Transforming Maryland's Transportation Sector

Background Materials for Mitigation Working Group

June 27, 2018

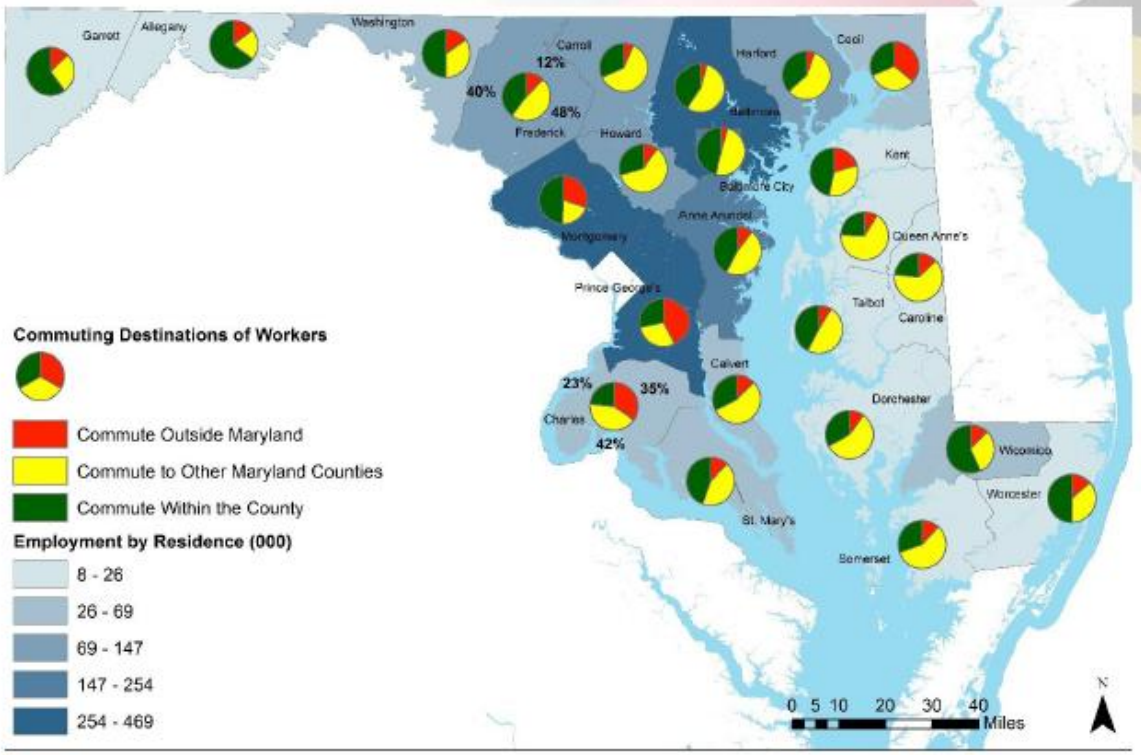
Review Materials

- Georgetown Climate Center and Cambridge Systematics Report, Appendix 2, April 2015: http://www.georgetownclimate.org/files/report/GCC-Appendix2_Emission_Reduction_Strategy-Nov2015_1.pdf
- Sierra Club Presentation to the Working Group October 2017: http://mde.maryland.gov/programs/Air/ClimateChange/MCCC/MWG/MWGTCIPresentation10272017.pdf
- Maryland Department of Transportation Presentation to the Working Group April 2018: http://mde.maryland.gov/programs/Air/ClimateChange/MCCC/MWG/MWGMDOTPresentation04052018.pdf

