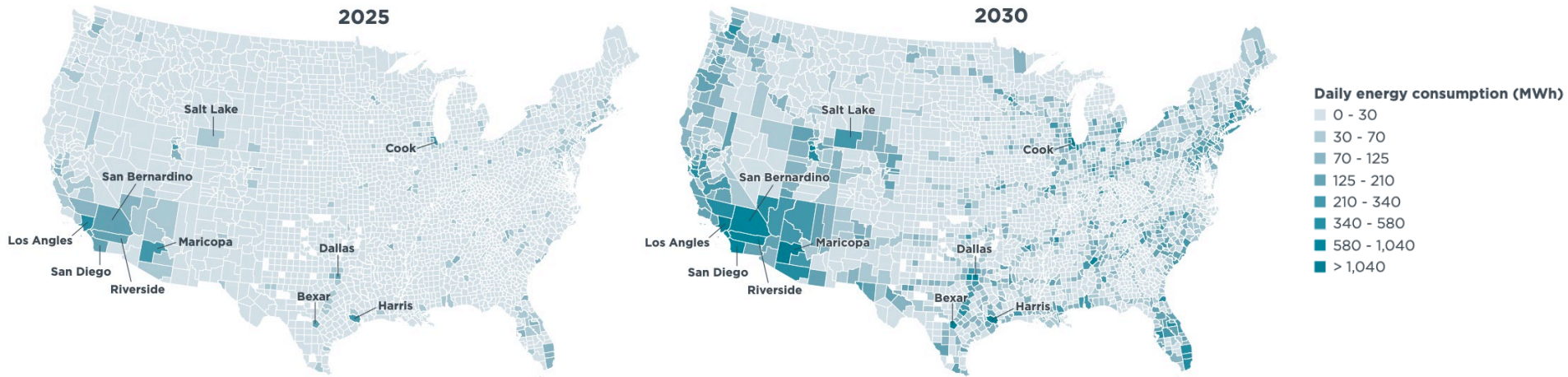


# Manufacturing capacity ramping up to reach 60% of production capacity

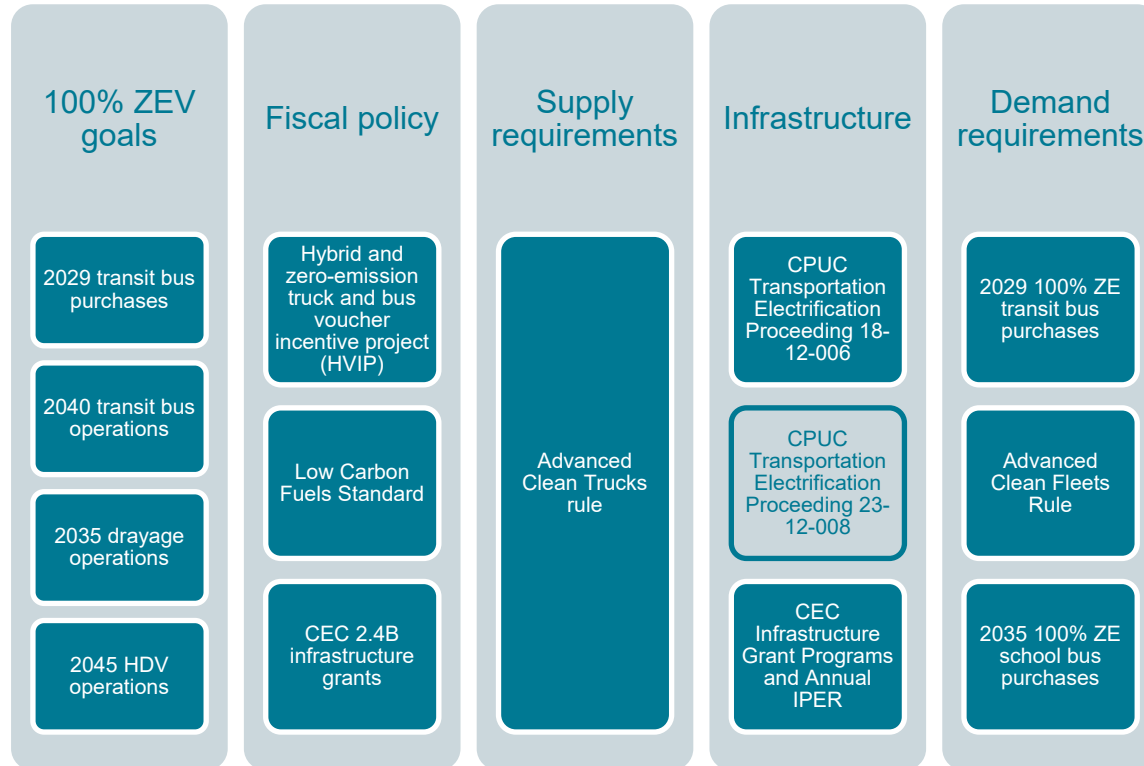
M/HD ZEV domestic manufacturing plans in the United States assuming 500,000 annual class 4-8 vehicle sales.



