

# Preliminary Regulatory Impact Analysis: CAFE DATA BOOK (Appendix I)

Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond

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U.S. Department of Transportation  
National Highway Traffic Safety  
Administration



# Contents

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Summary Tables.....	3
Estimated Required CAFE Levels .....	43
Estimated Achieved CAFE Levels.....	107
CAFE Costs per Vehicle.....	166
Various Impacts of Alternatives .....	169
Required and Achieved CAFE Levels, Baseline vs Preferred Alternative .....	174
Incremental Benefits and Costs .....	209
Technology Costs and Civil Penalties per Vehicle, by Model Year.....	221
Regulatory Costs and Civil Penalties per Vehicle, by Model Year .....	281
Incremental Societal Impacts .....	341
Labor Impacts.....	359
Compliance Impacts.....	386
Powertrain Technology Penetration Rate, by Model Year .....	445
Mass Reduction Penetration Rate, by Model Year .....	565
Powertrain Technology Penetration Rate, by Alternative.....	609
Mass Reduction Penetration Rate, by Alternative .....	633
Electrification Rates .....	657
Required and Achieved CAFE Levels, Comparison .....	681
Regulatory Cost, Comparison.....	708
Vehicle Price Increase.....	726
Technology Costs, Price Increases, Sales, and Labor Utilization .....	749
CAFE Compliance Credits .....	772
Consumer Impacts .....	777
Environmental Impacts .....	807
Electrification Costs.....	825
Fleet Characteristics .....	828
Liquid Fuel and Electricity Consumption.....	834
Sales Impacts .....	840
Regulatory Costs per Vehicle, by Vehicle Type.....	864
Vehicle-Mass-Related Fatality Impacts.....	887
Change in Safety Parameters .....	907

## Summary Tables

**Table 1 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, All SCC Levels**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, All SCC Levels</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Total Incremental Social Benefits, 7% SCC Discount Rate	51.2	65.0	75.5	103.4
Total Incremental Social Benefits, 3% SCC Discount Rate	59.5	75.5	87.5	120.1
Total Incremental Social Benefits, No SCC Valuation	65.3	82.9	96.1	132.0
<b>Net Incremental Social Benefits</b>				
Net Incremental Social Benefits, 7% SCC Discount Rate	4.4	6.3	-3.2	-1.2
Net Incremental Social Benefits, 3% SCC Discount Rate	12.7	16.8	8.8	15.6
Net Incremental Social Benefits, No SCC Valuation	18.5	24.3	17.4	27.5

**Table 2 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, All SCC Levels**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, All SCC Levels</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Total Incremental Social Benefits, 7% SCC Discount Rate	29.2	37.0	42.8	58.1
Total Incremental Social Benefits, 3% SCC Discount Rate	37.5	47.5	54.9	74.8
Total Incremental Social Benefits, No SCC Valuation	43.3	54.9	63.5	86.7
Net Incremental Social Benefits, 7% SCC Discount Rate	-2.0	-2.1	-9.4	-12.2
Net Incremental Social Benefits, 3% SCC Discount Rate	6.3	8.4	2.7	4.5
Net Incremental Social Benefits, No SCC Valuation	12.1	15.8	11.3	16.4

**Table 3 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet for Calendar Years 2022-2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, All SCC Levels**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet for Calendar Years 2022-2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, All SCC Levels</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Total Incremental Social Benefits, 7% SCC Discount Rate	128.2	173.2	221.6	369.0
Total Incremental Social Benefits, 3% SCC Discount Rate	150.5	203.3	260.8	436.9
Total Incremental Social Benefits, No SCC Valuation	166.4	224.8	288.8	485.5
Net Incremental Social Benefits, 7% SCC Discount	11.9	16.3	-18.2	-16.9
Net Incremental Social Benefits, 3% SCC Discount Rate	34.2	46.5	21.0	51.0
Net Incremental Social Benefits, No SCC Valuation	50.1	68.0	49.0	99.7

**Table 4 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet for Calendar Years 2022-2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, All SCC Levels**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet for Calendar Years 2022-2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, All SCC Levels</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Total Incremental Social Benefits, 7% SCC Discount Rate	66.0	88.6	112.5	184.4
Total Incremental Social Benefits, 3% SCC Discount Rate	88.3	118.8	151.6	252.3
Total Incremental Social Benefits, No SCC Valuation	104.2	140.3	179.6	301.0
Net Incremental Social Benefits, 7% SCC Discount	1.2	1.9	-17.8	-21.6
Net Incremental Social Benefits, 3% SCC Discount Rate	23.4	32.1	21.4	46.4
Net Incremental Social Benefits, No SCC Valuation	39.3	53.6	49.4	95.0

**Table 5 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0

**Table 6 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0



**Table 7 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0

**Table 8 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	46.8	31.2	1.8	2.3
Benefits	59.5	37.5	2.3	2.7
Net Benefits	12.7	6.3	0.5	0.5

**Table 9 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	8.4	6.3	0.3	0.5
Benefits	3.6	2.2	0.1	0.2
Net Benefits	-4.7	-4.1	-0.2	-0.3

**Table 10 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	38.5	24.9	1.5	1.8
Benefits	55.8	35.3	2.2	2.6
Net Benefits	17.4	10.4	0.7	0.7

**Table 11 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	58.6	39.1	2.3	2.8
Benefits	75.5	47.5	2.9	3.4
Net Benefits	16.8	8.4	0.7	0.6

**Table 12 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	12.1	8.9	0.5	0.6
Benefits	7.1	4.3	0.3	0.3
Net Benefits	-5.1	-4.5	-0.2	-0.3

**Table 13 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	46.5	30.2	1.8	2.2
Benefits	68.4	43.1	2.7	3.1
Net Benefits	21.9	12.9	0.9	0.9

**Table 14 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	78.7	52.2	3.1	3.8
Benefits	87.5	54.9	3.4	4.0
Net Benefits	8.8	2.7	0.3	0.2



**Table 15 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	21.6	14.9	0.8	1.1
Benefits	9.8	6.0	0.4	0.4
Net Benefits	-11.7	-8.9	-0.5	-0.6

**Table 16 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	57.1	37.3	2.2	2.7
Benefits	77.7	48.9	3.0	3.5
Net Benefits	20.6	11.6	0.8	0.8

**Table 17 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Total Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	104.5	70.3	4.1	5.1
Benefits	120.1	74.8	4.7	5.4
Net Benefits	15.6	4.5	0.6	0.3

**Table 18 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Passenger Car Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	34.5	24.0	1.3	1.7
Benefits	23.5	14.3	0.9	1.0
Net Benefits	-10.9	-9.7	-0.4	-0.7

**Table 19 - Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars), Light Truck Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	70.1	46.3	2.7	3.4
Benefits	96.6	60.5	3.8	4.4
Net Benefits	26.5	14.2	1.0	1.0

**Table 20 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0

**Table 21 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0

**Table 22 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for No Action Alternative (Baseline), Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for No Action Alternative (Baseline), Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	0.0	0.0	0.0	0.0
Benefits	0.0	0.0	0.0	0.0
Net Benefits	0.0	0.0	0.0	0.0



**Table 23 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	116.3	64.9	6.1	5.3
Benefits	150.5	88.3	7.8	7.2
Net Benefits	34.2	23.4	1.8	1.9

**Table 24 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	17.2	10.9	0.9	0.9
Benefits	3.9	2.0	0.2	0.2
Net Benefits	-13.3	-8.9	-0.7	-0.7

**Table 25 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC1LT3, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC1LT3, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	99.1	53.9	5.2	4.4
Benefits	146.6	86.2	7.6	7.0
Net Benefits	47.4	32.3	2.5	2.6

**Table 26 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	156.8	86.7	8.2	7.1
Benefits	203.3	118.8	10.6	9.7
Net Benefits	46.5	32.1	2.4	2.6

**Table 27 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	25.2	15.7	1.3	1.3
Benefits	11.5	5.9	0.6	0.5
Net Benefits	-13.7	-9.8	-0.7	-0.8

**Table 28 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC2LT4, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC2LT4, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	131.6	71.0	6.9	5.8
Benefits	191.8	112.8	10.0	9.2
Net Benefits	60.2	41.9	3.1	3.4

**Table 29 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	239.9	130.2	12.5	10.6
Benefits	260.8	151.6	13.6	12.4
Net Benefits	21.0	21.4	1.1	1.7

**Table 30 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	55.4	32.0	2.9	2.6
Benefits	28.1	15.5	1.5	1.3
Net Benefits	-27.3	-16.5	-1.4	-1.3



**Table 31 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC3LT5, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC3LT5, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	184.4	98.3	9.6	8.0
Benefits	232.8	136.2	12.1	11.1
Net Benefits	48.3	37.9	2.5	3.1

**Table 32 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Total Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	385.9	206.0	20.1	16.8
Benefits	436.9	252.3	22.8	20.6
Net Benefits	51.0	46.4	2.7	3.8

**Table 33 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Passenger Car Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	111.7	61.9	5.8	5.0
Benefits	97.8	55.5	5.1	4.5
Net Benefits	-14.0	-6.4	-0.7	-0.5

**Table 34 - Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC6LT8, Average SCC**

<b>Estimated Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars), Light Truck Fleet for Alternative PC6LT8, Average SCC</b>				
	Totals		Annualized	
	3% Discount Rate	7% Discount Rate	3% Discount Rate	7% Discount Rate
Costs	274.2	144.1	14.3	11.7
Benefits	339.1	196.9	17.7	16.0
Net Benefits	65.0	52.8	3.4	4.3

**Table 35 - Estimated Total Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Total Fleet, by Alternative, Average SCC**

<b>Estimated Total Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Total Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	46.8	59.5	12.7	31.2	37.5	6.3
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	58.6	75.5	16.8	39.1	47.5	8.4
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	78.7	87.5	8.8	52.2	54.9	2.7
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	104.5	120.1	15.6	70.3	74.8	4.5

**Table 36 - Estimated Passenger Car Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Passenger Car Fleet, by Alternative, Average SCC**

<b>Estimated Passenger Car Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Passenger Car Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	8.4	3.6	-4.7	6.3	2.2	-4.1
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	12.1	7.1	-5.1	8.9	4.3	-4.5
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	21.6	9.8	-11.7	14.9	6.0	-8.9
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	34.5	23.5	-10.9	24.0	14.3	-9.7

**Table 37 - Estimated Light Truck Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Light Truck Fleet, by Alternative, Average SCC**

<b>Estimated Light Truck Fleet Costs, Benefits, and Net Benefits Across MYs 1983-2032 (billions of dollars) Light Truck Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	38.5	55.8	17.4	24.9	35.3	10.4
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	46.5	68.4	21.9	30.2	43.1	12.9
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	57.1	77.7	20.6	37.3	48.9	11.6
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	70.1	96.6	26.5	46.3	60.5	14.2

**Table 38 - Estimated Total Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Total Fleet, by Alternative, Average SCC**

<b>Estimated Total Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Total Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	116.3	150.5	34.2	64.9	88.3	23.4
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	156.8	203.3	46.5	86.7	118.8	32.1
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	239.9	260.8	21.0	130.2	151.6	21.4
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	385.9	436.9	51.0	206.0	252.3	46.4



**Table 39 - Estimated Passenger Car Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Passenger Car Fleet, by Alternative, Average SCC**

<b>Estimated Passenger Car Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Passenger Car Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	17.2	3.9	-13.3	10.9	2.0	-8.9
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	25.2	11.5	-13.7	15.7	5.9	-9.8
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	55.4	28.1	-27.3	32.0	15.5	-16.5
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	111.7	97.8	-14.0	61.9	55.5	-6.4

**Table 40 - Estimated Light Truck Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Light Truck Fleet, by Alternative, Average SCC**

<b>Estimated Light Truck Fleet Costs, Benefits, and Net Benefits Across Calendar Years 2022-2050 (billions of dollars) Light Truck Fleet, by Alternative, Average SCC</b>						
Alternative	3% Discount Rate			7% Discount Rate		
	Costs	Benefits	Net Benefits	Costs	Benefits	Net Benefits
1.00%/Y Pc And 3.00%/Y Lt During 2027-2032	99.1	146.6	47.4	53.9	86.2	32.3
2.00%/Y Pc And 4.00%/Y Lt During 2027-2032	131.6	191.8	60.2	71.0	112.8	41.9
3.00%/Y Pc And 5.00%/Y Lt During 2027-2032	184.4	232.8	48.3	98.3	136.2	37.9
6.00%/Y Pc And 8.00%/Y Lt During 2027-2032	274.2	339.1	65.0	144.1	196.9	52.8

## Estimated Required CAFE Levels

**Table 41 - Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), No Action Alternative (Baseline)**

Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), No Action Alternative (Baseline)			
Model Year	Passenger Car	Light Truck	Combined
2022	44.1	32.1	35.8
2023	44.8	32.6	36.1
2024	48.7	35.3	39.0
2025	52.9	38.3	42.2
2026	58.8	42.6	46.8
2027	58.8	42.6	46.7
2028	58.8	42.6	46.7
2029	58.8	42.6	46.7
2030	58.8	42.6	46.7
2031	58.8	42.6	46.7
2032	58.8	42.6	46.7

**Table 42 - Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC1LT3**

<b>Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC1LT3</b>			
Model Year	Passenger Car	Light Truck	Combined
2022	44.1	32.1	35.8
2023	44.8	32.6	36.1
2024	48.7	35.3	39.0
2025	52.9	38.3	42.2
2026	58.8	42.6	46.8
2027	59.4	43.9	47.9
2028	60.0	45.3	49.1
2029	60.6	46.7	50.3
2030	61.2	48.1	51.6
2031	61.8	49.6	53.0
2032	62.4	51.2	54.3

**Table 43 - Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC2LT4**

<b>Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC2LT4</b>			
Model Year	Passenger Car	Light Truck	Combined
2022	44.1	32.1	35.8
2023	44.8	32.6	36.1
2024	48.7	35.3	39.0
2025	52.9	38.3	42.2
2026	58.8	42.6	46.8
2027	60.0	44.4	48.4
2028	61.2	46.2	50.1
2029	62.5	48.2	51.9
2030	63.7	50.2	53.8
2031	65.1	52.2	55.7
2032	66.4	54.4	57.8

**Table 44 - Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC3LT5**

<b>Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC3LT5</b>			
Model Year	Passenger Car	Light Truck	Combined
2022	44.1	32.1	35.8
2023	44.8	32.6	36.1
2024	48.7	35.3	39.0
2025	52.9	38.3	42.2
2026	58.8	42.6	46.8
2027	60.6	44.9	48.9
2028	62.5	47.2	51.2
2029	64.4	49.7	53.5
2030	66.4	52.3	56.1
2031	68.5	55.1	58.7
2032	70.6	58.0	61.5

**Table 45 - Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC6LT8**

<b>Average CAFE Requirements for Passenger Cars, Light Trucks, and Combined (mpg), Alternative PC6LT8</b>			
Model Year	Passenger Car	Light Truck	Combined
2022	44.1	32.1	35.8
2023	44.8	32.6	36.1
2024	48.7	35.3	39.0
2025	52.9	38.3	42.2
2026	58.8	42.6	46.8
2027	62.5	46.3	50.5
2028	66.5	50.3	54.5
2029	70.8	54.7	58.9
2030	75.3	59.5	63.7
2031	80.1	64.6	68.9
2032	85.2	70.3	74.5