MDOT INITIATIVES – ANALYTICS FOR LOCAL DECISION MAKING

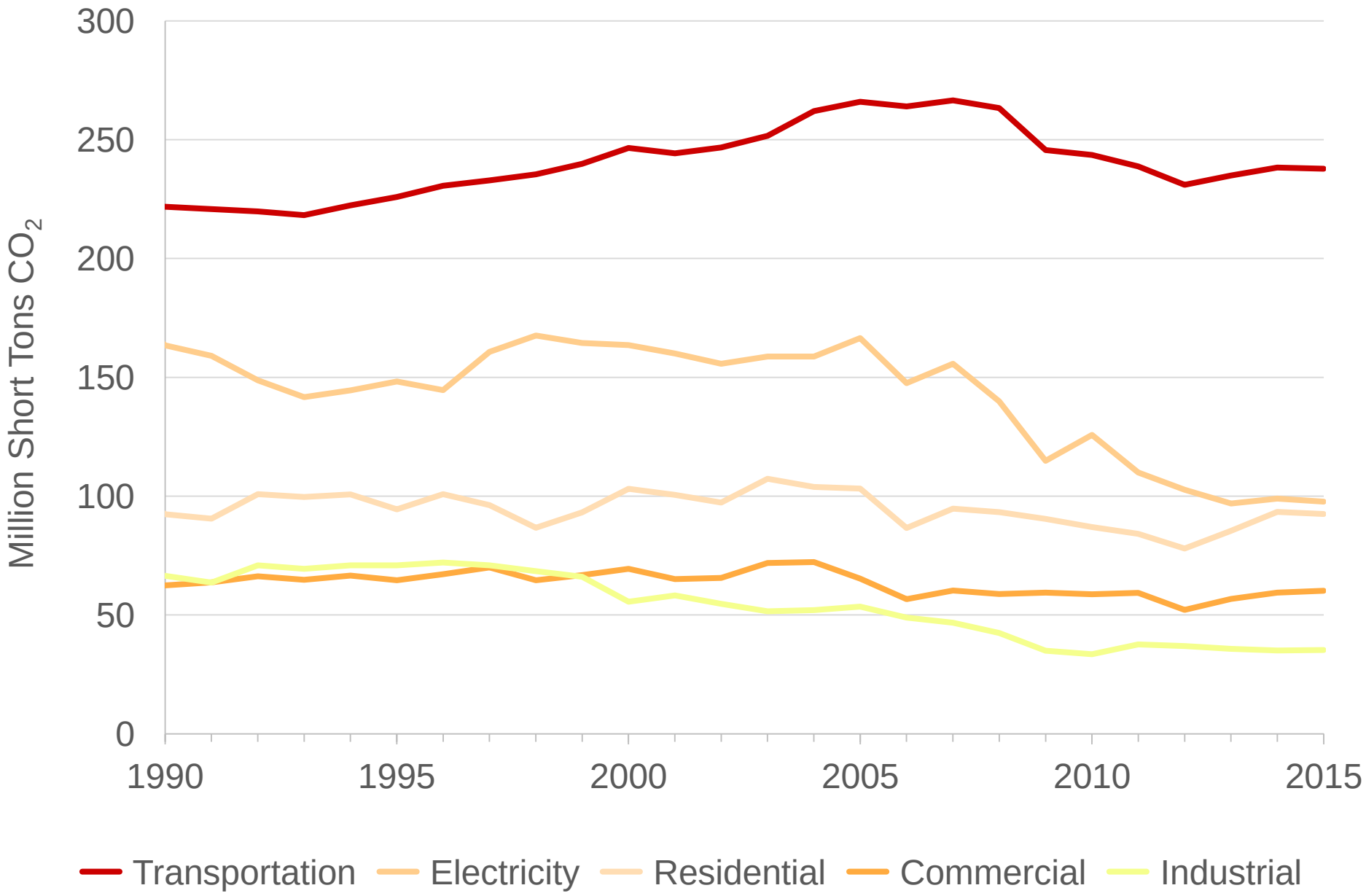
States with Highest Commute Times

Rank	State	Mean Commute Time (min)
1	**Maryland**	**32.3**
2	New York	32.3
3	New Jersey	31
4	D.C.	29.7
5	Massachusetts	28.7
6	Illinois	28.4
7	California	28
8	Virginia	27.9
9	Georgia	27.4
10	New Hampshire	26.9

