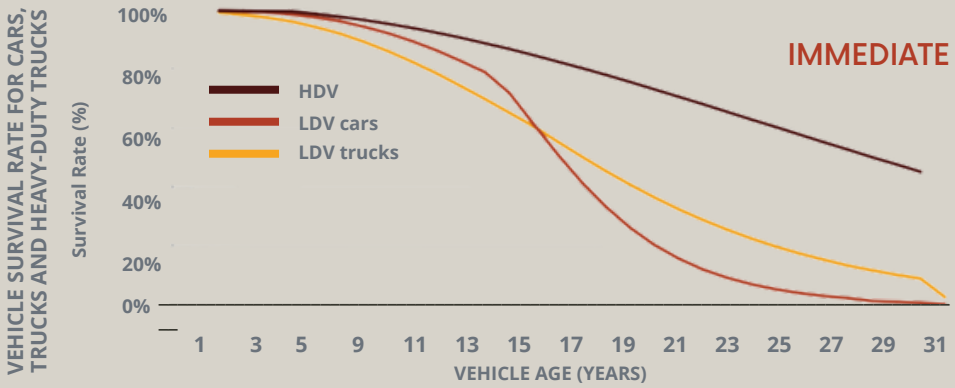
TRANSPORTATION ENERGY INSTITUTE

How Can We Reduce Transportation Emissions *Now*?

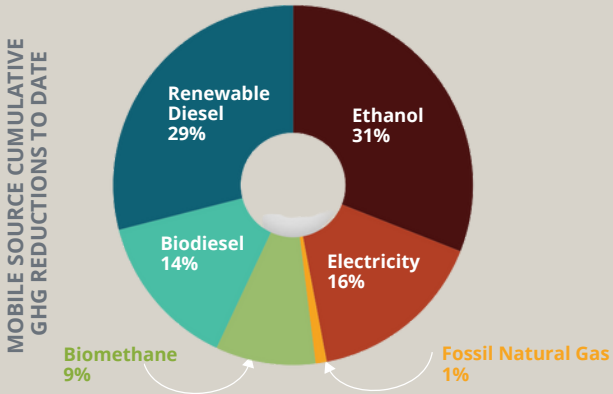
The transition to electric vehicles (EVs) will take time, but there are **immediate options** to decarbonize **existing vehicles** and deliver greater environmental benefits.

Download Our New Report: Decarbonizing Combustion Vehicles - A Portfolio Approach to GHG Reductions



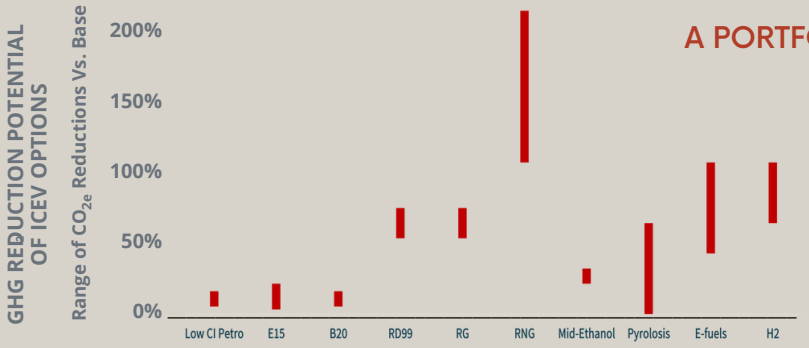
IMMEDIATE CARBON REDUCTIONS YIELD BOTH SHORT AND LONG-TERM BENEFITS

- A ton of CO_2 emitted today will remain in the atmosphere for more than 100 years
- Transportation = 33% anthropogenic (human-caused) CO_2 emissions
- It takes 29 years for new vehicle sales to replace 98% of fleet
- By 2030 there will be 290M ICEVs in operations



VIABLE OPTIONS EXIST TODAY TO REDUCE LIFE CYCLE GHG EMISSIONS FROM ICEVs

- Decarbonizing the current fleet can reduce emissions faster than gradual conversion to new technologies
- There are 24+ fuels for ICEVs that provide life cycle GHG reductions ≥ EVs
- Biofueled ICEVs account for 99% of emissions reductions today
- Emerging technologies promise significantly greater life cycle GHG reductions in the near term



A PORTFOLIO APPROACH IS ESSENTIAL FOR MEANINGFUL GHG REDUCTIONS FROM ICEVs

- Lower carbon ICEV and fuel options provide real short- and long-term CO_2 reductions
- A portfolio approach will maximize the reductions in on-road transportation carbon emissions
- This study evaluates each low carbon option based upon:
  - GHG Reduction Potential
  - Ease of implementation
  - Technical viability/compatibility
  - Cost, timing and impact

DECARBONIZING THE ICEV fleet while growing the EV fleet will MAXIMIZE CUMULATIVE GHG REDUCTIONS