**Table 46 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	35.8	36.1	39.0	42.2	46.8	46.7	46.7	46.7	46.7	46.7	46.7
Alternative PC1LT3	35.8	36.1	39.0	42.2	46.8	47.9	49.1	50.3	51.6	53.0	54.3
Alternative PC2LT4	35.8	36.1	39.0	42.2	46.8	48.4	50.1	51.9	53.8	55.7	57.8
Alternative PC3LT5	35.8	36.1	39.0	42.2	46.8	48.9	51.2	53.5	56.1	58.7	61.5
Alternative PC6LT8	35.8	36.1	39.0	42.2	46.8	50.5	54.5	58.9	63.7	68.9	74.5



**Table 47 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.1	44.8	48.7	52.9	58.8	58.8	58.8	58.8	58.8	58.8	58.8
Alternative PC1LT3	44.1	44.8	48.7	52.9	58.8	59.4	60.0	60.6	61.2	61.8	62.4
Alternative PC2LT4	44.1	44.8	48.7	52.9	58.8	60.0	61.2	62.5	63.7	65.1	66.4
Alternative PC3LT5	44.1	44.8	48.7	52.9	58.8	60.6	62.5	64.4	66.4	68.5	70.6
Alternative PC6LT8	44.1	44.8	48.7	52.9	58.8	62.5	66.5	70.8	75.3	80.1	85.2

**Table 48 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.1	32.6	35.3	38.3	42.6	42.6	42.6	42.6	42.6	42.6	42.6
Alternative PC1LT3	32.1	32.6	35.3	38.3	42.6	43.9	45.3	46.7	48.1	49.6	51.2
Alternative PC2LT4	32.1	32.6	35.3	38.3	42.6	44.4	46.2	48.2	50.2	52.2	54.4
Alternative PC3LT5	32.1	32.6	35.3	38.3	42.6	44.9	47.2	49.7	52.3	55.1	58.0
Alternative PC6LT8	32.1	32.6	35.3	38.3	42.6	46.3	50.3	54.7	59.5	64.6	70.3

**Table 49 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (BMW)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.6	37.9	41.0	44.4	49.3	49.2	49.2	49.1	49.2	49.2	49.2
Alternative PC1LT3	37.6	37.9	41.0	44.4	49.3	50.3	51.4	52.5	53.7	54.9	56.1
Alternative PC2LT4	37.6	37.9	41.0	44.4	49.3	50.8	52.4	54.1	55.9	57.8	59.7
Alternative PC3LT5	37.6	37.9	41.0	44.4	49.3	51.3	53.5	55.8	58.3	60.8	63.5
Alternative PC6LT8	37.6	37.9	41.0	44.4	49.3	52.9	57.0	61.4	66.1	71.3	76.9

**Table 50 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Ford)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	31.4	31.8	34.3	37.2	41.4	41.4	41.3	41.3	41.3	41.4	41.4
Alternative PC1LT3	31.4	31.8	34.3	37.2	41.4	42.5	43.8	45.1	46.4	47.8	49.2
Alternative PC2LT4	31.4	31.8	34.3	37.2	41.4	42.9	44.7	46.5	48.4	50.3	52.3
Alternative PC3LT5	31.4	31.8	34.3	37.2	41.4	43.4	45.6	47.9	50.4	53.0	55.7
Alternative PC6LT8	31.4	31.8	34.3	37.2	41.4	44.8	48.6	52.8	57.3	62.2	67.5

**Table 51 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (GM)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.5	32.9	35.2	38.2	42.3	42.2	42.2	42.2	42.2	42.3	42.3
Alternative PC1LT3	32.5	32.9	35.2	38.2	42.3	43.4	44.6	45.9	47.1	48.5	49.8
Alternative PC2LT4	32.5	32.9	35.2	38.2	42.3	43.8	45.6	47.2	49.1	51.0	53.0
Alternative PC3LT5	32.5	32.9	35.2	38.2	42.3	44.4	46.5	48.7	51.2	53.8	56.5
Alternative PC6LT8	32.5	32.9	35.2	38.2	42.3	45.7	49.5	53.7	58.2	63.0	68.4

**Table 52 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Honda)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.1	39.4	42.7	46.2	51.2	51.1	51.1	51.0	51.1	51.1	51.1
Alternative PC1LT3	39.1	39.4	42.7	46.2	51.2	52.2	53.4	54.6	55.8	57.1	58.3
Alternative PC2LT4	39.1	39.4	42.7	46.2	51.2	52.8	54.5	56.2	58.1	60.1	62.0
Alternative PC3LT5	39.1	39.4	42.7	46.2	51.2	53.3	55.6	58.0	60.5	63.3	66.1
Alternative PC6LT8	39.1	39.4	42.7	46.2	51.2	55.1	59.3	63.8	68.8	74.1	79.9

**Table 53 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.6	40.0	43.3	46.8	51.9	51.9	51.8	51.8	51.8	51.9	51.9
Alternative PC1LT3	39.6	40.0	43.3	46.8	51.9	52.9	54.0	55.1	56.2	57.4	58.6
Alternative PC2LT4	39.6	40.0	43.3	46.8	51.9	53.5	55.1	56.8	58.6	60.5	62.3
Alternative PC3LT5	39.6	40.0	43.3	46.8	51.9	54.0	56.3	58.6	61.1	63.7	66.4
Alternative PC6LT8	39.6	40.0	43.3	46.8	51.9	55.8	60.0	64.4	69.3	74.6	80.3

**Table 54 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.5	39.8	43.1	46.7	51.7	51.7	51.6	51.6	51.6	51.7	51.7
Alternative PC1LT3	39.5	39.8	43.1	46.7	51.7	52.7	53.9	55.0	56.2	57.4	58.6
Alternative PC2LT4	39.5	39.8	43.1	46.7	51.7	53.3	55.0	56.7	58.5	60.5	62.4
Alternative PC3LT5	39.5	39.8	43.1	46.7	51.7	53.9	56.1	58.5	61.0	63.7	66.4
Alternative PC6LT8	39.5	39.8	43.1	46.7	51.7	55.6	59.8	64.3	69.2	74.6	80.3



**Table 55 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (JLR)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.9	33.4	36.2	39.4	43.7	43.7	43.7	43.7	43.7	43.7	43.7
Alternative PC1LT3	32.9	33.4	36.2	39.4	43.7	45.1	46.4	47.9	49.4	50.9	52.4
Alternative PC2LT4	32.9	33.4	36.2	39.4	43.7	45.5	47.4	49.4	51.4	53.6	55.8
Alternative PC3LT5	32.9	33.4	36.2	39.4	43.7	46.0	48.4	51.0	53.6	56.4	59.4
Alternative PC6LT8	32.9	33.4	36.2	39.4	43.7	47.5	51.6	56.1	60.9	66.2	72.0

**Table 56 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Karma)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.6	41.1	44.3	48.1	53.5	54.1	54.1	54.1	54.1	54.1	54.1
Alternative PC1LT3	40.6	41.1	44.3	48.1	53.5	54.6	55.2	55.7	56.3	56.9	57.4
Alternative PC2LT4	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1
Alternative PC3LT5	40.6	41.1	44.3	48.1	53.5	55.8	57.5	59.3	61.1	63.0	64.9
Alternative PC6LT8	40.6	41.1	44.3	48.1	53.5	57.5	61.2	65.1	69.3	73.7	78.4

**Table 57 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Lucid)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.6	41.1	44.3	48.1	53.5	54.1	54.1	54.1	54.1	54.1	54.1
Alternative PC1LT3	40.6	41.1	44.3	48.1	53.5	54.6	55.2	55.7	56.3	56.9	57.4
Alternative PC2LT4	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1
Alternative PC3LT5	40.6	41.1	44.3	48.1	53.5	55.8	57.5	59.3	61.1	63.0	64.9
Alternative PC6LT8	40.6	41.1	44.3	48.1	53.5	57.5	61.2	65.1	69.3	73.7	78.4

**Table 58 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mazda)**

Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mazda)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.3	37.8	41.0	44.4	49.4	49.3	49.3	49.3	49.3	49.3	49.3
Alternative PC1LT3	37.3	37.8	41.0	44.4	49.4	50.8	52.2	53.7	55.2	56.9	58.5
Alternative PC2LT4	37.3	37.8	41.0	44.4	49.4	51.3	53.3	55.4	57.6	59.9	62.3
Alternative PC3LT5	37.3	37.8	41.0	44.4	49.4	51.9	54.4	57.2	60.1	63.1	66.3
Alternative PC6LT8	37.3	37.8	41.0	44.4	49.4	53.5	58.0	62.9	68.2	74.1	80.3

**Table 59 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.8	37.2	40.2	43.6	48.4	48.3	48.3	48.3	48.3	48.3	48.3
Alternative PC1LT3	36.8	37.2	40.2	43.6	48.4	49.4	50.5	51.6	52.8	54.1	55.3
Alternative PC2LT4	36.8	37.2	40.2	43.6	48.4	49.9	51.5	53.3	55.0	56.9	58.8
Alternative PC3LT5	36.8	37.2	40.2	43.6	48.4	50.5	52.6	55.0	57.4	59.9	62.6
Alternative PC6LT8	36.8	37.2	40.2	43.6	48.4	52.1	56.1	60.4	65.1	70.3	75.7

**Table 60 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	42.0	42.5	45.9	49.8	55.2	55.1	55.1	55.1	55.1	55.1	55.1
Alternative PC1LT3	42.0	42.5	45.9	49.8	55.2	56.3	57.5	58.7	60.0	61.3	62.6
Alternative PC2LT4	42.0	42.5	45.9	49.8	55.2	56.9	58.7	60.5	62.5	64.6	66.6
Alternative PC3LT5	42.0	42.5	45.9	49.8	55.2	57.5	59.9	62.4	65.1	68.0	70.9
Alternative PC6LT8	42.0	42.5	45.9	49.8	55.2	59.3	63.9	68.7	73.9	79.7	85.8

**Table 61 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Nissan)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	38.9	39.3	42.4	46.0	50.9	50.9	50.8	50.8	50.8	50.9	50.9
Alternative PC1LT3	38.9	39.3	42.4	46.0	50.9	51.9	53.0	54.1	55.3	56.5	57.7
Alternative PC2LT4	38.9	39.3	42.4	46.0	50.9	52.4	54.1	55.8	57.6	59.5	61.4
Alternative PC3LT5	38.9	39.3	42.4	46.0	50.9	53.0	55.2	57.6	60.1	62.7	65.4
Alternative PC6LT8	38.9	39.3	42.4	46.0	50.9	54.7	58.8	63.3	68.2	73.5	79.1

**Table 62 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Stellantis)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	31.9	32.3	34.9	38.0	42.1	42.1	42.1	42.1	42.1	42.1	42.1
Alternative PC1LT3	31.9	32.3	34.9	38.0	42.1	43.3	44.5	45.9	47.2	48.6	50.0
Alternative PC2LT4	31.9	32.3	34.9	38.0	42.1	43.8	45.6	47.3	49.2	51.1	53.2
Alternative PC3LT5	31.9	32.3	34.9	38.0	42.1	44.2	46.5	48.8	51.3	53.9	56.7
Alternative PC6LT8	31.9	32.3	34.9	38.0	42.1	45.6	49.5	53.7	58.3	63.3	68.7



**Table 63 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Subaru)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.8	38.2	41.4	44.9	50.0	49.9	49.9	49.9	49.9	49.9	49.9
Alternative PC1LT3	37.8	38.2	41.4	44.9	50.0	51.4	52.9	54.4	55.9	57.5	59.2
Alternative PC2LT4	37.8	38.2	41.4	44.9	50.0	51.9	53.9	56.0	58.2	60.5	62.9
Alternative PC3LT5	37.8	38.2	41.4	44.9	50.0	52.5	55.1	57.8	60.8	63.8	67.0
Alternative PC6LT8	37.8	38.2	41.4	44.9	50.0	54.1	58.7	63.6	69.0	74.9	81.2

**Table 64 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Tesla)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.7	41.2	44.8	48.6	54.1	54.1	54.1	54.1	54.1	54.1	54.1
Alternative PC1LT3	40.7	41.2	44.8	48.6	54.1	54.6	55.3	55.9	56.6	57.2	57.8
Alternative PC2LT4	40.7	41.2	44.8	48.6	54.1	55.2	56.4	57.7	58.9	60.3	61.5
Alternative PC3LT5	40.7	41.2	44.8	48.6	54.1	55.8	57.6	59.5	61.4	63.4	65.5
Alternative PC6LT8	40.7	41.2	44.8	48.6	54.1	57.5	61.3	65.4	69.6	74.2	79.0

**Table 65 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Toyota)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.1	37.4	40.4	43.6	48.4	48.3	48.3	48.3	48.3	48.3	48.4
Alternative PC1LT3	37.1	37.4	40.4	43.6	48.4	49.5	50.7	52.0	53.3	54.6	56.0
Alternative PC2LT4	37.1	37.4	40.4	43.6	48.4	50.0	51.8	53.6	55.5	57.5	59.5
Alternative PC3LT5	37.1	37.4	40.4	43.6	48.4	50.6	52.8	55.3	57.9	60.5	63.4
Alternative PC6LT8	37.1	37.4	40.4	43.6	48.4	52.2	56.3	60.8	65.7	71.0	76.7

**Table 66 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Volvo)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.0	36.4	39.4	42.6	47.4	47.3	47.3	47.3	47.3	47.3	47.3
Alternative PC1LT3	36.0	36.4	39.4	42.6	47.4	48.6	49.8	51.0	52.4	53.8	55.2
Alternative PC2LT4	36.0	36.4	39.4	42.6	47.4	49.0	50.8	52.7	54.6	56.7	58.7
Alternative PC3LT5	36.0	36.4	39.4	42.6	47.4	49.5	51.9	54.3	56.9	59.7	62.5
Alternative PC6LT8	36.0	36.4	39.4	42.6	47.4	51.2	55.3	59.8	64.7	70.0	75.8

**Table 67 - Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (VWA)**

<b>Estimated Required Average Fuel Economy (mpg), Total Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.9	38.2	41.3	44.8	49.6	49.6	49.6	49.5	49.6	49.6	49.6
Alternative PC1LT3	37.9	38.2	41.3	44.8	49.6	50.8	52.1	53.4	54.6	56.0	57.4
Alternative PC2LT4	37.9	38.2	41.3	44.8	49.6	51.3	53.1	55.0	57.0	59.0	61.1
Alternative PC3LT5	37.9	38.2	41.3	44.8	49.6	51.9	54.2	56.7	59.4	62.2	65.0
Alternative PC6LT8	37.9	38.2	41.3	44.8	49.6	53.6	57.9	62.4	67.4	72.9	78.7

**Table 68 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (BMW)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	43.3	44.0	47.8	52.0	57.7	57.7	57.7	57.7	57.7	57.7	57.7
Alternative PC1LT3	43.3	44.0	47.8	52.0	57.7	58.3	58.9	59.5	60.1	60.7	61.3
Alternative PC2LT4	43.3	44.0	47.8	52.0	57.7	58.9	60.1	61.3	62.6	63.9	65.2
Alternative PC3LT5	43.3	44.0	47.8	52.0	57.7	59.5	61.4	63.3	65.2	67.2	69.3
Alternative PC6LT8	43.3	44.0	47.8	52.0	57.7	61.4	65.3	69.5	73.9	78.7	83.7