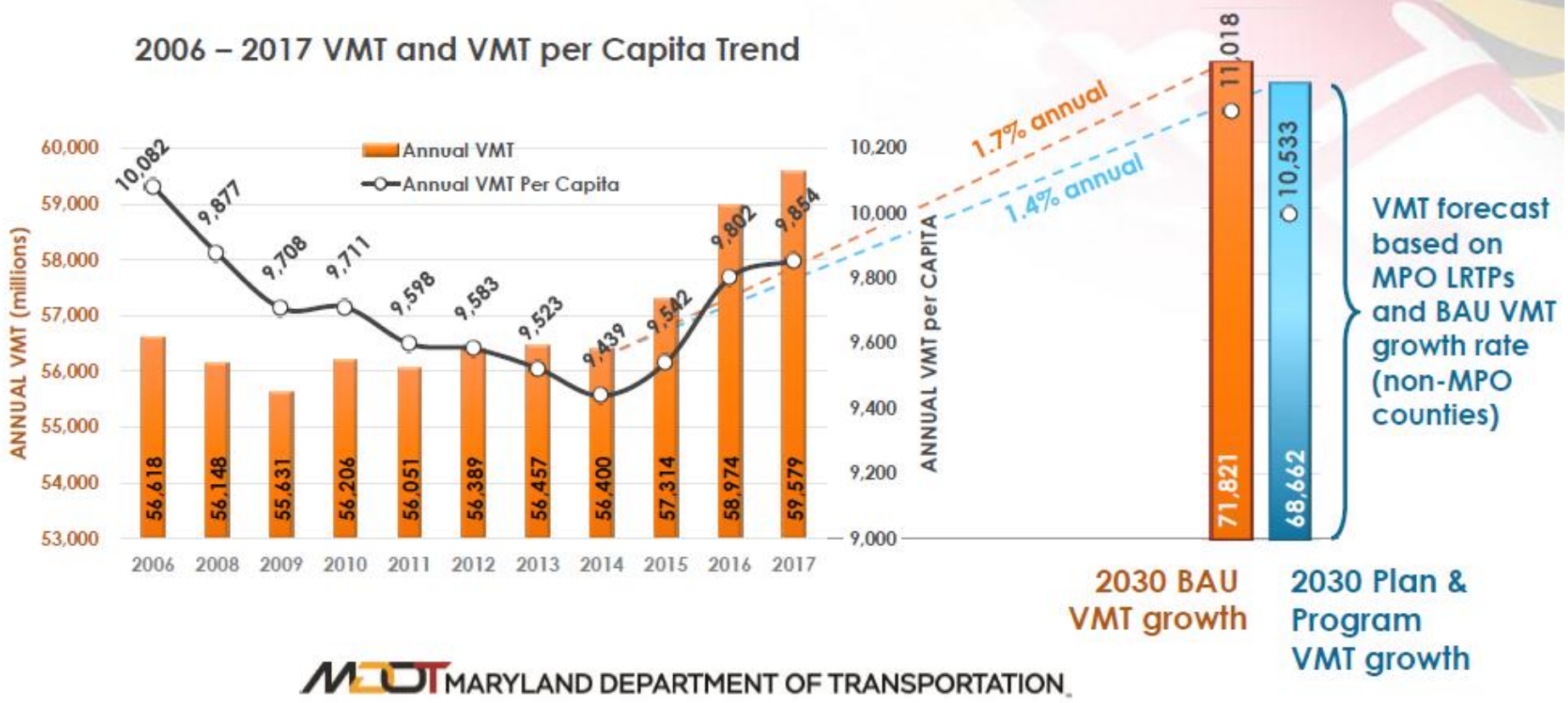


CO_2 Emissions by Sector

DC, MD, DE, NJ, NY, CT, RI, MA, VT

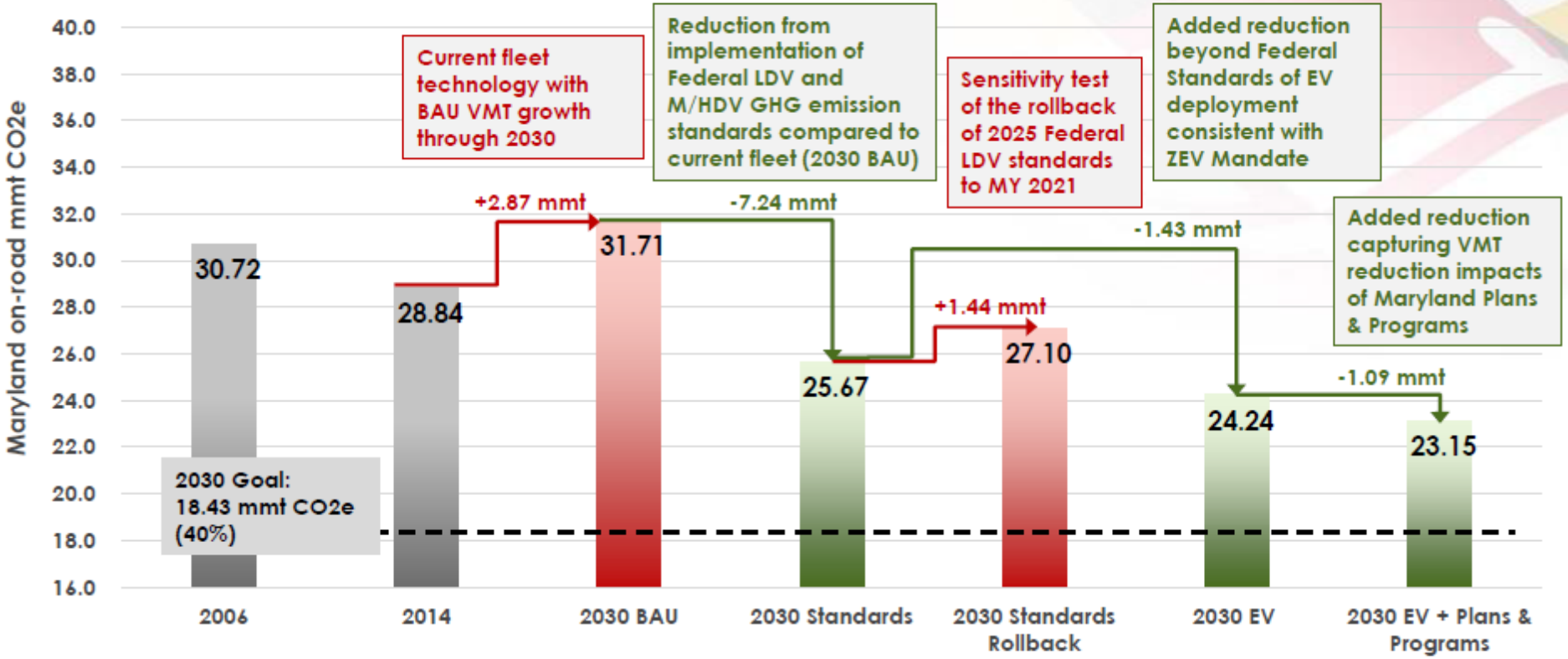


VMT TREND AND FORECASTS



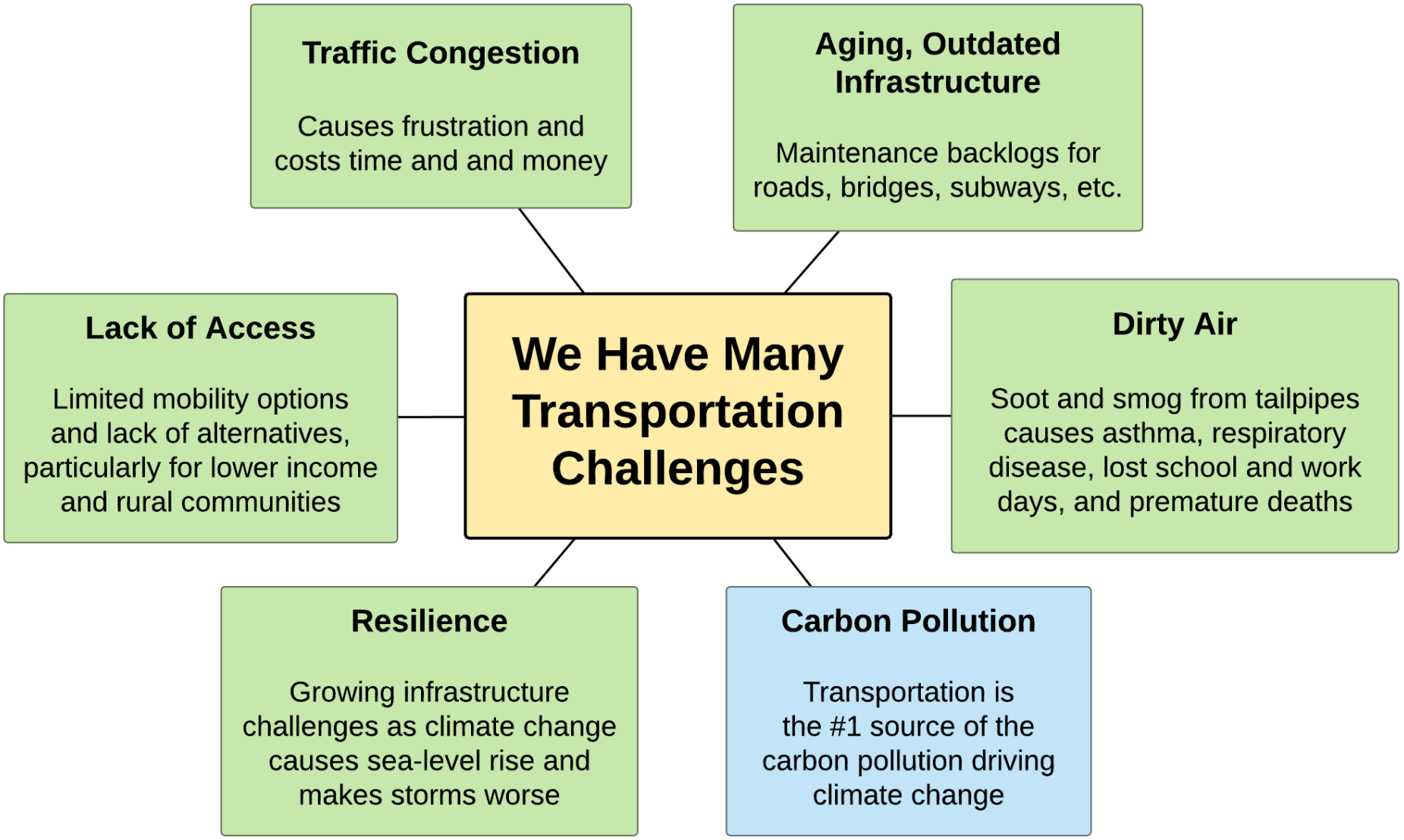
MARYLAND DEPARTMENT OF TRANSPORTATION

2030 ON-ROAD EMISSION SCENARIOS (DRAFT)



MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

It’s Not Just About Carbon



There Are Solutions – But Funding Is an Issue

Better Public Transit

- Buses, subways, trains
- Improved route access, more transit options, and increased reliability
- Reduced congestion on our roads

