

Road to Clean Air Update: ZEV Benefits Analysis

Based on research conducted for the American Lung Association in California's "Road to Clean Air" report on the health benefits of a strong suite of clean vehicle standards in California, this analysis quantifies the benefits Californians could experience if our fleet of passenger vehicles consumed no petroleum and produced zero tailpipe emissions.

A 100% Zero Emission Vehicle fleet in California would result in the following annual and daily benefits as compared to a fleet meeting today's standards:

Overall Benefits of a 100% ZEV Fleet in California

- reduce vehicle greenhouse gas emissions by 73%
- reduce smog-forming and fine particulate emissions by 95%
- reduce petroleum consumption by 100%
- reduce premature deaths and illnesses by 90%
- reduce public health, global warming and societal costs by 90%

Health Damages Avoided Annually by a 100% ZEV Fleet in California

- 510 premature deaths avoided
- 545 respiratory ER visits and cardiac/respiratory hospitalizations avoided
- 10,200 asthma attacks and lower respiratory symptoms avoided
- 230,600 acute and upper respiratory symptoms avoided
- 490 heart attacks avoided
- 48,200 lost work and school days avoided

Total Costs Avoided Annually by a 100% ZEV Fleet in California

- \$13 billion in annual health, global warming and societal costs avoided
- \$4.7 billion in health damages avoided
- \$2.8 billion in climate damages avoided
- \$163 million in environmental damages avoided
- \$5.3 billion in energy security costs avoided

Tons Per Day of Emissions Avoided by a 100% ZEV Fleet in California

- 245,000 tons per day of greenhouse gases
- 275 tons per day of smog-forming gases
- 141 tons per day of VOC
- 116 tons per day of NO_x
- 17 tons per day of PM_{2.5}

Note: while Hydrogen Fuel Cell technologies will play a key role in meeting California's mobility needs, this analysis assumes a full fleet of Battery Electric Vehicles, and accounts for emissions associated with energy production.