**Table 69 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Ford)**

Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Ford)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	43.4	44.1	47.9	52.1	57.9	57.9	57.9	57.9	57.9	57.9	57.9
Alternative PC1LT3	43.4	44.1	47.9	52.1	57.9	58.4	59.0	59.6	60.2	60.8	61.5
Alternative PC2LT4	43.4	44.1	47.9	52.1	57.9	59.0	60.2	61.5	62.7	64.0	65.3
Alternative PC3LT5	43.4	44.1	47.9	52.1	57.9	59.6	61.5	63.4	65.4	67.4	69.5
Alternative PC6LT8	43.4	44.1	47.9	52.1	57.9	61.6	65.5	69.7	74.1	78.8	83.9

**Table 70 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (GM)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	45.1	45.8	49.7	54.1	60.1	60.1	60.1	60.1	60.1	60.1	60.1
Alternative PC1LT3	45.1	45.8	49.7	54.1	60.1	60.7	61.3	61.9	62.6	63.2	63.8
Alternative PC2LT4	45.1	45.8	49.7	54.1	60.1	61.3	62.6	63.9	65.1	66.5	67.8
Alternative PC3LT5	45.1	45.8	49.7	54.1	60.1	61.9	63.9	65.8	67.9	70.0	72.1
Alternative PC6LT8	45.1	45.8	49.7	54.1	60.1	63.9	68.0	72.3	77.0	81.9	87.1



**Table 71 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Honda)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.7	45.4	49.4	53.7	59.6	59.6	59.6	59.6	59.6	59.6	59.6
Alternative PC1LT3	44.7	45.4	49.4	53.7	59.6	60.2	60.8	61.4	62.1	62.7	63.3
Alternative PC2LT4	44.7	45.4	49.4	53.7	59.6	60.8	62.1	63.3	64.6	66.0	67.3
Alternative PC3LT5	44.7	45.4	49.4	53.7	59.6	61.5	63.4	65.3	67.3	69.4	71.6
Alternative PC6LT8	44.7	45.4	49.4	53.7	59.6	63.4	67.5	71.8	76.4	81.2	86.4

**Table 72 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.2	44.9	48.8	53.1	59.0	59.0	59.0	59.0	59.0	59.0	59.0
Alternative PC1LT3	44.2	44.9	48.8	53.1	59.0	59.6	60.2	60.8	61.4	62.0	62.7
Alternative PC2LT4	44.2	44.9	48.8	53.1	59.0	60.2	61.4	62.7	64.0	65.3	66.6
Alternative PC3LT5	44.2	44.9	48.8	53.1	59.0	60.8	62.7	64.6	66.6	68.7	70.8
Alternative PC6LT8	44.2	44.9	48.8	53.1	59.0	62.8	66.8	71.0	75.5	80.3	85.5

**Table 73 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.7	45.4	49.4	53.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6
Alternative PC1LT3	44.7	45.4	49.4	53.6	59.6	60.2	60.8	61.4	62.1	62.7	63.3
Alternative PC2LT4	44.7	45.4	49.4	53.6	59.6	60.8	62.1	63.3	64.6	65.9	67.2
Alternative PC3LT5	44.7	45.4	49.4	53.6	59.6	61.5	63.3	65.3	67.3	69.4	71.6
Alternative PC6LT8	44.7	45.4	49.4	53.6	59.6	63.4	67.4	71.8	76.3	81.2	86.4

**Table 74 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (JLR)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	43.2	43.8	47.6	51.8	57.5	57.5	57.5	57.5	57.5	57.5	57.5
Alternative PC1LT3	43.2	43.8	47.6	51.8	57.5	58.1	58.7	59.3	59.9	60.5	61.1
Alternative PC2LT4	43.2	43.8	47.6	51.8	57.5	58.7	59.9	61.1	62.4	63.6	64.9
Alternative PC3LT5	43.2	43.8	47.6	51.8	57.5	59.3	61.1	63.0	65.0	67.0	69.1
Alternative PC6LT8	43.2	43.8	47.6	51.8	57.5	61.2	65.1	69.3	73.7	78.4	83.4

**Table 75 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Karma)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.6	41.1	44.3	48.1	53.5	54.1	54.1	54.1	54.1	54.1	54.1
Alternative PC1LT3	40.6	41.1	44.3	48.1	53.5	54.6	55.2	55.7	56.3	56.9	57.4
Alternative PC2LT4	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1
Alternative PC3LT5	40.6	41.1	44.3	48.1	53.5	55.8	57.5	59.3	61.1	63.0	64.9
Alternative PC6LT8	40.6	41.1	44.3	48.1	53.5	57.5	61.2	65.1	69.3	73.7	78.4

**Table 76 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Lucid)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.6	41.1	44.3	48.1	53.5	54.1	54.1	54.1	54.1	54.1	54.1
Alternative PC1LT3	40.6	41.1	44.3	48.1	53.5	54.6	55.2	55.7	56.3	56.9	57.4
Alternative PC2LT4	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1
Alternative PC3LT5	40.6	41.1	44.3	48.1	53.5	55.8	57.5	59.3	61.1	63.0	64.9
Alternative PC6LT8	40.6	41.1	44.3	48.1	53.5	57.5	61.2	65.1	69.3	73.7	78.4

**Table 77 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mazda)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	46.1	46.8	50.9	55.3	61.5	61.5	61.5	61.5	61.5	61.5	61.5
Alternative PC1LT3	46.1	46.8	50.9	55.3	61.5	62.1	62.7	63.4	64.0	64.7	65.3
Alternative PC2LT4	46.1	46.8	50.9	55.3	61.5	62.7	64.0	65.3	66.7	68.0	69.4
Alternative PC3LT5	46.1	46.8	50.9	55.3	61.5	63.4	65.3	67.4	69.5	71.6	73.8
Alternative PC6LT8	46.1	46.8	50.9	55.3	61.5	65.4	69.6	74.0	78.7	83.8	89.1

**Table 78 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	41.8	42.4	46.1	50.1	55.6	55.6	55.6	55.6	55.6	55.6	55.6
Alternative PC1LT3	41.8	42.4	46.1	50.1	55.6	56.2	56.8	57.3	57.9	58.5	59.1
Alternative PC2LT4	41.8	42.4	46.1	50.1	55.6	56.8	57.9	59.1	60.3	61.6	62.8
Alternative PC3LT5	41.8	42.4	46.1	50.1	55.6	57.4	59.1	61.0	62.8	64.8	66.8
Alternative PC6LT8	41.8	42.4	46.1	50.1	55.6	59.2	63.0	67.0	71.3	75.8	80.7



**Table 79 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	47.0	47.7	51.9	56.4	62.7	62.7	62.7	62.7	62.7	62.7	62.7
Alternative PC1LT3	47.0	47.7	51.9	56.4	62.7	63.3	63.9	64.6	65.2	65.9	66.5
Alternative PC2LT4	47.0	47.7	51.9	56.4	62.7	63.9	65.2	66.6	67.9	69.3	70.7
Alternative PC3LT5	47.0	47.7	51.9	56.4	62.7	64.6	66.6	68.6	70.8	73.0	75.2
Alternative PC6LT8	47.0	47.7	51.9	56.4	62.7	66.7	70.9	75.4	80.2	85.4	90.8

**Table 80 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Nissan)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.7	45.4	49.3	53.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6
Alternative PC1LT3	44.7	45.4	49.3	53.6	59.6	60.2	60.8	61.4	62.1	62.7	63.3
Alternative PC2LT4	44.7	45.4	49.3	53.6	59.6	60.8	62.1	63.3	64.6	65.9	67.3
Alternative PC3LT5	44.7	45.4	49.3	53.6	59.6	61.4	63.4	65.3	67.3	69.4	71.5
Alternative PC6LT8	44.7	45.4	49.3	53.6	59.6	63.4	67.5	71.7	76.3	81.2	86.4

**Table 81 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Stellantis)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	41.8	42.4	46.1	50.0	55.6	55.6	55.6	55.6	55.6	55.6	55.6
Alternative PC1LT3	41.8	42.4	46.1	50.0	55.6	56.2	56.8	57.3	57.9	58.5	59.1
Alternative PC2LT4	41.8	42.4	46.1	50.0	55.6	56.8	57.9	59.1	60.3	61.5	62.8
Alternative PC3LT5	41.8	42.4	46.1	50.0	55.6	57.3	59.1	60.9	62.8	64.8	66.8
Alternative PC6LT8	41.8	42.4	46.1	50.0	55.6	59.2	63.0	67.0	71.2	75.8	80.6

**Table 82 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Subaru)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	46.0	46.7	50.7	55.1	61.3	61.3	61.3	61.3	61.3	61.3	61.3
Alternative PC1LT3	46.0	46.7	50.7	55.1	61.3	61.9	62.5	63.1	63.8	64.4	65.1
Alternative PC2LT4	46.0	46.7	50.7	55.1	61.3	62.5	63.8	65.1	66.4	67.8	69.2
Alternative PC3LT5	46.0	46.7	50.7	55.1	61.3	63.2	65.1	67.1	69.2	71.3	73.6
Alternative PC6LT8	46.0	46.7	50.7	55.1	61.3	65.2	69.3	73.8	78.5	83.5	88.8

**Table 83 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Tesla)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	41.1	41.7	45.3	49.3	54.8	54.8	54.8	54.8	54.8	54.8	54.8
Alternative PC1LT3	41.1	41.7	45.3	49.3	54.8	55.3	55.9	56.4	57.0	57.6	58.2
Alternative PC2LT4	41.1	41.7	45.3	49.3	54.8	55.9	57.0	58.2	59.4	60.7	61.9
Alternative PC3LT5	41.1	41.7	45.3	49.3	54.8	56.5	58.2	60.1	61.9	63.8	65.8
Alternative PC6LT8	41.1	41.7	45.3	49.3	54.8	58.3	62.0	66.0	70.1	74.6	79.4

**Table 84 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Toyota)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.7	45.4	49.4	53.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6
Alternative PC1LT3	44.7	45.4	49.4	53.6	59.6	60.2	60.8	61.4	62.1	62.7	63.3
Alternative PC2LT4	44.7	45.4	49.4	53.6	59.6	60.8	62.1	63.4	64.6	65.9	67.3
Alternative PC3LT5	44.7	45.4	49.4	53.6	59.6	61.5	63.4	65.3	67.3	69.4	71.6
Alternative PC6LT8	44.7	45.4	49.4	53.6	59.6	63.4	67.4	71.8	76.3	81.2	86.4

**Table 85 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Volvo)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	42.9	43.6	47.4	51.5	57.2	57.2	57.2	57.2	57.2	57.2	57.2
Alternative PC1LT3	42.9	43.6	47.4	51.5	57.2	57.8	58.3	58.9	59.5	60.1	60.8
Alternative PC2LT4	42.9	43.6	47.4	51.5	57.2	58.3	59.5	60.8	62.0	63.3	64.6
Alternative PC3LT5	42.9	43.6	47.4	51.5	57.2	59.0	60.8	62.7	64.6	66.6	68.6
Alternative PC6LT8	42.9	43.6	47.4	51.5	57.2	60.8	64.8	68.8	73.2	77.9	82.9

**Table 86 - Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (VWA)**

<b>Estimated Required Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	45.0	45.7	49.7	54.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Alternative PC1LT3	45.0	45.7	49.7	54.0	60.0	60.6	61.2	61.9	62.5	63.1	63.8
Alternative PC2LT4	45.0	45.7	49.7	54.0	60.0	61.2	62.5	63.8	65.1	66.4	67.7
Alternative PC3LT5	45.0	45.7	49.7	54.0	60.0	61.9	63.8	65.8	67.7	69.9	72.0
Alternative PC6LT8	45.0	45.7	49.7	54.0	60.0	63.9	67.9	72.2	76.9	81.8	87.0



**Table 87 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (BMW)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.5	33.0	35.9	39.0	43.4	43.4	43.4	43.4	43.4	43.4	43.4
Alternative PC1LT3	32.5	33.0	35.9	39.0	43.4	44.7	46.1	47.5	49.0	50.5	52.0
Alternative PC2LT4	32.5	33.0	35.9	39.0	43.4	45.2	47.0	49.0	51.0	53.2	55.4
Alternative PC3LT5	32.5	33.0	35.9	39.0	43.4	45.6	48.0	50.6	53.2	56.0	59.0
Alternative PC6LT8	32.5	33.0	35.9	39.0	43.4	47.1	51.2	55.7	60.5	65.8	71.5

**Table 88 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Ford)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	30.3	30.8	33.2	36.1	40.2	40.2	40.2	40.2	40.2	40.2	40.2
Alternative PC1LT3	30.3	30.8	33.2	36.1	40.2	41.4	42.7	44.0	45.4	46.8	48.2
Alternative PC2LT4	30.3	30.8	33.2	36.1	40.2	41.8	43.6	45.4	47.3	49.2	51.3
Alternative PC3LT5	30.3	30.8	33.2	36.1	40.2	42.3	44.5	46.8	49.3	51.9	54.6
Alternative PC6LT8	30.3	30.8	33.2	36.1	40.2	43.6	47.4	51.6	56.0	60.9	66.2

**Table 89 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (GM)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	29.8	30.3	32.5	35.4	39.3	39.3	39.3	39.3	39.3	39.3	39.3
Alternative PC1LT3	29.8	30.3	32.5	35.4	39.3	40.5	41.8	43.1	44.4	45.8	47.2
Alternative PC2LT4	29.8	30.3	32.5	35.4	39.3	40.9	42.7	44.4	46.3	48.2	50.2
Alternative PC3LT5	29.8	30.3	32.5	35.4	39.3	41.4	43.6	45.8	48.3	50.8	53.5
Alternative PC6LT8	29.8	30.3	32.5	35.4	39.3	42.7	46.4	50.5	54.9	59.6	64.8

**Table 90 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Honda)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.0	34.5	37.5	40.8	45.3	45.3	45.3	45.3	45.3	45.3	45.3
Alternative PC1LT3	34.0	34.5	37.5	40.8	45.3	46.7	48.2	49.7	51.2	52.8	54.4
Alternative PC2LT4	34.0	34.5	37.5	40.8	45.3	47.2	49.2	51.2	53.4	55.6	57.9
Alternative PC3LT5	34.0	34.5	37.5	40.8	45.3	47.7	50.2	52.9	55.6	58.6	61.7
Alternative PC6LT8	34.0	34.5	37.5	40.8	45.3	49.3	53.6	58.2	63.3	68.8	74.7

**Table 91 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.0	34.5	37.5	40.7	45.3	45.3	45.3	45.3	45.3	45.3	45.3
Alternative PC1LT3	34.0	34.5	37.5	40.7	45.3	46.7	48.1	49.6	51.1	52.7	54.3
Alternative PC2LT4	34.0	34.5	37.5	40.7	45.3	47.2	49.1	51.2	53.3	55.5	57.8
Alternative PC3LT5	34.0	34.5	37.5	40.7	45.3	47.7	50.2	52.8	55.6	58.5	61.6
Alternative PC6LT8	34.0	34.5	37.5	40.7	45.3	49.2	53.5	58.1	63.2	68.7	74.7

**Table 92 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.0	34.5	37.5	40.8	45.3	45.3	45.3	45.3	45.3	45.3	45.3
Alternative PC1LT3	34.0	34.5	37.5	40.8	45.3	46.7	48.2	49.6	51.2	52.8	54.4
Alternative PC2LT4	34.0	34.5	37.5	40.8	45.3	47.2	49.2	51.2	53.3	55.6	57.9
Alternative PC3LT5	34.0	34.5	37.5	40.8	45.3	47.7	50.2	52.8	55.6	58.6	61.6
Alternative PC6LT8	34.0	34.5	37.5	40.8	45.3	49.2	53.5	58.2	63.2	68.7	74.7