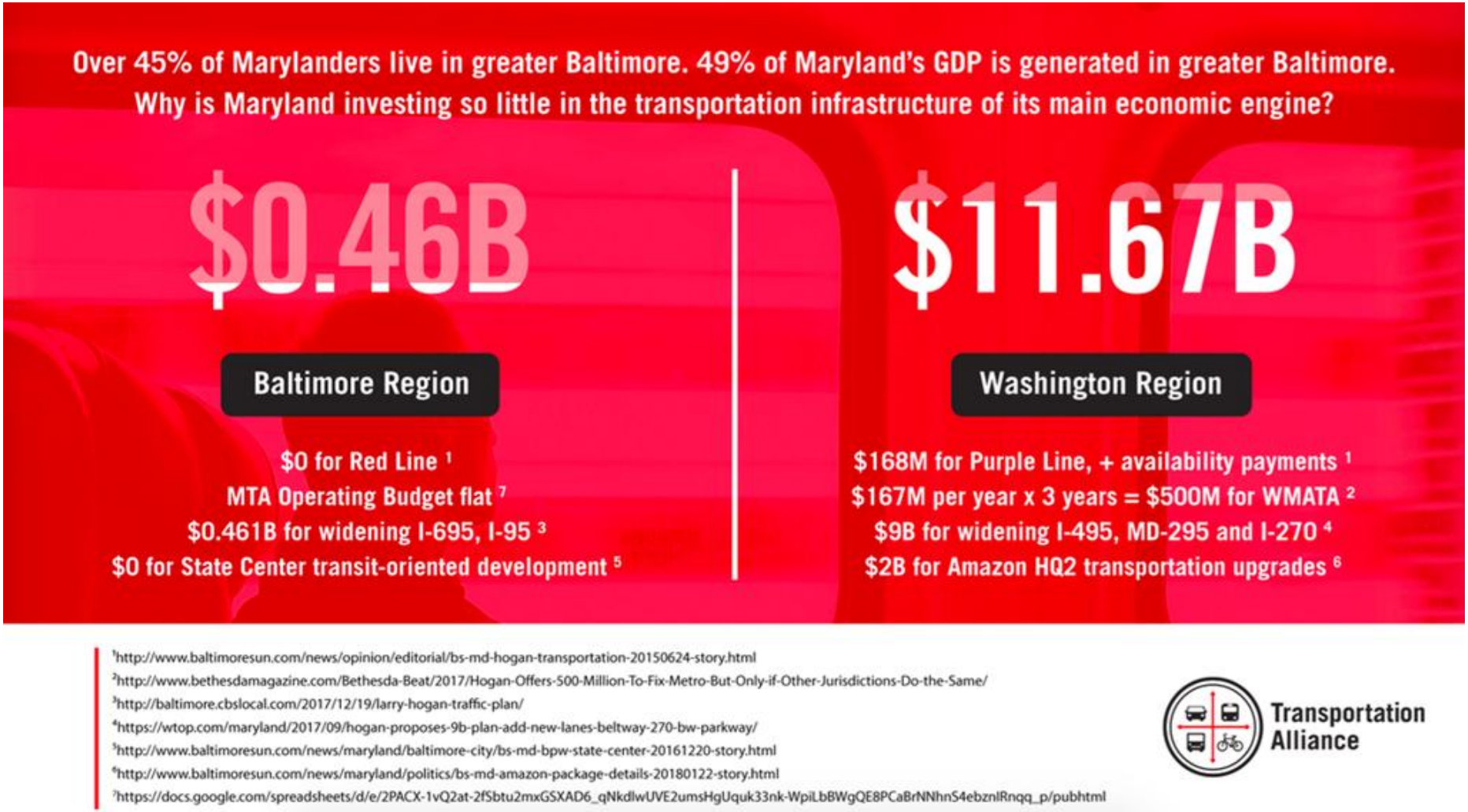
Smarter Planning

- Reduced travel times and vehicle miles traveled
- Walkable and bikeable communities
- Affordable, transit-oriented housing
- To address pollution hotspots (airports, ports, truck depots, etc.)

Electric Vehicles

- Electric cars, trucks, and buses can cut emissions and cost less to own
- EV infrastructure to meet charging needs
- Purchase rebates, vehicle sharing programs, and electric buses to provide EV access to low-income households

Inequities in our Current Systems



http://www.cmtalliance.org/uploads/file/reports/Invest_in_Baltimore_Region_infographic-footnotes.pdf

