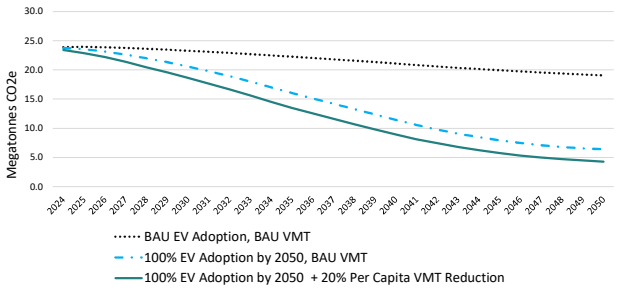
Benefits of 20% Per Capita VMT reduction by 2050 in Maryland, given 100% EV Adoption by 2050

EXECUTIVE SUMMARY

CLIMATE IMPACT

Transportation Emissions Reduction Pathways



By 2050, EV adoption + VMT Reduction would reduce GHG emissions by up to 55 megatonnes MORE than 100% EV Adoption by 2050 alone

That's the same as preventing the annual emissions of 138 natural gas-fired plants!

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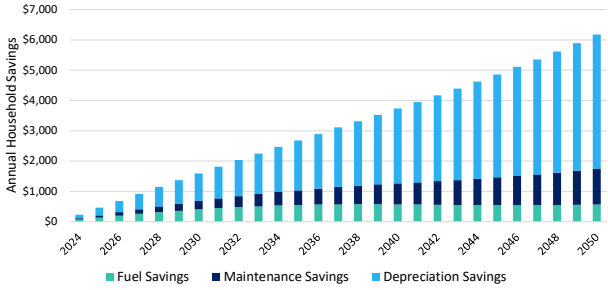
HOUSEHOLD SAVINGS

On average, 20% Per Capita VMT reduction would save each household $3,081 a year from reduced automobile fuel, maintenance, and depreciation costs.

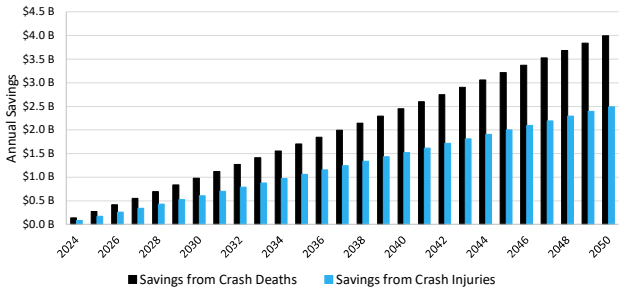
If expanded transportation options allow a family to downsize from two cars to one, household savings increase to $12,000 a year per vehicle.

Annual Direct Household Savings from VMT Reduction



ROAD SAFETY

Savings from Avoided Crash Injuries and Deaths



On average, 20% Per Capita VMT reduction would prevent 171 crash fatalities and 2,572 crash injuries per year.

By 2050, that adds up to $89 billion in savings from avoided medical expenses, damages, and productivity losses.

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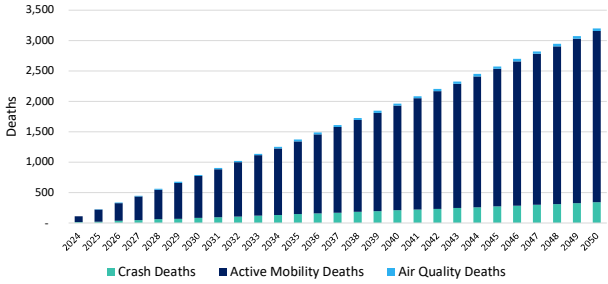
PUBLIC HEALTH

On average, 20% Per Capita VMT reduction would improve crash outcomes and alleviate mortality risks from air pollution and inactivity health outcomes, saving over 1,420 lives per year.

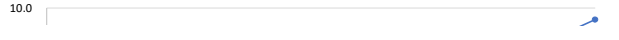
By 2050 and using the US DOT Statistical Value of Life, this would represent $657 billion of avoided life loss.

Avoided Deaths from VMT Reduction

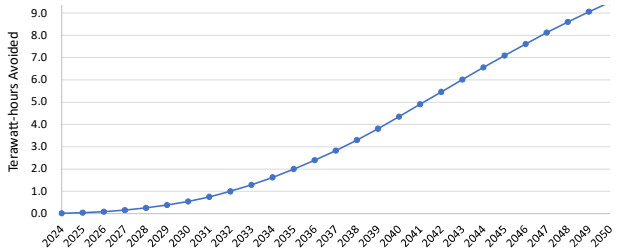


ENERGY DEMAND

Energy Demand Avoided by Reducing EV Charging



By 2050, 20% Per Capita VMT reduction would lower energy



demand by 98 TWh due to reduced electric vehicle charging. This would alleviate strain on the electrical grid to provide reliable service.

That's enough to completely meet New York City's current annual energy demand for 1.9 years!

In the selected EV scenario, 100% EV Adoption by 2050, EVs will be 43% of vehicles by 2035 and will be 99% of vehicles by 2050, requiring new generation from the grid.