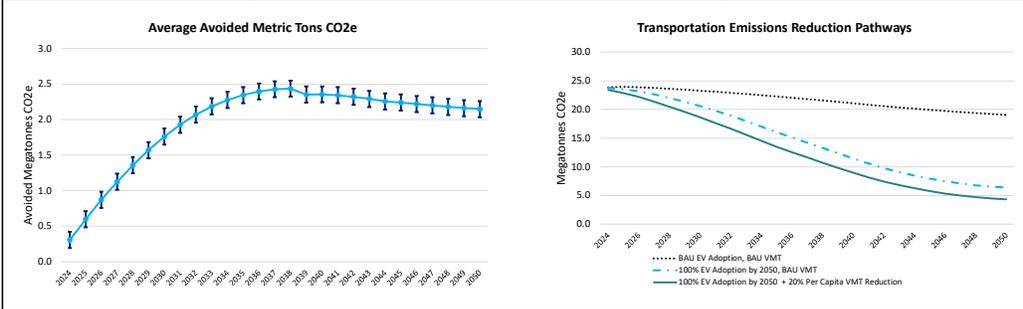


Benefits of a 20% Per Capita VMT reduction by 2050 in Maryland, given 100% EV Adoption by 2050

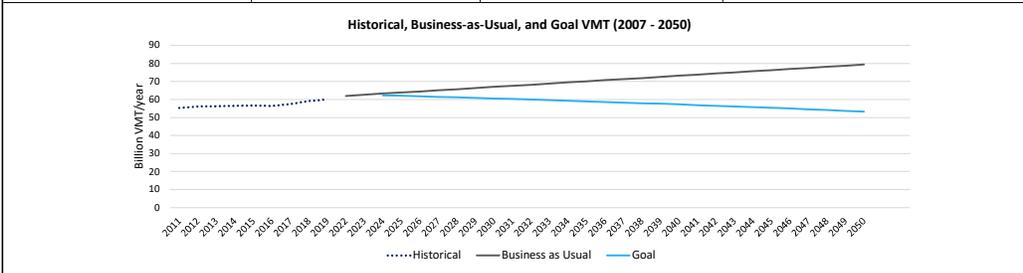
DETAILED RESULTS

CLIMATE IMPACT

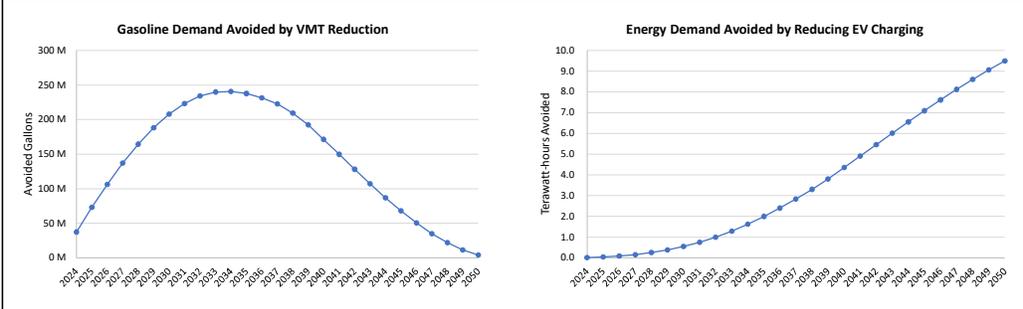
Category	Annual (Average)	Cumulative (2024 - 2050)	Why This Matters
Method 1: Avoided Emissions From Fuel & Charging (metric tons CO2e)	2,039,782	55,074,102	By 2050, the cumulative metric tons CO2e savings from both avoided fuel combustion and charging would be equivalent to preventing the annual emissions of 15 coal plants.
Method 1a: ICE Fuel ONLY Avoided Emissions (metric tons CO2e)	1,244,016	33,588,432	Internal Combustion Engine, or ICE, vehicles burn gasoline fuel. Tailpipe emissions from ICE vehicles will impact pollution for decades to come, even as engines become more efficient.
Method 1b: EV Charging ONLY Avoided Emissions (metric tons CO2e)	795,766	21,485,671	Battery Electric Vehicles (EV's) produce no tailpipe emissions and use energy very efficiently. However, until the Maryland grid fully decarbonizes, charging EV's will produce some emissions.
Method 2: 'Net' Avoided Emissions (metric tons CO2e)	1,833,242	49,497,521	VMT reduction may cause trips to 'shift' to other modes that produce emissions. Method 2 conservatively estimates 'net' emission impacts on the transportation system.