Figure 1.1 Comprehensive Policy Bundle Approach

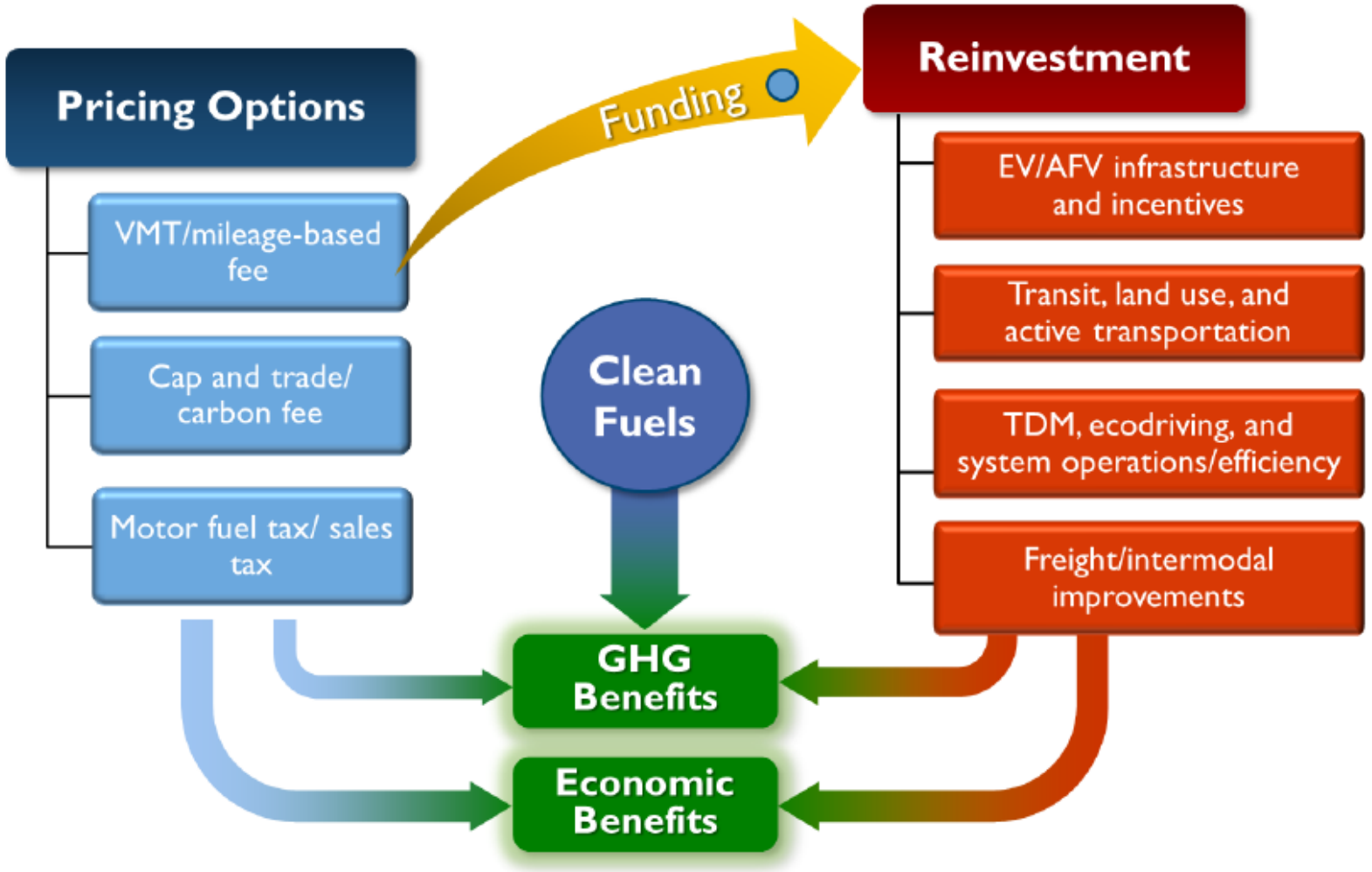