**Table 93 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (JLR)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.7	33.2	36.0	39.2	43.5	43.5	43.5	43.5	43.5	43.5	43.5
Alternative PC1LT3	32.7	33.2	36.0	39.2	43.5	44.9	46.2	47.7	49.2	50.7	52.2
Alternative PC2LT4	32.7	33.2	36.0	39.2	43.5	45.3	47.2	49.2	51.2	53.4	55.6
Alternative PC3LT5	32.7	33.2	36.0	39.2	43.5	45.8	48.2	50.8	53.4	56.2	59.2
Alternative PC6LT8	32.7	33.2	36.0	39.2	43.5	47.3	51.4	55.9	60.7	66.0	71.8

**Table 94 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Karma)**

Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Karma)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC1LT3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC2LT4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC3LT5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC6LT8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



**Table 95 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Lucid)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC1LT3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC2LT4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC3LT5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC6LT8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 96 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mazda)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.0	36.6	39.8	43.2	48.0	48.0	48.0	48.0	48.0	48.0	48.0
Alternative PC1LT3	36.0	36.6	39.8	43.2	48.0	49.5	51.0	52.6	54.2	55.9	57.7
Alternative PC2LT4	36.0	36.6	39.8	43.2	48.0	50.0	52.1	54.3	56.5	58.9	61.4
Alternative PC3LT5	36.0	36.6	39.8	43.2	48.0	50.6	53.2	56.0	59.0	62.1	65.3
Alternative PC6LT8	36.0	36.6	39.8	43.2	48.0	52.2	56.7	61.7	67.0	72.9	79.2

**Table 97 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.9	33.4	36.3	39.5	43.9	43.9	43.9	43.9	43.9	43.9	43.9
Alternative PC1LT3	32.9	33.4	36.3	39.5	43.9	45.2	46.6	48.1	49.5	51.1	52.7
Alternative PC2LT4	32.9	33.4	36.3	39.5	43.9	45.7	47.6	49.6	51.6	53.8	56.0
Alternative PC3LT5	32.9	33.4	36.3	39.5	43.9	46.2	48.6	51.2	53.9	56.7	59.7
Alternative PC6LT8	32.9	33.4	36.3	39.5	43.9	47.7	51.8	56.3	61.2	66.6	72.3

**Table 98 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.0	37.6	40.8	44.4	49.3	49.3	49.3	49.3	49.3	49.3	49.3
Alternative PC1LT3	37.0	37.6	40.8	44.4	49.3	50.8	52.4	54.0	55.7	57.4	59.2
Alternative PC2LT4	37.0	37.6	40.8	44.4	49.3	51.4	53.5	55.7	58.1	60.5	63.0
Alternative PC3LT5	37.0	37.6	40.8	44.4	49.3	51.9	54.6	57.5	60.5	63.7	67.1
Alternative PC6LT8	37.0	37.6	40.8	44.4	49.3	53.6	58.3	63.3	68.8	74.8	81.3

**Table 99 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Nissan)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.9	33.4	36.3	39.5	43.9	43.9	43.9	43.9	43.9	43.9	43.9
Alternative PC1LT3	32.9	33.4	36.3	39.5	43.9	45.2	46.6	48.1	49.6	51.1	52.7
Alternative PC2LT4	32.9	33.4	36.3	39.5	43.9	45.7	47.6	49.6	51.7	53.8	56.1
Alternative PC3LT5	32.9	33.4	36.3	39.5	43.9	46.2	48.6	51.2	53.9	56.7	59.7
Alternative PC6LT8	32.9	33.4	36.3	39.5	43.9	47.7	51.8	56.4	61.3	66.6	72.4

**Table 100 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Stellantis)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	30.7	31.2	33.8	36.8	40.9	40.9	40.9	40.9	40.9	40.9	40.9
Alternative PC1LT3	30.7	31.2	33.8	36.8	40.9	42.1	43.4	44.8	46.2	47.6	49.1
Alternative PC2LT4	30.7	31.2	33.8	36.8	40.9	42.6	44.4	46.2	48.1	50.1	52.2
Alternative PC3LT5	30.7	31.2	33.8	36.8	40.9	43.0	45.3	47.7	50.2	52.8	55.6
Alternative PC6LT8	30.7	31.2	33.8	36.8	40.9	44.4	48.3	52.5	57.1	62.0	67.4

**Table 101 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Subaru)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.5	37.0	40.2	43.7	48.6	48.6	48.6	48.6	48.6	48.6	48.6
Alternative PC1LT3	36.5	37.0	40.2	43.7	48.6	50.1	51.7	53.3	54.9	56.6	58.4
Alternative PC2LT4	36.5	37.0	40.2	43.7	48.6	50.6	52.7	54.9	57.2	59.6	62.1
Alternative PC3LT5	36.5	37.0	40.2	43.7	48.6	51.2	53.9	56.7	59.7	62.8	66.1
Alternative PC6LT8	36.5	37.0	40.2	43.7	48.6	52.8	57.4	62.4	67.8	73.8	80.2

**Table 102 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Tesla)**

Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Tesla)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	33.4	33.9	36.9	40.1	44.5	44.5	44.5	44.5	44.5	44.5	44.5
Alternative PC1LT3	33.4	33.9	36.9	40.1	44.5	45.9	47.3	48.8	50.3	51.8	53.4
Alternative PC2LT4	33.4	33.9	36.9	40.1	44.5	46.4	48.3	50.3	52.4	54.6	56.9
Alternative PC3LT5	33.4	33.9	36.9	40.1	44.5	46.8	49.3	51.9	54.6	57.5	60.5
Alternative PC6LT8	33.4	33.9	36.9	40.1	44.5	48.4	52.6	57.1	62.1	67.5	73.4



**Table 103 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Toyota)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	33.0	33.5	36.3	39.4	43.8	43.8	43.8	43.8	43.8	43.8	43.8
Alternative PC1LT3	33.0	33.5	36.3	39.4	43.8	45.1	46.5	48.0	49.5	51.0	52.6
Alternative PC2LT4	33.0	33.5	36.3	39.4	43.8	45.6	47.5	49.5	51.6	53.7	55.9
Alternative PC3LT5	33.0	33.5	36.3	39.4	43.8	46.1	48.5	51.1	53.8	56.6	59.6
Alternative PC6LT8	33.0	33.5	36.3	39.4	43.8	47.6	51.7	56.2	61.1	66.4	72.2

**Table 104 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Volvo)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	33.4	33.9	36.8	40.0	44.5	44.5	44.5	44.5	44.5	44.5	44.5
Alternative PC1LT3	33.4	33.9	36.8	40.0	44.5	45.9	47.3	48.7	50.2	51.8	53.4
Alternative PC2LT4	33.4	33.9	36.8	40.0	44.5	46.3	48.3	50.3	52.4	54.6	56.8
Alternative PC3LT5	33.4	33.9	36.8	40.0	44.5	46.8	49.3	51.9	54.6	57.5	60.5
Alternative PC6LT8	33.4	33.9	36.8	40.0	44.5	48.4	52.6	57.1	62.1	67.5	73.4

**Table 105 - Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (VWA)**

<b>Estimated Required Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.0	34.5	37.5	40.8	45.3	45.3	45.3	45.3	45.3	45.3	45.3
Alternative PC1LT3	34.0	34.5	37.5	40.8	45.3	46.7	48.2	49.7	51.2	52.8	54.4
Alternative PC2LT4	34.0	34.5	37.5	40.8	45.3	47.2	49.2	51.2	53.4	55.6	57.9
Alternative PC3LT5	34.0	34.5	37.5	40.8	45.3	47.7	50.2	52.9	55.7	58.6	61.7
Alternative PC6LT8	34.0	34.5	37.5	40.8	45.3	49.3	53.6	58.2	63.3	68.8	74.8

**Estimated Achieved CAFE Levels**

**Table 106 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.1	35.5	38.4	40.9	43.8	45.2	46.0	47.2	48.4	49.8	50.8
Alternative PC1LT3	34.1	35.5	38.4	40.9	43.8	45.8	47.1	48.7	50.2	52.1	53.4
Alternative PC2LT4	34.1	35.5	38.4	40.9	43.8	45.9	47.3	49.1	50.7	52.8	54.4
Alternative PC3LT5	34.1	35.5	38.4	40.9	43.8	45.9	47.6	49.5	51.4	53.6	55.5
Alternative PC6LT8	34.1	35.5	38.4	40.9	43.8	46.0	47.9	50.3	52.6	55.3	58.3

**Table 107 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	43.7	46.6	51.3	54.3	59.5	60.8	62.3	63.8	65.7	67.5	69.0
Alternative PC1LT3	43.7	46.6	51.3	54.3	59.5	61.1	62.7	64.7	66.6	68.6	70.2
Alternative PC2LT4	43.7	46.6	51.3	54.3	59.5	61.3	63.2	65.4	67.5	69.6	71.4
Alternative PC3LT5	43.7	46.6	51.3	54.3	59.5	61.4	63.6	66.0	68.6	71.2	73.3
Alternative PC6LT8	43.7	46.6	51.3	54.3	59.5	61.4	65.2	68.8	72.6	76.8	81.7

**Table 108 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	30.1	31.3	34.0	36.4	38.9	40.4	41.0	42.1	43.1	44.3	45.2
Alternative PC1LT3	30.1	31.3	34.0	36.4	38.9	41.0	42.2	43.8	45.0	46.8	48.0
Alternative PC2LT4	30.1	31.3	34.0	36.4	38.9	41.1	42.4	44.1	45.5	47.4	48.9
Alternative PC3LT5	30.1	31.3	34.0	36.4	38.9	41.1	42.6	44.4	46.1	48.1	49.8
Alternative PC6LT8	30.1	31.3	34.0	36.4	38.9	41.1	42.7	44.8	46.7	48.9	51.3

**Table 109 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (BMW)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.9	34.8	38.0	41.5	46.5	46.4	48.4	50.4	52.7	54.9	56.8
Alternative PC1LT3	32.9	34.8	38.0	41.5	46.5	46.4	48.4	50.7	53.1	55.3	58.2
Alternative PC2LT4	32.9	34.8	38.0	41.5	46.5	46.4	48.4	50.7	53.1	55.3	58.6
Alternative PC3LT5	32.9	34.8	38.0	41.5	46.5	46.4	48.5	50.8	53.1	55.3	58.7
Alternative PC6LT8	32.9	34.8	38.0	41.5	46.5	46.4	48.8	51.3	53.9	56.2	60.5

**Table 110 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Ford)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	29.0	30.1	33.5	34.3	36.4	39.1	39.2	40.0	40.0	40.6	41.2
Alternative PC1LT3	29.0	30.1	33.5	34.3	36.4	40.8	42.5	44.6	44.6	45.4	46.1
Alternative PC2LT4	29.0	30.1	33.5	34.3	36.4	41.1	43.0	45.1	45.2	45.9	46.7
Alternative PC3LT5	29.0	30.1	33.5	34.3	36.4	41.1	43.0	45.1	45.2	45.9	46.7
Alternative PC6LT8	29.0	30.1	33.5	34.3	36.4	41.2	43.0	45.2	45.2	46.0	46.8

**Table 111 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (GM)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	29.1	29.0	33.7	37.1	38.3	39.5	39.5	39.5	39.6	40.2	40.3
Alternative PC1LT3	29.1	29.0	33.7	37.1	38.3	39.8	40.0	40.3	40.6	43.2	43.8
Alternative PC2LT4	29.1	29.0	33.7	37.1	38.3	39.8	40.0	40.4	40.7	43.3	44.0
Alternative PC3LT5	29.1	29.0	33.7	37.1	38.3	39.8	40.0	40.4	40.7	43.4	44.2
Alternative PC6LT8	29.1	29.0	33.7	37.1	38.3	39.8	40.0	40.4	40.7	43.4	44.2



**Table 112 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Honda)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.8	40.2	40.2	41.7	45.7	47.5	49.6	51.2	53.3	55.3	57.1
Alternative PC1LT3	37.8	40.2	40.2	41.7	45.7	48.9	51.0	52.7	54.8	56.8	58.6
Alternative PC2LT4	37.8	40.2	40.2	41.7	45.7	49.0	51.3	53.3	56.1	58.2	60.6
Alternative PC3LT5	37.8	40.2	40.2	41.7	45.7	49.5	52.5	54.7	58.3	60.4	63.1
Alternative PC6LT8	37.8	40.2	40.2	41.7	45.7	49.5	54.7	58.3	62.7	65.1	68.1

**Table 113 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.1	40.8	41.0	44.9	49.0	50.1	50.7	52.0	53.6	55.3	56.5
Alternative PC1LT3	39.1	40.8	41.0	44.9	49.0	50.1	51.8	53.2	54.8	56.3	57.8
Alternative PC2LT4	39.1	40.8	41.0	44.9	49.0	50.1	53.6	54.9	56.6	58.5	60.4
Alternative PC3LT5	39.1	40.8	41.0	44.9	49.0	50.1	55.2	56.6	58.3	60.2	62.9
Alternative PC6LT8	39.1	40.8	41.0	44.9	49.0	50.1	55.3	56.7	58.3	60.8	66.7

**Table 114 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	38.5	40.5	44.7	44.7	49.3	49.2	49.2	49.9	51.3	52.6	53.6
Alternative PC1LT3	38.5	40.5	44.7	44.7	49.3	49.2	49.2	52.3	53.6	55.6	57.0
Alternative PC2LT4	38.5	40.5	44.7	44.7	49.3	49.2	49.2	52.7	54.1	57.4	59.5
Alternative PC3LT5	38.5	40.5	44.7	44.7	49.3	49.2	49.2	53.2	55.3	58.8	62.6
Alternative PC6LT8	38.5	40.5	44.7	44.7	49.3	49.2	49.2	54.4	56.7	61.7	67.7

**Table 115 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (JLR)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.4	44.9	46.2
Alternative PC1LT3	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.8	46.3	49.0
Alternative PC2LT4	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.8	46.4	49.0
Alternative PC3LT5	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.9	46.4	49.0
Alternative PC6LT8	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.9	46.4	49.0

**Table 116 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Karma)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC1LT3	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC2LT4	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC3LT5	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC6LT8	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6

**Table 117 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Lucid)**

Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Lucid)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC1LT3	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC2LT4	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC3LT5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC6LT8	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6

**Table 118 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mazda)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	35.1	41.2	42.4	42.5	46.8	48.8	50.5	52.6	54.8	56.8	58.5
Alternative PC1LT3	35.1	41.2	42.4	42.5	46.8	48.9	50.6	52.7	54.9	57.0	58.6
Alternative PC2LT4	35.1	41.2	42.4	42.5	46.8	49.2	50.8	53.2	55.6	57.7	59.3
Alternative PC3LT5	35.1	41.2	42.4	42.5	46.8	49.8	51.5	56.3	59.0	61.2	63.6
Alternative PC6LT8	35.1	41.2	42.4	42.5	46.8	51.9	53.6	64.3	68.1	70.5	72.3

**Table 119 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	31.6	36.7	37.3	37.8	43.4	44.8	46.9	48.8	51.0	53.2	55.1
Alternative PC1LT3	31.6	36.7	37.3	37.8	43.4	44.9	47.4	49.3	53.3	55.4	57.4
Alternative PC2LT4	31.6	36.7	37.3	37.8	43.4	44.9	47.4	49.4	53.6	55.8	57.8
Alternative PC3LT5	31.6	36.7	37.3	37.8	43.4	44.9	47.4	49.4	54.0	56.6	58.6
Alternative PC6LT8	31.6	36.7	37.3	37.8	43.4	44.9	47.4	49.4	54.0	56.6	58.8