Avoided VMT (miles)	13,187,890,550	356,073,044,862	By 2050, the cumulative reduction in VMT would be the same as 745,235 round trips from the earth to the moon.
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Category	Annual (Average)	Cumulative (2024 - 2050)	Why This Matters
Avoided Gasoline Demand (total gallons)	139,934,308	3,778,226,312	This is the same reduction as avoiding the use of 79,342,753 barrels of oil.
Avoided Energy Demand (total TWhs)	3.6	97.7	Cumulatively, this is the same reduction as the energy used by 13,487,464 average American homes in one year.
Avoided Gasoline Demand (gallons per household)	61	1,652	Using today's average gas price of \$3.24/gal, households would save \$5,351.0 from 2024 - 2050. Adjusting for future & local prices, this value becomes \$6,900.57. This result only considers the gas avoided by VMT reduction, rather than gas avoided by electrification.
Avoided Energy Demand (kWhs per household)	1,577	42,578	Cumulatively, this is the same kWh usage as it takes to power 4.3 average US homes in the course of a year. Using Maryland's rate data and projections, this could save a household \$10,341.75 between 2024 - 2050.



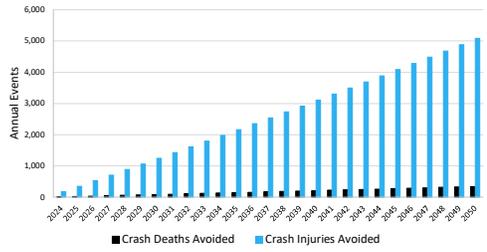
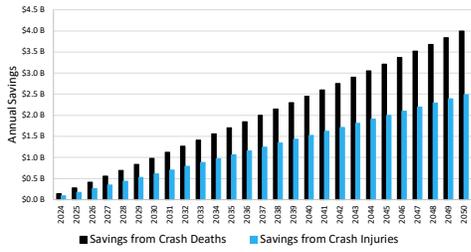
AVOIDED CRASHES

Category	Annual (Average)		Cumulative (2024 - 2050)		Why This Matters
	Events	Savings (\$)	Events	Savings (\$)	
Avoided Crash Fatalities	171	\$2,023,022,410	4,629	\$54,621,605,082	Avoiding fatalities presents value, both for individual lives and for the economy. This Calculator uses the US DOT Statistical Value of Life (SVL) to estimate savings to Maryland.
Avoided Crash Injuries	2,572	\$1,260,102,942	69,434	\$34,022,779,437	Avoiding injuries presents value, both for individual lives and for the economy. The average savings from avoiding injuries on a per household basis is \$549 per year from 2024 - 2050.

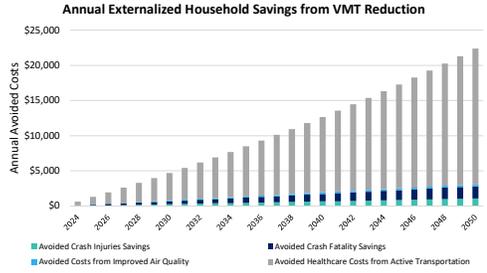
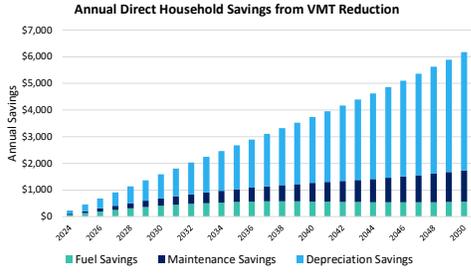
Savings from Avoided Crash Injuries and Deaths
Avoided Crash Injuries and Deaths