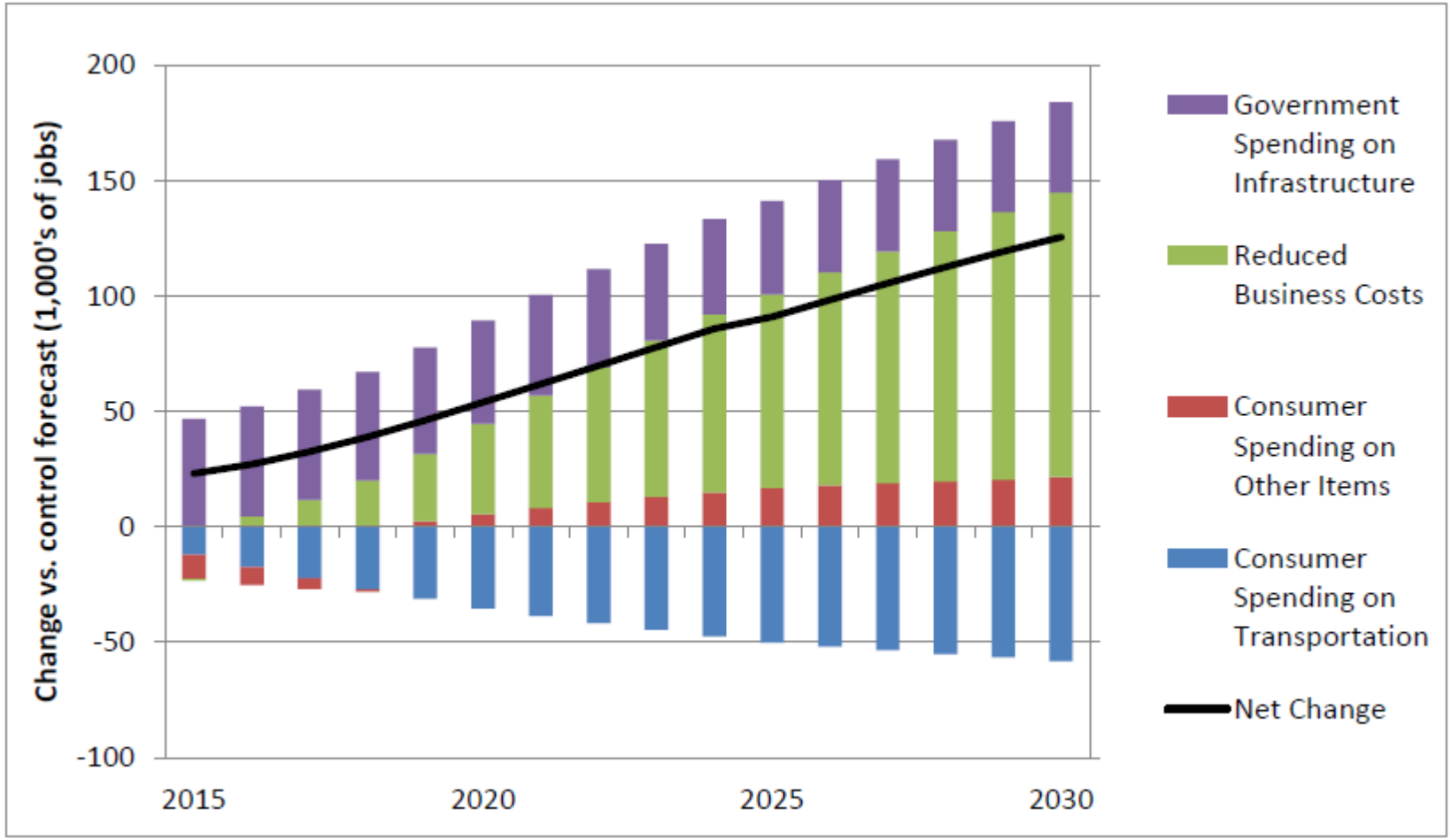
Table 1.1b Pricing Policy Proceeds and Reinvestment Allocation Scenarios