**Table 120 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.3	53.3	57.7	58.4
Alternative PC1LT3	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.3	53.3	62.4	63.4
Alternative PC2LT4	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.2	53.3	63.6	64.4
Alternative PC3LT5	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.2	53.3	67.1	68.0
Alternative PC6LT8	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.2	53.3	69.7	70.8

**Table 121 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Nissan)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.8	39.6	41.4	43.8	46.6	46.7	48.6	49.9	52.2	53.4	54.3
Alternative PC1LT3	36.8	39.6	41.4	43.8	46.6	46.7	50.2	51.6	54.0	55.2	56.1
Alternative PC2LT4	36.8	39.6	41.4	43.8	46.6	46.7	50.8	52.5	56.4	57.7	59.0
Alternative PC3LT5	36.8	39.6	41.4	43.8	46.6	46.7	50.8	52.5	58.4	59.8	61.3
Alternative PC6LT8	36.8	39.6	41.4	43.8	46.6	46.7	51.3	53.1	59.5	62.1	66.1

**Table 122 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Stellantis)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	27.3	28.5	31.4	37.0	37.5	39.2	39.3	40.9	42.1	43.1	43.8
Alternative PC1LT3	27.3	28.5	31.4	37.0	37.5	40.1	40.2	42.6	44.1	45.1	46.9
Alternative PC2LT4	27.3	28.5	31.4	37.0	37.5	40.1	40.2	42.8	44.4	45.4	47.3
Alternative PC3LT5	27.3	28.5	31.4	37.0	37.5	40.1	40.2	42.8	44.4	45.6	47.5
Alternative PC6LT8	27.3	28.5	31.4	37.0	37.5	40.1	40.2	42.8	44.3	45.6	47.7

**Table 123 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Subaru)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.7	40.3	42.2	44.1	50.0	52.3	54.3	56.6	59.5	62.0	64.2
Alternative PC1LT3	36.7	40.3	42.2	44.1	50.0	52.3	54.3	56.6	59.5	62.0	64.2
Alternative PC2LT4	36.7	40.3	42.2	44.1	50.0	52.3	54.3	56.6	59.5	62.0	64.2
Alternative PC3LT5	36.7	40.3	42.2	44.1	50.0	52.3	54.4	56.6	59.5	62.1	64.3
Alternative PC6LT8	36.7	40.3	42.2	44.1	50.0	52.3	55.0	62.5	70.0	72.8	75.3

**Table 124 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Tesla)**

Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Tesla)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6
Alternative PC1LT3	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6
Alternative PC2LT4	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6
Alternative PC3LT5	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6
Alternative PC6LT8	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6

**Table 125 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Toyota)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.6	37.7	40.6	41.7	46.6	47.7	49.2	50.7	52.6	54.8	56.5
Alternative PC1LT3	36.6	37.7	40.6	41.7	46.6	47.7	49.2	50.7	52.6	54.8	56.5
Alternative PC2LT4	36.6	37.7	40.6	41.7	46.6	47.8	49.2	50.8	52.7	54.9	57.0
Alternative PC3LT5	36.6	37.7	40.6	41.7	46.6	47.8	49.9	51.9	54.2	56.9	59.6
Alternative PC6LT8	36.6	37.7	40.6	41.7	46.6	47.8	50.3	52.5	55.9	60.6	68.5

**Table 126 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Volvo)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.0	41.3	41.3	45.3	45.8	45.8	45.7	45.8	47.5	49.5	51.2
Alternative PC1LT3	39.0	41.3	41.3	45.3	45.8	46.3	46.2	46.7	50.8	52.9	54.6
Alternative PC2LT4	39.0	41.3	41.3	45.3	45.8	46.3	46.2	46.7	52.7	54.8	57.6
Alternative PC3LT5	39.0	41.3	41.3	45.3	45.8	46.3	46.2	46.7	53.1	55.2	59.7
Alternative PC6LT8	39.0	41.3	41.3	45.3	45.8	46.3	46.2	46.7	53.1	55.2	60.2

**Table 127 - Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (VWA)**

<b>Estimated Achieved Average Fuel Economy (mpg), Total Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	33.8	35.2	40.3	42.9	45.0	45.6	47.0	48.4	50.2	52.4	53.8
Alternative PC1LT3	33.8	35.2	40.3	42.9	45.0	45.8	47.6	49.2	52.4	54.7	56.1
Alternative PC2LT4	33.8	35.2	40.3	42.9	45.0	45.8	47.8	49.4	53.4	56.5	58.7
Alternative PC3LT5	33.8	35.2	40.3	42.9	45.0	45.8	48.0	49.6	53.7	57.3	60.0
Alternative PC6LT8	33.8	35.2	40.3	42.9	45.0	45.8	48.7	50.2	54.4	58.2	60.9



**Table 128 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (BMW)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	35.4	38.7	48.1	51.7	56.2	56.2	60.2	63.1	65.9	68.5	70.6
Alternative PC1LT3	35.4	38.7	48.1	51.7	56.2	56.2	60.2	63.2	65.9	68.5	70.6
Alternative PC2LT4	35.4	38.7	48.1	51.7	56.2	56.2	60.3	63.2	65.9	68.5	70.6
Alternative PC3LT5	35.4	38.7	48.1	51.7	56.2	56.2	60.4	63.4	66.1	68.7	70.8
Alternative PC6LT8	35.4	38.7	48.1	51.7	56.2	56.2	61.6	65.0	68.9	71.8	75.2

**Table 129 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Ford)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.7	40.8	56.2	57.9	57.9	58.4	58.4	58.4	58.6	59.5	60.4
Alternative PC1LT3	40.7	40.8	56.2	57.9	57.9	59.2	59.2	59.2	59.5	60.8	62.0
Alternative PC2LT4	40.7	40.8	56.2	57.9	57.9	65.5	65.5	65.5	66.0	66.9	68.2
Alternative PC3LT5	40.7	40.8	56.2	57.9	57.9	65.5	65.5	65.5	65.9	66.9	69.0
Alternative PC6LT8	40.7	40.8	56.2	57.9	57.9	66.6	66.6	66.6	67.1	68.1	70.3

**Table 130 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (GM)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39.1	39.3	49.2	52.0	56.8	56.9	56.9	56.9	57.1	57.1	57.2
Alternative PC1LT3	39.1	39.3	49.2	52.0	56.8	57.0	57.0	60.3	60.6	62.4	62.5
Alternative PC2LT4	39.1	39.3	49.2	52.0	56.8	57.0	57.0	61.5	62.3	63.6	64.3
Alternative PC3LT5	39.1	39.3	49.2	52.0	56.8	57.0	57.0	61.6	62.5	65.6	66.7
Alternative PC6LT8	39.1	39.3	49.2	52.0	56.8	57.0	57.0	61.6	62.5	65.6	66.7

**Table 131 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Honda)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	43.4	47.0	47.2	48.8	53.6	56.0	59.0	61.0	63.5	65.8	68.3
Alternative PC1LT3	43.4	47.0	47.2	48.8	53.6	57.1	60.1	62.2	64.6	67.0	69.5
Alternative PC2LT4	43.4	47.0	47.2	48.8	53.6	57.1	60.1	62.2	64.6	67.0	69.5
Alternative PC3LT5	43.4	47.0	47.2	48.8	53.6	57.4	61.0	63.1	65.6	68.0	70.6
Alternative PC6LT8	43.4	47.0	47.2	48.8	53.6	57.4	67.4	74.1	76.8	79.4	82.9

**Table 132 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	42.9	46.0	46.4	50.2	55.8	57.5	58.1	59.6	61.4	63.3	64.7
Alternative PC1LT3	42.9	46.0	46.4	50.2	55.8	57.6	58.8	60.3	62.1	63.8	65.1
Alternative PC2LT4	42.9	46.0	46.4	50.2	55.8	57.6	59.9	61.4	63.2	65.5	66.9
Alternative PC3LT5	42.9	46.0	46.4	50.2	55.8	57.6	62.1	63.7	65.5	67.6	69.8
Alternative PC6LT8	42.9	46.0	46.4	50.2	55.8	57.6	62.3	64.0	65.8	69.0	78.7

**Table 133 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.3	46.5	55.7	55.7	57.9	57.9	57.9	58.4	59.9	61.4	62.5
Alternative PC1LT3	44.3	46.5	55.7	55.7	57.9	58.0	58.0	59.5	61.1	63.0	64.1
Alternative PC2LT4	44.3	46.5	55.7	55.7	57.9	58.0	58.0	60.8	62.4	64.3	65.5
Alternative PC3LT5	44.3	46.5	55.7	55.7	57.9	58.0	58.0	62.2	65.7	68.0	69.8
Alternative PC6LT8	44.3	46.5	55.7	55.7	57.9	58.0	58.0	65.5	69.7	76.1	83.6

**Table 134 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (JLR)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	29.4	54.5	54.5	54.5	61.7	61.8	61.8	63.0	65.2	67.3	69.1
Alternative PC1LT3	29.4	54.5	54.5	54.5	61.7	61.8	61.9	63.2	65.4	67.4	69.1
Alternative PC2LT4	29.4	54.5	54.5	54.5	61.7	61.8	61.9	63.2	65.4	67.4	69.1
Alternative PC3LT5	29.4	54.5	54.5	54.5	61.7	61.8	61.9	63.2	67.5	69.6	71.7
Alternative PC6LT8	29.4	54.5	54.5	54.5	61.7	61.8	61.9	63.1	67.6	69.6	71.8

**Table 135 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Karma)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC1LT3	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC2LT4	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC3LT5	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Alternative PC6LT8	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6



**Table 136 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Lucid)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC1LT3	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC2LT4	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC3LT5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6
Alternative PC6LT8	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6

**Table 137 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mazda)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	40.1	40.8	49.6	51.5	56.8	59.9	61.9	64.1	66.7	69.2	71.3
Alternative PC1LT3	40.1	40.8	49.6	51.5	56.8	60.4	62.4	64.6	67.2	69.7	71.8
Alternative PC2LT4	40.1	40.8	49.6	51.5	56.8	60.4	62.4	64.6	67.2	69.7	71.8
Alternative PC3LT5	40.1	40.8	49.6	51.5	56.8	60.4	62.9	67.5	70.2	72.8	75.3
Alternative PC6LT8	40.1	40.8	49.6	51.5	56.8	60.4	62.9	78.9	81.8	84.6	87.0

**Table 138 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.1	41.6	43.7	45.6	54.0	55.9	55.9	58.6	60.9	63.3	65.9
Alternative PC1LT3	34.1	41.6	43.7	45.6	54.0	56.2	56.2	58.9	61.3	63.6	66.3
Alternative PC2LT4	34.1	41.6	43.7	45.6	54.0	56.2	56.2	59.3	61.6	64.0	66.6
Alternative PC3LT5	34.1	41.6	43.7	45.6	54.0	56.2	56.2	59.3	62.9	66.4	69.1
Alternative PC6LT8	34.1	41.6	43.7	45.6	54.0	56.2	56.2	59.3	63.0	66.5	69.6

**Table 139 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	41.4	41.7	50.4	54.1	62.0	62.0	62.0	62.0	62.0	67.0	67.8
Alternative PC1LT3	41.4	41.7	50.4	54.1	62.0	62.0	62.0	62.0	62.0	69.5	70.7
Alternative PC2LT4	41.4	41.7	50.4	54.1	62.0	62.0	62.0	62.0	62.0	69.5	70.5
Alternative PC3LT5	41.4	41.7	50.4	54.1	62.0	62.0	62.0	62.0	62.0	73.4	74.5
Alternative PC6LT8	41.4	41.7	50.4	54.1	62.0	62.0	62.0	62.0	62.0	78.6	80.1

**Table 140 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Nissan)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	42.4	46.5	50.0	54.1	58.6	58.7	58.9	60.1	62.0	63.4	64.4
Alternative PC1LT3	42.4	46.5	50.0	54.1	58.6	58.7	58.9	60.1	62.0	63.4	64.4
Alternative PC2LT4	42.4	46.5	50.0	54.1	58.6	58.8	59.6	60.8	63.1	64.5	66.3
Alternative PC3LT5	42.4	46.5	50.0	54.1	58.6	58.8	59.6	60.8	65.1	66.9	68.9
Alternative PC6LT8	42.4	46.5	50.0	54.1	58.6	58.8	61.1	62.4	67.7	72.7	81.8

**Table 141 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Stellantis)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	28.2	30.5	41.2	51.1	52.4	52.4	53.1	54.8	56.2	57.5	58.5
Alternative PC1LT3	28.2	30.5	41.2	51.1	52.4	52.4	53.1	55.9	57.4	58.7	59.6
Alternative PC2LT4	28.2	30.5	41.2	51.1	52.4	52.4	53.1	56.1	57.9	60.2	61.6
Alternative PC3LT5	28.2	30.5	41.2	51.1	52.4	52.4	53.1	56.1	57.9	62.6	65.1
Alternative PC6LT8	28.2	30.5	41.2	51.1	52.4	52.4	53.1	56.1	57.9	62.6	66.5

**Table 142 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Subaru)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.0	46.1	46.1	52.9	58.6	60.7	62.9	66.0	69.0	71.9	75.2
Alternative PC1LT3	37.0	46.1	46.1	52.9	58.6	60.7	63.0	66.0	69.0	71.9	75.2
Alternative PC2LT4	37.0	46.1	46.1	52.9	58.6	60.7	63.0	66.0	69.0	71.9	75.2
Alternative PC3LT5	37.0	46.1	46.1	52.9	58.6	60.7	63.6	66.7	69.8	72.7	75.9
Alternative PC6LT8	37.0	46.1	46.1	52.9	58.6	60.7	67.6	74.5	80.2	83.3	88.3

**Table 143 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Tesla)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0
Alternative PC1LT3	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0
Alternative PC2LT4	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0
Alternative PC3LT5	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0
Alternative PC6LT8	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0	161.0



**Table 144 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Toyota)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	44.0	46.3	47.7	49.3	56.2	58.4	60.4	62.4	64.7	67.0	68.7
Alternative PC1LT3	44.0	46.3	47.7	49.3	56.2	58.4	60.4	62.4	64.7	67.0	68.7
Alternative PC2LT4	44.0	46.3	47.7	49.3	56.2	58.4	60.4	62.4	64.7	67.0	68.7
Alternative PC3LT5	44.0	46.3	47.7	49.3	56.2	58.4	60.4	62.5	65.1	67.4	69.2
Alternative PC6LT8	44.0	46.3	47.7	49.3	56.2	58.5	61.2	64.1	71.6	76.7	81.1

**Table 145 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Volvo)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	53.6	55.4	56.0	59.6	61.8	61.8	61.8	62.5	64.4	66.7	68.6
Alternative PC1LT3	53.6	55.4	56.0	59.6	61.8	61.8	61.8	62.5	64.8	67.1	69.3
Alternative PC2LT4	53.6	55.4	56.0	59.6	61.8	61.8	61.8	62.5	65.9	68.2	71.6
Alternative PC3LT5	53.6	55.4	56.0	59.6	61.8	61.8	61.8	62.5	66.0	68.3	72.6
Alternative PC6LT8	53.6	55.4	56.0	59.6	61.8	61.8	61.8	62.5	66.0	68.5	75.7