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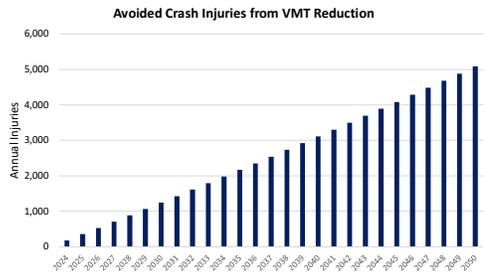
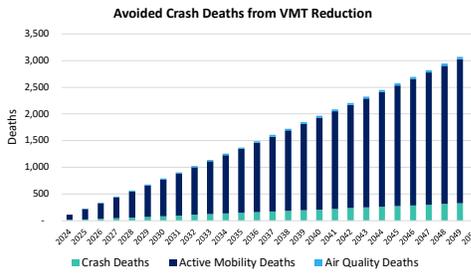
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OPERATING COSTS			
Category	Annual (Average)	Cumulative (2024 - 2050)	Why This Matters
Avoided Fuel & Charging Costs (total dollars)	\$1,070,967,142	\$28,916,112,821	Avoiding fuel costs can help families save money for other priorities, including local economic activity.
Avoided Maintenance Costs (total dollars)	\$1,330,039,978	\$35,911,079,394	Avoiding maintenance costs can help families save money for other priorities, including local economic activity.
Avoided Depreciation Costs (total dollars)	\$4,766,810,275	\$128,703,877,436	Less odometer miles means more money in your wallet when its time to sell or trade-in your vehicle. In other words, shorter trips means cars depreciate slower & retain value longer.
Avoided Fuel & Charging Costs (dollars per household)	\$467	\$12,618	The average fuel costs saved would equate to \$38.95 a month, which presents an opportunity to help alleviate strain in household budgets.
Avoided Maintenance Costs (dollars per household)	\$536	\$1,173	The average maintenance costs saved would equate to \$44.69 a month, which presents an opportunity to help alleviate strain in household budgets.
Avoided Depreciation (dollars per household)	\$2,078	\$56,094	Less odometer miles means more money in your wallet when its time to sell or trade-in your vehicle. In other words, shorter trips means cars depreciate slower & retain value longer.
SUM: Avoided Operating Costs (total dollars)	\$7,167,817,394	\$193,531,069,651	The total avoided operating costs is a sum of avoided depreciation, maintenance costs, and fuel expenses.
SUM: Avoided Operating Costs (dollars per household)	\$3,081	\$69,885	The total avoided operating costs is a sum of avoided depreciation, maintenance costs, and fuel expenses. It demonstrates significant financial opportunities for households.



ROAD SAFETY



ACTIVE TRANSPORT					
Category	Annual (Average)		Cumulative (2024 - 2050)		Why This Matters
	Events	Savings (\$)	Events	Savings (\$)	
Avoided Deaths from Increased Biking	299	\$4,332,549,387	9,258	\$134,309,030,999	Regular exercise presents a significant health savings opportunity through avoided mortality and adverse health outcomes. By shifting a portion of VMT to biking, societal health costs would decrease \$2,168.04 a year on average per household.
Avoided Deaths from Increased Walking	942	\$13,664,194,221	29,198	\$423,590,020,842	Regular exercise presents a significant health savings opportunity through avoided mortality and adverse health outcomes. By shifting a portion of VMT to walking, societal health costs would decrease \$6,837.65 a year on average per household.

AIR QUALITY					
Category	Annual (Average)		Cumulative (2024 - 2050)		Why This Matters
	Events	Savings (\$)	Events	Savings (\$)	
Avoided Fatalities from NOx, SOx, PM2.5	8.15	\$116,948,509	758	\$10,876,211,323	Cutting air pollution from transportation prevents fatalities, valued here using the US DOT Statistical Value of Life. Air quality impacts are disproportionately felt by low-income communities, impacting health, financial opportunities, and overall well-being.

CONGESTION			
Category	Annual (Average)	Cumulative (2024 - 2050)	Why This Matters

Scroll down →

	Hours	Savings (\$)	Hours	Savings (\$)	
Avoided Traffic	172,293,409	\$3,495,130,291	5,341,095,673	\$108,349,039,023	Reducing time spent in the traffic is the same as saving residents 609,714 cumulative years of travel time between 2024 and 2050.