# Growth in energy demand will be concentrated in freight zones, such as ports, industrial zones, and freight corridors



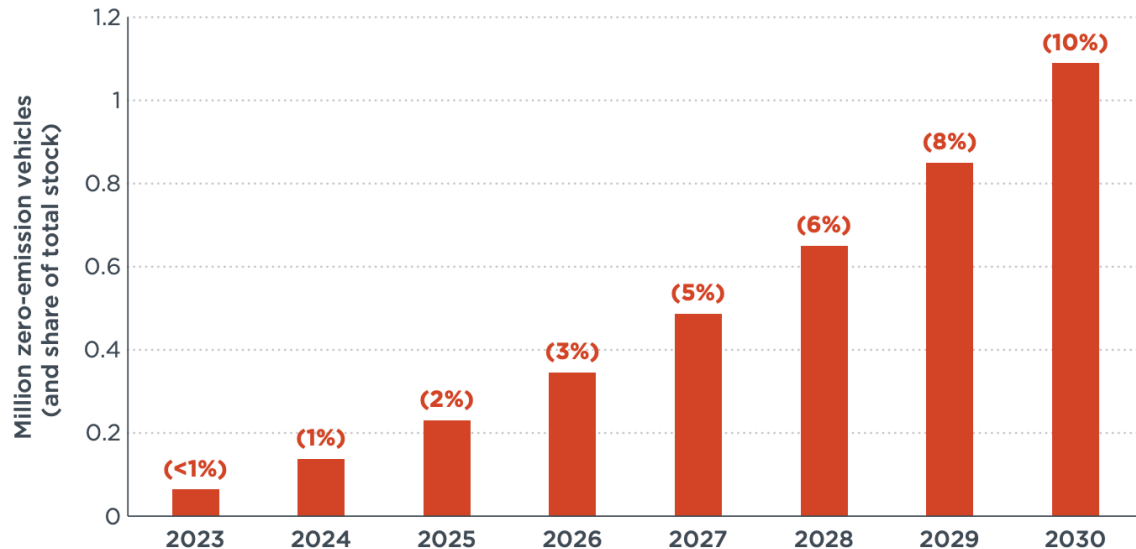
# Five effective policies to support vehicle electrification: the California example



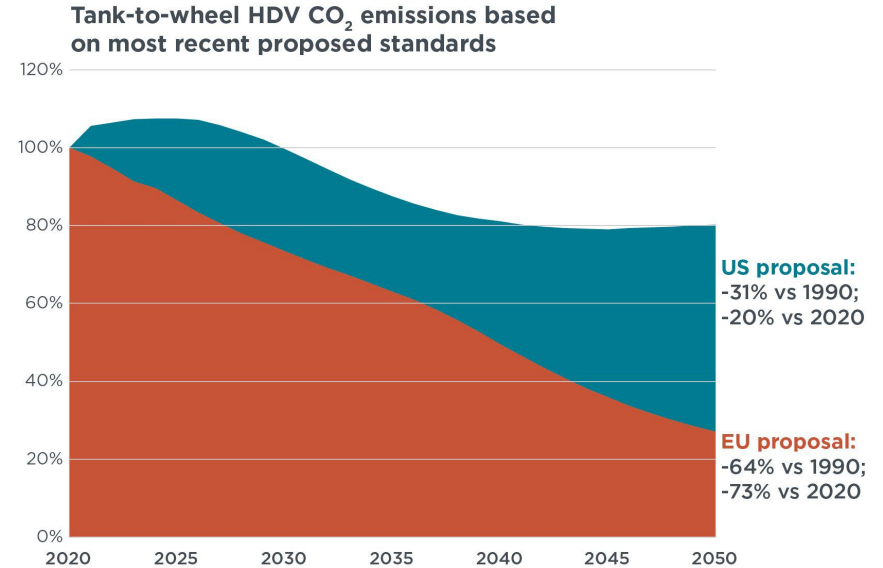
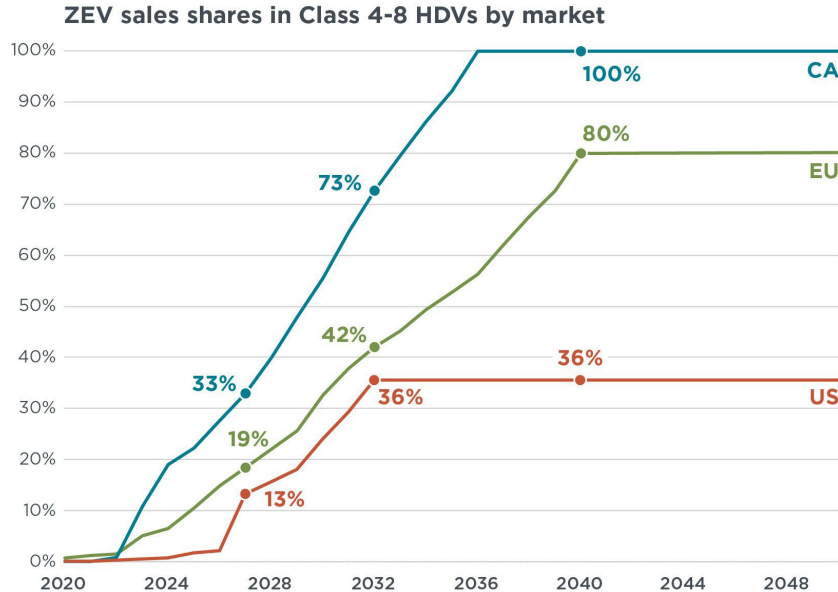


# Potential for 1.1M zero-emission trucks and buses by 2030 in response to IRA tax credits and incentives

Projected stock of Class 4-8 zero-emission MHDVs based on market developments, 2023-2030



# International progress towards zero emissions



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