**Table 146 - Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (VWA)**

<b>Estimated Achieved Average Fuel Economy (mpg), Passenger Car Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	37.8	38.8	44.3	47.4	53.6	55.5	60.5	62.4	64.5	67.0	68.6
Alternative PC1LT3	37.8	38.8	44.3	47.4	53.6	55.5	61.5	63.4	65.6	67.8	69.5
Alternative PC2LT4	37.8	38.8	44.3	47.4	53.6	55.5	62.5	64.4	66.6	68.8	70.5
Alternative PC3LT5	37.8	38.8	44.3	47.4	53.6	55.5	63.5	65.4	67.7	71.1	72.8
Alternative PC6LT8	37.8	38.8	44.3	47.4	53.6	55.5	66.8	68.8	71.1	75.1	76.9

**Table 147 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (BMW)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	30.3	31.3	31.3	34.9	40.1	40.1	41.2	42.7	44.7	46.5	48.1
Alternative PC1LT3	30.3	31.3	31.3	34.9	40.1	40.1	41.2	43.2	45.2	47.0	50.2
Alternative PC2LT4	30.3	31.3	31.3	34.9	40.1	40.1	41.2	43.2	45.2	47.0	50.7
Alternative PC3LT5	30.3	31.3	31.3	34.9	40.1	40.1	41.2	43.2	45.2	47.0	50.7
Alternative PC6LT8	30.3	31.3	31.3	34.9	40.1	40.1	41.2	43.2	45.2	47.0	51.2

**Table 148 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Ford)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	27.9	29.1	32.1	32.9	35.1	37.8	37.9	38.7	38.7	39.4	40.0
Alternative PC1LT3	27.9	29.1	32.1	32.9	35.1	39.5	41.3	43.5	43.5	44.2	44.9
Alternative PC2LT4	27.9	29.1	32.1	32.9	35.1	39.7	41.6	43.8	43.8	44.5	45.2
Alternative PC3LT5	27.9	29.1	32.1	32.9	35.1	39.7	41.6	43.8	43.8	44.5	45.2
Alternative PC6LT8	27.9	29.1	32.1	32.9	35.1	39.7	41.5	43.8	43.8	44.5	45.2

**Table 149 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (GM)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	26.8	26.9	30.9	34.5	35.4	36.7	36.7	36.7	36.7	37.4	37.5
Alternative PC1LT3	26.8	26.9	30.9	34.5	35.4	37.0	37.3	37.3	37.5	40.1	40.7
Alternative PC2LT4	26.8	26.9	30.9	34.5	35.4	37.0	37.3	37.3	37.5	40.0	40.7
Alternative PC3LT5	26.8	26.9	30.9	34.5	35.4	37.0	37.3	37.3	37.5	40.0	40.7
Alternative PC6LT8	26.8	26.9	30.9	34.5	35.4	37.0	37.3	37.3	37.5	40.0	40.7

**Table 150 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Honda)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.8	34.8	34.9	36.7	40.2	41.8	43.4	44.9	46.6	48.3	49.7
Alternative PC1LT3	32.8	34.8	34.9	36.7	40.2	43.4	44.9	46.4	48.2	50.0	51.3
Alternative PC2LT4	32.8	34.8	34.9	36.7	40.2	43.6	45.4	47.5	50.2	52.0	54.3
Alternative PC3LT5	32.8	34.8	34.9	36.7	40.2	44.1	46.7	48.9	53.0	55.0	57.5
Alternative PC6LT8	32.8	34.8	34.9	36.7	40.2	44.1	46.9	49.2	54.0	56.0	58.6

**Table 151 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.3	35.1	35.4	39.6	42.6	43.3	44.1	45.2	46.6	47.9	49.0
Alternative PC1LT3	34.3	35.1	35.4	39.6	42.6	43.4	45.5	46.7	48.0	49.3	50.9
Alternative PC2LT4	34.3	35.1	35.4	39.6	42.6	43.4	47.7	48.9	50.3	51.8	54.0
Alternative PC3LT5	34.3	35.1	35.4	39.6	42.6	43.4	48.8	50.0	51.5	53.2	56.2
Alternative PC6LT8	34.3	35.1	35.4	39.6	42.6	43.4	48.8	50.0	51.5	53.2	56.2



**Table 152 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.6	34.9	36.3	36.6	42.5	42.5	42.5	43.4	44.6	45.6	46.5
Alternative PC1LT3	32.6	34.9	36.3	36.6	42.5	42.5	42.5	46.4	47.6	49.5	51.0
Alternative PC2LT4	32.6	34.9	36.3	36.6	42.5	42.5	42.5	46.4	47.5	51.5	54.2
Alternative PC3LT5	32.6	34.9	36.3	36.6	42.5	42.5	42.5	46.4	47.5	51.5	56.3
Alternative PC6LT8	32.6	34.9	36.3	36.6	42.5	42.5	42.5	46.3	47.5	51.5	56.3

**Table 153 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (JLR)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	27.3	33.9	36.4	36.5	38.6	39.5	39.5	40.4	42.1	44.6	45.8
Alternative PC1LT3	27.3	33.9	36.4	36.5	38.6	39.5	39.5	40.4	42.5	46.0	48.7
Alternative PC2LT4	27.3	33.9	36.4	36.5	38.6	39.5	39.5	40.4	42.5	46.0	48.7
Alternative PC3LT5	27.3	33.9	36.4	36.5	38.6	39.5	39.5	40.4	42.5	46.0	48.7
Alternative PC6LT8	27.3	33.9	36.4	36.5	38.6	39.5	39.5	40.4	42.5	46.0	48.7

**Table 154 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Karma)**

Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Karma)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC1LT3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC2LT4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC3LT5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC6LT8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 155 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Lucid)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC1LT3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC2LT4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC3LT5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternative PC6LT8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 156 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mazda)**

Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mazda)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.3	41.3	41.4	41.4	45.6	47.6	49.2	51.4	53.5	55.5	57.1
Alternative PC1LT3	34.3	41.3	41.4	41.4	45.6	47.7	49.3	51.4	53.5	55.5	57.1
Alternative PC2LT4	34.3	41.3	41.4	41.4	45.6	48.0	49.6	52.0	54.3	56.3	57.9
Alternative PC3LT5	34.3	41.3	41.4	41.4	45.6	48.6	50.2	55.0	57.8	59.9	62.2
Alternative PC6LT8	34.3	41.3	41.4	41.4	45.6	50.9	52.6	62.8	66.6	68.9	70.6

**Table 157 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	29.4	33.1	33.2	33.2	37.6	38.9	41.9	43.4	45.4	47.4	48.9
Alternative PC1LT3	29.4	33.1	33.2	33.2	37.6	38.9	42.4	44.0	48.5	50.4	52.0
Alternative PC2LT4	29.4	33.1	33.2	33.2	37.6	38.9	42.4	44.0	48.9	50.8	52.4
Alternative PC3LT5	29.4	33.1	33.2	33.2	37.6	38.9	42.4	44.0	48.9	50.8	52.4
Alternative PC6LT8	29.4	33.1	33.2	33.2	37.6	38.9	42.4	44.0	48.9	50.8	52.5

**Table 158 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	35.6	35.9	40.5	43.1	46.9	46.9	46.9	46.9	46.9	50.8	51.4
Alternative PC1LT3	35.6	35.9	40.5	43.1	46.9	46.9	46.9	46.9	46.9	56.8	57.5
Alternative PC2LT4	35.6	35.9	40.5	43.1	46.9	46.9	46.9	46.9	46.9	58.7	59.3
Alternative PC3LT5	35.6	35.9	40.5	43.1	46.9	46.9	46.9	46.9	46.9	61.9	62.6
Alternative PC6LT8	35.6	35.9	40.5	43.1	46.9	46.9	46.9	46.9	46.9	62.8	63.6

**Table 159 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Nissan)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	30.9	33.3	34.2	36.0	38.1	38.2	40.9	42.3	44.6	45.6	46.3
Alternative PC1LT3	30.9	33.3	34.2	36.0	38.1	38.2	43.4	44.8	47.4	48.4	49.2
Alternative PC2LT4	30.9	33.3	34.2	36.0	38.1	38.2	43.9	46.0	50.7	51.8	52.6
Alternative PC3LT5	30.9	33.3	34.2	36.0	38.1	38.2	43.9	46.0	52.6	53.7	54.6
Alternative PC6LT8	30.9	33.3	34.2	36.0	38.1	38.2	43.9	46.0	52.7	53.7	54.6



**Table 160 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Stellantis)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	27.2	28.3	30.4	35.8	36.2	38.0	38.0	39.7	40.8	41.8	42.5
Alternative PC1LT3	27.2	28.3	30.4	35.8	36.2	39.0	39.1	41.4	42.9	43.9	45.6
Alternative PC2LT4	27.2	28.3	30.4	35.8	36.2	39.0	39.1	41.7	43.1	44.1	45.9
Alternative PC3LT5	27.2	28.3	30.4	35.8	36.2	39.0	39.1	41.7	43.1	44.1	46.0
Alternative PC6LT8	27.2	28.3	30.4	35.8	36.2	39.0	39.1	41.7	43.1	44.1	46.0

**Table 161 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Subaru)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	36.6	39.4	41.6	43.0	48.9	51.3	53.2	55.4	58.3	60.8	62.9
Alternative PC1LT3	36.6	39.4	41.6	43.0	48.9	51.3	53.3	55.4	58.3	60.8	62.9
Alternative PC2LT4	36.6	39.4	41.6	43.0	48.9	51.3	53.3	55.4	58.3	60.8	62.9
Alternative PC3LT5	36.6	39.4	41.6	43.0	48.9	51.3	53.3	55.4	58.3	60.8	62.9
Alternative PC6LT8	36.6	39.4	41.6	43.0	48.9	51.3	53.5	61.1	68.8	71.5	73.7

**Table 162 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Tesla)**

Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Tesla)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4
Alternative PC1LT3	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4
Alternative PC2LT4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4
Alternative PC3LT5	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4
Alternative PC6LT8	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4	154.4

**Table 163 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Toyota)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	32.7	33.6	37.2	38.3	42.5	43.4	44.7	46.1	47.8	49.8	51.5
Alternative PC1LT3	32.7	33.6	37.2	38.3	42.5	43.4	44.7	46.1	47.8	49.8	51.5
Alternative PC2LT4	32.7	33.6	37.2	38.3	42.5	43.4	44.7	46.2	47.9	50.0	52.1
Alternative PC3LT5	32.7	33.6	37.2	38.3	42.5	43.4	45.6	47.6	49.7	52.4	55.3
Alternative PC6LT8	32.7	33.6	37.2	38.3	42.5	43.5	45.9	47.9	50.1	54.3	63.0

**Table 164 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Volvo)**

<b>Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34.5	37.2	37.3	41.5	41.8	41.8	41.8	41.8	43.4	45.2	46.8
Alternative PC1LT3	34.5	37.2	37.3	41.5	41.8	42.4	42.4	42.8	47.2	49.1	50.6
Alternative PC2LT4	34.5	37.2	37.3	41.5	41.8	42.4	42.4	42.8	49.1	51.1	53.7
Alternative PC3LT5	34.5	37.2	37.3	41.5	41.8	42.4	42.4	42.8	49.6	51.5	56.0
Alternative PC6LT8	34.5	37.2	37.3	41.5	41.8	42.4	42.4	42.8	49.6	51.5	56.0

**Table 165 - Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (VWA)**

Estimated Achieved Average Fuel Economy (mpg), Light Truck Fleet for Manufacturer (VWA)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	31.5	33.1	38.2	40.7	41.4	41.6	42.0	43.3	44.9	46.9	48.1
Alternative PC1LT3	31.5	33.1	38.2	40.7	41.4	41.9	42.5	44.0	47.4	49.4	50.7
Alternative PC2LT4	31.5	33.1	38.2	40.7	41.4	41.9	42.5	44.0	48.3	51.5	53.7
Alternative PC3LT5	31.5	33.1	38.2	40.7	41.4	41.9	42.5	44.0	48.3	51.8	54.6
Alternative PC6LT8	31.5	33.1	38.2	40.7	41.4	41.9	42.5	44.0	48.3	51.8	54.6

## CAFE Costs per Vehicle

**Table 166 - MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Total Fleet by Alternative**

MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Total Fleet by Alternative			
	Avg Required (mpg)	Avg Achieved (mpg)	Avg Reg. Cost (\$)
No Action Alternative (Baseline)	46.7	50.8	2077
Alternative PC1LT3	54.3	53.4	2678
Alternative PC2LT4	57.8	54.4	3008
Alternative PC3LT5	61.5	55.5	3679
Alternative PC6LT8	74.5	58.3	5562

**Table 167 - MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Passenger Car Fleet by Alternative**

<b>MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Passenger Car Fleet by Alternative</b>			
	Avg Required (mpg)	Avg Achieved (mpg)	Avg Reg. Cost (\$)
No Action Alternative (Baseline)	58.8	69.0	1312
Alternative PC1LT3	62.4	70.2	1731
Alternative PC2LT4	66.4	71.4	1966
Alternative PC3LT5	70.6	73.3	2517
Alternative PC6LT8	85.2	81.7	4393

**Table 168 - MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Light Truck Fleet by Alternative**

<b>MY 2032 Required and Achieved CAFE Levels (mpg), and Per-Vehicle Regulatory Costs (\$) for Light Truck Fleet by Alternative</b>			
	Avg Required (mpg)	Avg Achieved (mpg)	Avg Reg. Cost (\$)
No Action Alternative (Baseline)	42.6	45.2	2438
Alternative PC1LT3	51.2	48.0	3125
Alternative PC2LT4	54.4	48.9	3502
Alternative PC3LT5	58.0	49.8	4232
Alternative PC6LT8	70.3	51.3	6118



# Various Impacts of Alternatives

**Table 169 - Impacts for No Action Alternative (Baseline), Average SCC**

<b>Impacts for No Action Alternative (Baseline), Average SCC</b>			
Category	Passenger Car	Light Truck	Combined Fleet
<b>Fuel Economy</b>			
Required Fuel Economy for MY 2032(mpg)	58.8	42.6	46.7
Achieved Fuel Economy for MY 2032 (mpg)	69.0	45.2	50.8
Achieved Fuel Economy for MY 2022 - for reference (mpg)	43.7	30.1	34.1
<b>Average MY 2032 Vehicle - Incremental to Alternative 0 (Baseline)</b>			
Per Vehicle Price Increase (dollars)	0	0	0
Lifetime Fuel Cost (per vehicle), 3% Discount Rate (dollars)	0	0	0
Lifetime Fuel Cost (per vehicle), 7% Discount Rate (dollars)	0	0	0
Payback Period Relative To MY 2022, 3% Discount Rate (years)	0.0	0.0	0.0
Payback Period Relative To MY 2022, 7% Discount Rate (years)	0.0	0.0	0.0
<b>Lifetime of Vehicles Through 2032 - Incremental to Alternative 0 (Baseline)</b>			
Total Lifetime Fuel Volume (billion gallons)	0	0	0
Total Lifetime CO2 Volume (million metric tons)	0	0	0
Fatalities (Including Rebound Miles)	0	0	0
Fatalities (Excluding Rebound Miles)	0	0	0
Total Technology Costs, 3% Discount Rate (\$b)	0.0	0.0	0.0
Total Technology Costs, 7% Discount Rate (\$b)	0.0	0.0	0.0
Total Net Societal Benefits, 3% Discount Rate (\$b)	0.0	0.0	0.0
Total Net Societal Benefits, 7% Discount Rate (\$b)	0.0	0.0	0.0