Strategy	Reinvestment Percent		New Average Annual Funding 2015-2030 (millions of current dollars)			
	100% GHG Mitigation	50% Mit./ 50% Other	Primary Pricing, 100% Mitigation	Primary Pricing, 50% Mit./ 50% Other	Double Pricing, 100% Mitigation	Double Pricing, 50% Mit./ 50% Other
GHG mitigation						
EV/alt. fuel infra. and incentives	20.0%	10.0%	$613	$311	$1,227	$621
Urban and intercity transit	25.0%	12.5%	$767	$388	$1,533	$777
Land use/smart growth	7.5%	3.75%	$230	$116	$460	$233
Active transportation	7.5%	3.75%	$230	$116	$460	$233
TDM and ecodriving	10.0%	5.0%	$307	$155	$613	$311
System operations/efficiency	15.0%	7.5%	$460	$233	$920	$466
Freight/intermodal infra./operations	15.0%	7.5%	$460	$233	$920	$466

Table 2.1c Summary Results by Strategy (1x Funding, 100% Reinvestment)

	GHG Reduction (mmt)		% Reduction vs. 2011 Baseline[d]	
Strategy	**2030**	**2015-2030**	**2030**	**2015-2030**
Pricing Options[a]				
VMT fee (0.6 c/mi)	1.60	22.11	0.6%	0.6%
Motor fuel tax ($0.137/gal)	1.50	22.80	0.6%	0.6%
Carbon price ($5-30/ton CO_2)	2. 75	25.77	1.1%	0.6%
EV/AFV infrastructure & incentives[b]	2.84	21.12	1.1%	0.5%
Urban and intercity transit	0.20	2.06	0.1%	0.0%
Land use/smart growth	1.69	19.12	0.7%	0.5%
Active transportation	1.32	12.66	0.5%	0.3%
TDM and ecodriving	0.69	13.73	0.3%	0.3%
System operations/efficiency	1.58	16.04	0.6%	0.4%
Freight/intermodal infra/ops	0.94	8.60	0.4%	0.2%
Total, Pricing + Reinvestment	**10.77**	**116.13**	**4.2%**	**2.9%**
Clean Fuels Standard 10%[c]	7.37	86.71	2.9%	2.2%

Figure 5.7 Net Effects on Employment (Scenario 1a)



By the numbers

- **1,000,000 tons** of carbon reduced annually
- **12,000 net new jobs** annually in 2030 in MD/DC
- **$13,000,000,000** added to the MD/DC economy through 2030
- **Thousands of lives saved** in the region
- **Hundreds of millions of dollars** saved in lower infrastructure costs
- **More access** to clean mobility opportunities for overburdened and underserved communities