**Table 170 - Impacts for Alternative PC1LT3, Average SCC**

<b>Impacts for Alternative PC1LT3, Average SCC</b>			
Category	Passenger Car	Light Truck	Combined Fleet
<b>Fuel Economy</b>			
Required Fuel Economy for MY 2032(mpg)	62.4	51.2	54.3
Achieved Fuel Economy for MY 2032 (mpg)	70.2	48.0	53.4
Achieved Fuel Economy for MY 2022 - for reference (mpg)	43.7	30.1	34.1
<b>Average MY 2032 Vehicle - Incremental to Alternative 0 (Baseline)</b>			
Per Vehicle Price Increase (dollars)	419	687	601
Lifetime Fuel Cost (per vehicle), 3% Discount Rate (dollars)	-153	-1,083	-784
Lifetime Fuel Cost (per vehicle), 7% Discount Rate (dollars)	-119	-839	-608
Payback Period Relative To MY 2022, 3% Discount Rate (years)	1.0	1.0	1.0
Payback Period Relative To MY 2022, 7% Discount Rate (years)	1.0	0.0	0.3
<b>Lifetime of Vehicles Through 2032 - Incremental to Alternative 0 (Baseline)</b>			
Total Lifetime Fuel Volume (billion gallons)	-1	-20	-21
Total Lifetime CO2 Volume (million metric tons)	-14	-222	-236
Fatalities (Including Rebound Miles)	-4	255	251
Fatalities (Excluding Rebound Miles)	-16	69	52
Total Technology Costs, 3% Discount Rate (\$b)	8.3	21.6	29.9
Total Technology Costs, 7% Discount Rate (\$b)	6.0	15.5	21.5
Total Net Societal Benefits, 3% Discount Rate (\$b)	-4.7	17.4	12.7
Total Net Societal Benefits, 7% Discount Rate (\$b)	-4.1	10.4	6.3

**Table 171 - Impacts for Alternative PC2LT4, Average SCC**

<b>Impacts for Alternative PC2LT4, Average SCC</b>			
Category	Passenger Car	Light Truck	Combined Fleet
<b>Fuel Economy</b>			
Required Fuel Economy for MY 2032(mpg)	66.4	54.4	57.8
Achieved Fuel Economy for MY 2032 (mpg)	71.4	48.9	54.4
Achieved Fuel Economy for MY 2022 - for reference (mpg)	43.7	30.1	34.1
<b>Average MY 2032 Vehicle - Incremental to Alternative 0 (Baseline)</b>			
Per Vehicle Price Increase (dollars)	654	1,064	932
Lifetime Fuel Cost (per vehicle), 3% Discount Rate (dollars)	-302	-1,389	-1,043
Lifetime Fuel Cost (per vehicle), 7% Discount Rate (dollars)	-236	-1,076	-809
Payback Period Relative To MY 2022, 3% Discount Rate (years)	1.0	1.0	1.0
Payback Period Relative To MY 2022, 7% Discount Rate (years)	2.0	1.0	1.3
<b>Lifetime of Vehicles Through 2032 - Incremental to Alternative 0 (Baseline)</b>			
Total Lifetime Fuel Volume (billion gallons)	-2	-25	-27
Total Lifetime CO2 Volume (million metric tons)	-27	-273	-301
Fatalities (Including Rebound Miles)	17	280	298
Fatalities (Excluding Rebound Miles)	-9	58	49
Total Technology Costs, 3% Discount Rate (\$b)	10.9	26.9	37.8
Total Technology Costs, 7% Discount Rate (\$b)	7.8	19.2	27.1
Total Net Societal Benefits, 3% Discount Rate (\$b)	-5.1	21.9	16.8
Total Net Societal Benefits, 7% Discount Rate (\$b)	-4.5	12.9	8.4

**Table 172 - Impacts for Alternative PC3LT5, Average SCC**

<b>Impacts for Alternative PC3LT5, Average SCC</b>			
Category	Passenger Car	Light Truck	Combined Fleet
<b>Fuel Economy</b>			
Required Fuel Economy for MY 2032(mpg)	70.6	58.0	61.5
Achieved Fuel Economy for MY 2032 (mpg)	73.3	49.8	55.5
Achieved Fuel Economy for MY 2022 - for reference (mpg)	43.7	30.1	34.1
<b>Average MY 2032 Vehicle - Incremental to Alternative 0 (Baseline)</b>			
Per Vehicle Price Increase (dollars)	1,205	1,795	1,602
Lifetime Fuel Cost (per vehicle), 3% Discount Rate (dollars)	-529	-1,643	-1,296
Lifetime Fuel Cost (per vehicle), 7% Discount Rate (dollars)	-415	-1,274	-1,006
Payback Period Relative To MY 2022, 3% Discount Rate (years)	3.0	2.0	2.3
Payback Period Relative To MY 2022, 7% Discount Rate (years)	4.0	3.0	3.3
<b>Lifetime of Vehicles Through 2032 - Incremental to Alternative 0 (Baseline)</b>			
Total Lifetime Fuel Volume (billion gallons)	-3	-28	-31
Total Lifetime CO2 Volume (million metric tons)	-37	-308	-346
Fatalities (Including Rebound Miles)	141	339	480
Fatalities (Excluding Rebound Miles)	96	78	174
Total Technology Costs, 3% Discount Rate (\$b)	15.7	35.0	50.7
Total Technology Costs, 7% Discount Rate (\$b)	11.2	24.9	36.1
Total Net Societal Benefits, 3% Discount Rate (\$b)	-11.7	20.6	8.8
Total Net Societal Benefits, 7% Discount Rate (\$b)	-8.9	11.6	2.7

**Table 173 - Impacts for Alternative PC6LT8, Average SCC**

<b>Impacts for Alternative PC6LT8, Average SCC</b>			
Category	Passenger Car	Light Truck	Combined Fleet
<b>Fuel Economy</b>			
Required Fuel Economy for MY 2032(mpg)	85.2	70.3	74.5
Achieved Fuel Economy for MY 2032 (mpg)	81.7	51.3	58.3
Achieved Fuel Economy for MY 2022 - for reference (mpg)	43.7	30.1	34.1
<b>Average MY 2032 Vehicle - Incremental to Alternative 0 (Baseline)</b>			
Per Vehicle Price Increase (dollars)	3,080	3,680	3,485
Lifetime Fuel Cost (per vehicle), 3% Discount Rate (dollars)	-1,426	-2,263	-2,002
Lifetime Fuel Cost (per vehicle), 7% Discount Rate (dollars)	-1,120	-1,751	-1,555
Payback Period Relative To MY 2022, 3% Discount Rate (years)	7.0	5.0	5.6
Payback Period Relative To MY 2022, 7% Discount Rate (years)	97.0	95.0	95.6
<b>Lifetime of Vehicles Through 2032 - Incremental to Alternative 0 (Baseline)</b>			
Total Lifetime Fuel Volume (billion gallons)	-8	-35	-43
Total Lifetime CO2 Volume (million metric tons)	-90	-392	-482
Fatalities (Including Rebound Miles)	210	349	559
Fatalities (Excluding Rebound Miles)	103	52	155
Total Technology Costs, 3% Discount Rate (\$b)	23.9	44.9	68.8
Total Technology Costs, 7% Discount Rate (\$b)	16.9	31.7	48.5
Total Net Societal Benefits, 3% Discount Rate (\$b)	-10.9	26.5	15.6
Total Net Societal Benefits, 7% Discount Rate (\$b)	-9.7	14.2	4.5

## Required and Achieved CAFE Levels, Baseline vs Preferred Alternative

Table 174 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	BMW				Ford				GM			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	37.6	32.9	37.6	32.9	31.4	29.0	31.4	29.0	32.5	29.1	32.5	29.1
2023	37.9	34.8	37.9	34.8	31.8	30.1	31.8	30.1	32.9	29.0	32.9	29.0
2024	41.0	38.0	41.0	38.0	34.3	33.5	34.3	33.5	35.2	33.7	35.2	33.7
2025	44.4	41.5	44.4	41.5	37.2	34.3	37.2	34.3	38.2	37.1	38.2	37.1
2026	49.3	46.5	49.3	46.5	41.4	36.4	41.4	36.4	42.3	38.3	42.3	38.3
2027	49.2	46.4	50.8	46.4	41.4	39.1	42.9	41.1	42.2	39.5	43.8	39.8
2028	49.2	48.4	52.4	48.4	41.3	39.2	44.7	43.0	42.2	39.5	45.6	40.0
2029	49.1	50.4	54.1	50.7	41.3	40.0	46.5	45.1	42.2	39.5	47.2	40.4
2030	49.2	52.7	55.9	53.1	41.3	40.0	48.4	45.2	42.2	39.6	49.1	40.7
2031	49.2	54.9	57.8	55.3	41.4	40.6	50.3	45.9	42.3	40.2	51.0	43.3
2032	49.2	56.8	59.7	58.6	41.4	41.2	52.3	46.7	42.3	40.3	53.0	44.0



**Table 175 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg) Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg) Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
	Honda				Hyundai KiH				Hyundai KiK			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	39.1	37.8	39.1	37.8	39.6	39.1	39.6	39.1	39.5	38.5	39.5	38.5
2023	39.4	40.2	39.4	40.2	40.0	40.8	40.0	40.8	39.8	40.5	39.8	40.5
2024	42.7	40.2	42.7	40.2	43.3	41.0	43.3	41.0	43.1	44.7	43.1	44.7
2025	46.2	41.7	46.2	41.7	46.8	44.9	46.8	44.9	46.7	44.7	46.7	44.7
2026	51.2	45.7	51.2	45.7	51.9	49.0	51.9	49.0	51.7	49.3	51.7	49.3
2027	51.1	47.5	52.8	49.0	51.9	50.1	53.5	50.1	51.7	49.2	53.3	49.2
2028	51.1	49.6	54.5	51.3	51.8	50.7	55.1	53.6	51.6	49.2	55.0	49.2
2029	51.0	51.2	56.2	53.3	51.8	52.0	56.8	54.9	51.6	49.9	56.7	52.7
2030	51.1	53.3	58.1	56.1	51.8	53.6	58.6	56.6	51.6	51.3	58.5	54.1
2031	51.1	55.3	60.1	58.2	51.9	55.3	60.5	58.5	51.7	52.6	60.5	57.4
2032	51.1	57.1	62.0	60.6	51.9	56.5	62.3	60.4	51.7	53.6	62.4	59.5

**Table 176 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	JLR				Karma				Lucid			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	32.9	27.4	32.9	27.4	40.6	66.7	40.6	66.7	40.6	166.5	40.6	166.5
2023	33.4	34.2	33.4	34.2	41.1	66.7	41.1	66.7	41.1	166.5	41.1	166.5
2024	36.2	36.7	36.2	36.7	44.3	66.7	44.3	66.7	44.3	166.5	44.3	166.5
2025	39.4	36.8	39.4	36.8	48.1	66.7	48.1	66.7	48.1	166.5	48.1	166.5
2026	43.7	38.9	43.7	38.9	53.5	138.6	53.5	138.6	53.5	166.5	53.5	166.5
2027	43.7	39.8	45.5	39.8	54.1	138.6	55.2	138.6	54.1	166.5	55.2	166.5
2028	43.7	39.8	47.4	39.8	54.1	138.6	56.3	138.6	54.1	166.5	56.3	166.5
2029	43.7	40.7	49.4	40.7	54.1	138.6	57.5	138.6	54.1	166.5	57.5	166.5
2030	43.7	42.4	51.4	42.8	54.1	138.6	58.6	138.6	54.1	166.5	58.6	166.5
2031	43.7	44.9	53.6	46.4	54.1	138.6	59.8	138.6	54.1	166.5	59.8	166.5
2032	43.7	46.2	55.8	49.0	54.1	138.6	61.1	138.6	54.1	170.6	61.1	170.6



**Table 177 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	Mazda				Mercedes-Benz				Mitsubishi			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	37.3	35.1	37.3	35.1	36.8	31.6	36.8	31.6	42.0	38.6	42.0	38.6
2023	37.8	41.2	37.8	41.2	37.2	36.7	37.2	36.7	42.5	38.8	42.5	38.8
2024	41.0	42.4	41.0	42.4	40.2	37.3	40.2	37.3	45.9	45.1	45.9	45.1
2025	44.4	42.5	44.4	42.5	43.6	37.8	43.6	37.8	49.8	48.0	49.8	48.0
2026	49.4	46.8	49.4	46.8	48.4	43.4	48.4	43.4	55.2	53.4	55.2	53.4
2027	49.3	48.8	51.3	49.2	48.3	44.8	49.9	44.9	55.1	53.3	56.9	53.3
2028	49.3	50.5	53.3	50.8	48.3	46.9	51.5	47.4	55.1	53.3	58.7	53.3
2029	49.3	52.6	55.4	53.2	48.3	48.8	53.3	49.4	55.1	53.3	60.5	53.2
2030	49.3	54.8	57.6	55.6	48.3	51.0	55.0	53.6	55.1	53.3	62.5	53.3
2031	49.3	56.8	59.9	57.7	48.3	53.2	56.9	55.8	55.1	57.7	64.6	63.6
2032	49.3	58.5	62.3	59.3	48.3	55.1	58.8	57.8	55.1	58.4	66.6	64.4

**Table 178 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	Nissan				Stellantis				Subaru			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	38.9	36.8	38.9	36.8	31.9	27.3	31.9	27.3	37.8	36.7	37.8	36.7
2023	39.3	39.6	39.3	39.6	32.3	28.5	32.3	28.5	38.2	40.3	38.2	40.3
2024	42.4	41.4	42.4	41.4	34.9	31.4	34.9	31.4	41.4	42.2	41.4	42.2
2025	46.0	43.8	46.0	43.8	38.0	37.0	38.0	37.0	44.9	44.1	44.9	44.1
2026	50.9	46.6	50.9	46.6	42.1	37.5	42.1	37.5	50.0	50.0	50.0	50.0
2027	50.9	46.7	52.4	46.7	42.1	39.2	43.8	40.1	49.9	52.3	51.9	52.3
2028	50.8	48.6	54.1	50.8	42.1	39.3	45.6	40.2	49.9	54.3	53.9	54.3
2029	50.8	49.9	55.8	52.5	42.1	40.9	47.3	42.8	49.9	56.6	56.0	56.6
2030	50.8	52.2	57.6	56.4	42.1	42.1	49.2	44.4	49.9	59.5	58.2	59.5
2031	50.9	53.4	59.5	57.7	42.1	43.1	51.1	45.4	49.9	62.0	60.5	62.0
2032	50.9	54.3	61.4	59.0	42.1	43.8	53.2	47.3	49.9	64.2	62.9	64.2

**Table 179 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	Tesla				Toyota				Volvo			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	40.7	160.7	40.7	160.7	37.1	36.6	37.1	36.6	36.0	39.0	36.0	39.0
2023	41.2	160.7	41.2	160.7	37.4	37.7	37.4	37.7	36.4	41.3	36.4	41.3
2024	44.8	160.7	44.8	160.7	40.4	40.6	40.4	40.6	39.4	41.3	39.4	41.3
2025	48.6	160.6	48.6	160.6	43.6	41.7	43.6	41.7	42.6	45.3	42.6	45.3
2026	54.1	160.6	54.1	160.6	48.4	46.6	48.4	46.6	47.4	45.8	47.4	45.8
2027	54.1	160.6	55.2	160.6	48.3	47.7	50.0	47.8	47.3	45.8	49.0	46.3
2028	54.1	160.6	56.4	160.6	48.3	49.2	51.8	49.2	47.3	45.7	50.8	46.2
2029	54.1	160.6	57.7	160.6	48.3	50.7	53.6	50.8	47.3	45.8	52.7	46.7
2030	54.1	160.6	58.9	160.6	48.3	52.6	55.5	52.7	47.3	47.5	54.6	52.7
2031	54.1	160.6	60.3	160.6	48.3	54.8	57.5	54.9	47.3	49.5	56.7	54.8
2032	54.1	160.6	61.5	160.6	48.4	56.5	59.5	57.0	47.3	51.2	58.7	57.6

**Table 180 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Total Fleet (mpg)												
Model Year	VWA				Total							
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	37.9	33.8	37.9	33.8	35.8	34.1	35.8	34.1	0.0	0.0	0.0	0.0
2023	38.2	35.2	38.2	35.2	36.1	35.5	36.1	35.5	0.0	0.0	0.0	0.0
2024	41.3	40.3	41.3	40.3	39.0	38.4	39.0	38.4	0.0	0.0	0.0	0.0
2025	44.8	42.9	44.8	42.9	42.2	40.9	42.2	40.9	0.0	0.0	0.0	0.0
2026	49.6	45.0	49.6	45.0	46.8	43.8	46.8	43.8	0.0	0.0	0.0	0.0
2027	49.6	45.6	51.3	45.8	46.7	45.2	48.4	45.9	0.0	0.0	0.0	0.0
2028	49.6	47.0	53.1	47.8	46.7	46.0	50.1	47.3	0.0	0.0	0.0	0.0
2029	49.5	48.4	55.0	49.4	46.7	47.2	51.9	49.1	0.0	0.0	0.0	0.0
2030	49.6	50.2	57.0	53.4	46.7	48.4	53.8	50.7	0.0	0.0	0.0	0.0
2031	49.6	52.4	59.0	56.5	46.7	49.8	55.7	52.8	0.0	0.0	0.0	0.0
2032	49.6	53.8	61.1	58.7	46.7	50.8	57.8	54.4	0.0	0.0	0.0	0.0

**Table 0-181 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
Model Year	BMW				Ford				GM			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	43.3	35.4	43.3	35.4	43.4	40.7	43.4	40.7	45.1	39.1	45.1	39.1
2023	44.0	38.7	44.0	38.7	44.1	40.8	44.1	40.8	45.8	39.3	45.8	39.3
2024	47.8	48.1	47.8	48.1	47.9	56.2	47.9	56.2	49.7	49.2	49.7	49.2
2025	52.0	51.7	52.0	51.7	52.1	57.9	52.1	57.9	54.1	52.0	54.1	52.0
2026	57.7	56.2	57.7	56.2	57.9	57.9	57.9	57.9	60.1	56.8	60.1	56.8
2027	57.7	56.2	58.9	56.2	57.9	58.4	59.0	65.5	60.1	56.9	61.3	57.0
2028	57.7	60.2	60.1	60.3	57.9	58.4	60.2	65.5	60.1	56.9	62.6	57.0
2029	57.7	63.1	61.3	63.2	57.9	58.4	61.5	65.5	60.1	56.9	63.9	61.5
2030	57.7	65.9	62.6	65.9	57.9	58.6	62.7	66.0	60.1	57.1	65.1	62.3
2031	57.7	68.5	63.9	68.5	57.9	59.5	64.0	66.9	60.1	57.1	66.5	63.6
2032	57.7	70.6	65.2	70.6	57.9	60.4	65.3	68.2	60.1	57.2	67.8	64.3

**Table 0-182 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
	Honda				Hyundai KiH				Hyundai KiK			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	44.7	43.4	44.7	43.4	44.2	42.9	44.2	42.9	44.7	44.3	44.7	44.3
2023	45.4	47.0	45.4	47.0	44.9	46.0	44.9	46.0	45.4	46.5	45.4	46.5
2024	49.4	47.2	49.4	47.2	48.8	46.4	48.8	46.4	49.4	55.7	49.4	55.7
2025	53.7	48.8	53.7	48.8	53.1	50.2	53.1	50.2	53.6	55.7	53.6	55.7
2026	59.6	53.6	59.6	53.6	59.0	55.8	59.0	55.8	59.6	57.9	59.6	57.9
2027	59.6	56.0	60.8	57.1	59.0	57.5	60.2	57.6	59.6	57.9	60.8	58.0
2028	59.6	59.0	62.1	60.1	59.0	58.1	61.4	59.9	59.6	57.9	62.1	58.0
2029	59.6	61.0	63.3	62.2	59.0	59.6	62.7	61.4	59.6	58.4	63.3	60.8
2030	59.6	63.5	64.6	64.6	59.0	61.4	64.0	63.2	59.6	59.9	64.6	62.4
2031	59.6	65.8	66.0	67.0	59.0	63.3	65.3	65.5	59.6	61.4	65.9	64.3
2032	59.6	68.3	67.3	69.5	59.0	64.7	66.6	66.9	59.6	62.5	67.2	65.5

**Table 0-183 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
	JLR				Karma				Lucid			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	43.2	29.4	43.2	29.4	40.6	66.7	40.6	66.7	40.6	166.5	40.6	166.5
2023	43.8	54.5	43.8	54.5	41.1	66.7	41.1	66.7	41.1	166.5	41.1	166.5
2024	47.6	54.5	47.6	54.5	44.3	66.7	44.3	66.7	44.3	166.5	44.3	166.5
2025	51.8	54.5	51.8	54.5	48.1	66.7	48.1	66.7	48.1	166.5	48.1	166.5
2026	57.5	61.7	57.5	61.7	53.5	138.6	53.5	138.6	53.5	166.5	53.5	166.5
2027	57.5	61.8	58.7	61.8	54.1	138.6	55.2	138.6	54.1	166.5	55.2	166.5
2028	57.5	61.8	59.9	61.9	54.1	138.6	56.3	138.6	54.1	166.5	56.3	166.5
2029	57.5	63.0	61.1	63.2	54.1	138.6	57.5	138.6	54.1	166.5	57.5	166.5
2030	57.5	65.2	62.4	65.4	54.1	138.6	58.6	138.6	54.1	166.5	58.6	166.5
2031	57.5	67.3	63.6	67.4	54.1	138.6	59.8	138.6	54.1	166.5	59.8	166.5
2032	57.5	69.1	64.9	69.1	54.1	138.6	61.1	138.6	54.1	170.6	61.1	170.6

**Table 184 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
Model Year	Mazda				Mercedes-Benz				Mitsubishi			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	46.1	40.1	46.1	40.1	41.8	34.1	41.8	34.1	47.0	41.4	47.0	41.4
2023	46.8	40.8	46.8	40.8	42.4	41.6	42.4	41.6	47.7	41.7	47.7	41.7
2024	50.9	49.6	50.9	49.6	46.1	43.7	46.1	43.7	51.9	50.4	51.9	50.4
2025	55.3	51.5	55.3	51.5	50.1	45.6	50.1	45.6	56.4	54.1	56.4	54.1
2026	61.5	56.8	61.5	56.8	55.6	54.0	55.6	54.0	62.7	62.0	62.7	62.0
2027	61.5	59.9	62.7	60.4	55.6	55.9	56.8	56.2	62.7	62.0	63.9	62.0
2028	61.5	61.9	64.0	62.4	55.6	55.9	57.9	56.2	62.7	62.0	65.2	62.0
2029	61.5	64.1	65.3	64.6	55.6	58.6	59.1	59.3	62.7	62.0	66.6	62.0
2030	61.5	66.7	66.7	67.2	55.6	60.9	60.3	61.6	62.7	62.0	67.9	62.0
2031	61.5	69.2	68.0	69.7	55.6	63.3	61.6	64.0	62.7	67.0	69.3	69.5
2032	61.5	71.3	69.4	71.8	55.6	65.9	62.8	66.6	62.7	67.8	70.7	70.5



**Table 0-185 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
	Nissan				Stellantis				Subaru			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	44.7	42.4	44.7	42.4	41.8	28.2	41.8	28.2	46.0	37.0	46.0	37.0
2023	45.4	46.5	45.4	46.5	42.4	30.5	42.4	30.5	46.7	46.1	46.7	46.1
2024	49.3	50.0	49.3	50.0	46.1	41.2	46.1	41.2	50.7	46.1	50.7	46.1
2025	53.6	54.1	53.6	54.1	50.0	51.1	50.0	51.1	55.1	52.9	55.1	52.9
2026	59.6	58.6	59.6	58.6	55.6	52.4	55.6	52.4	61.3	58.6	61.3	58.6
2027	59.6	58.7	60.8	58.8	55.6	52.4	56.8	52.4	61.3	60.7	62.5	60.7
2028	59.6	58.9	62.1	59.6	55.6	53.1	57.9	53.1	61.3	62.9	63.8	63.0
2029	59.6	60.1	63.3	60.8	55.6	54.8	59.1	56.1	61.3	66.0	65.1	66.0
2030	59.6	62.0	64.6	63.1	55.6	56.2	60.3	57.9	61.3	69.0	66.4	69.0
2031	59.6	63.4	65.9	64.5	55.6	57.5	61.5	60.2	61.3	71.9	67.8	71.9
2032	59.6	64.4	67.3	66.3	55.6	58.5	62.8	61.6	61.3	75.2	69.2	75.2

**Table 0-186 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
	Tesla				Toyota				Volvo			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	41.1	161.0	41.1	161.0	44.7	44.0	44.7	44.0	42.9	53.6	42.9	53.6
2023	41.7	161.0	41.7	161.0	45.4	46.3	45.4	46.3	43.6	55.4	43.6	55.4
2024	45.3	161.0	45.3	161.0	49.4	47.7	49.4	47.7	47.4	56.0	47.4	56.0
2025	49.3	161.0	49.3	161.0	53.6	49.3	53.6	49.3	51.5	59.6	51.5	59.6
2026	54.8	161.0	54.8	161.0	59.6	56.2	59.6	56.2	57.2	61.8	57.2	61.8
2027	54.8	161.0	55.9	161.0	59.6	58.4	60.8	58.4	57.2	61.8	58.3	61.8
2028	54.8	161.0	57.0	161.0	59.6	60.4	62.1	60.4	57.2	61.8	59.5	61.8
2029	54.8	161.0	58.2	161.0	59.6	62.4	63.4	62.4	57.2	62.5	60.8	62.5
2030	54.8	161.0	59.4	161.0	59.6	64.7	64.6	64.7	57.2	64.4	62.0	65.9
2031	54.8	161.0	60.7	161.0	59.6	67.0	65.9	67.0	57.2	66.7	63.3	68.2
2032	54.8	161.0	61.9	161.0	59.6	68.7	67.3	68.7	57.2	68.6	64.6	71.6

**Table 0-187 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Passenger Car Fleet (mpg)												
	VWA				Total							
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	45.0	37.8	45.0	37.8	44.1	43.7	44.1	43.7	0.0	0.0	0.0	0.0
2023	45.7	38.8	45.7	38.8	44.8	46.6	44.8	46.6	0.0	0.0	0.0	0.0
2024	49.7	44.3	49.7	44.3	48.7	51.3	48.7	51.3	0.0	0.0	0.0	0.0
2025	54.0	47.4	54.0	47.4	52.9	54.3	52.9	54.3	0.0	0.0	0.0	0.0
2026	60.0	53.6	60.0	53.6	58.8	59.5	58.8	59.5	0.0	0.0	0.0	0.0
2027	60.0	55.5	61.2	55.5	58.8	60.8	60.0	61.3	0.0	0.0	0.0	0.0
2028	60.0	60.5	62.5	62.5	58.8	62.3	61.2	63.2	0.0	0.0	0.0	0.0
2029	60.0	62.4	63.8	64.4	58.8	63.8	62.5	65.4	0.0	0.0	0.0	0.0
2030	60.0	64.5	65.1	66.6	58.8	65.7	63.7	67.5	0.0	0.0	0.0	0.0
2031	60.0	67.0	66.4	68.8	58.8	67.5	65.1	69.6	0.0	0.0	0.0	0.0
2032	60.0	68.6	67.7	70.5	58.8	69.0	66.4	71.4	0.0	0.0	0.0	0.0

**Table 0-188 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)</b>												
	BMW				Ford				GM			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	32.5	30.3	32.5	30.3	30.3	27.9	30.3	27.9	29.8	26.8	29.8	26.8
2023	33.0	31.3	33.0	31.3	30.8	29.1	30.8	29.1	30.3	26.9	30.3	26.9
2024	35.9	31.3	35.9	31.3	33.2	32.1	33.2	32.1	32.5	30.9	32.5	30.9
2025	39.0	34.9	39.0	34.9	36.1	32.9	36.1	32.9	35.4	34.5	35.4	34.5
2026	43.4	40.1	43.4	40.1	40.2	35.1	40.2	35.1	39.3	35.4	39.3	35.4
2027	43.4	40.1	45.2	40.1	40.2	37.8	41.8	39.7	39.3	36.7	40.9	37.0
2028	43.4	41.2	47.0	41.2	40.2	37.9	43.6	41.6	39.3	36.7	42.7	37.3
2029	43.4	42.7	49.0	43.2	40.2	38.7	45.4	43.8	39.3	36.7	44.4	37.3
2030	43.4	44.7	51.0	45.2	40.2	38.7	47.3	43.8	39.3	36.7	46.3	37.5
2031	43.4	46.5	53.2	47.0	40.2	39.4	49.2	44.5	39.3	37.4	48.2	40.0
2032	43.4	48.1	55.4	50.7	40.2	40.0	51.3	45.2	39.3	37.5	50.2	40.7

**Table 0-189 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)</b>												
	Honda				Hyundai KiH				Hyundai KiK			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	34.0	32.8	34.0	32.8	34.0	34.3	34.0	34.3	34.0	32.6	34.0	32.6
2023	34.5	34.8	34.5	34.8	34.5	35.1	34.5	35.1	34.5	34.9	34.5	34.9
2024	37.5	34.9	37.5	34.9	37.5	35.4	37.5	35.4	37.5	36.3	37.5	36.3
2025	40.8	36.7	40.8	36.7	40.7	39.6	40.7	39.6	40.8	36.6	40.8	36.6
2026	45.3	40.2	45.3	40.2	45.3	42.6	45.3	42.6	45.3	42.5	45.3	42.5
2027	45.3	41.8	47.2	43.6	45.3	43.3	47.2	43.4	45.3	42.5	47.2	42.5
2028	45.3	43.4	49.2	45.4	45.3	44.1	49.1	47.7	45.3	42.5	49.2	42.5
2029	45.3	44.9	51.2	47.5	45.3	45.2	51.2	48.9	45.3	43.4	51.2	46.4
2030	45.3	46.6	53.4	50.2	45.3	46.6	53.3	50.3	45.3	44.6	53.3	47.5
2031	45.3	48.3	55.6	52.0	45.3	47.9	55.5	51.8	45.3	45.6	55.6	51.5
2032	45.3	49.7	57.9	54.3	45.3	49.0	57.8	54.0	45.3	46.5	57.9	54.2

**Table 0-190 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)												
	JLR				Karma				Lucid			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	32.7	27.3	32.7	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	33.2	33.9	33.2	33.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024	36.0	36.4	36.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	39.2	36.5	39.2	36.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	43.5	38.6	43.5	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2027	43.5	39.5	45.3	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028	43.5	39.5	47.2	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029	43.5	40.4	49.2	40.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2030	43.5	42.1	51.2	42.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2031	43.5	44.6	53.4	46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2032	43.5	45.8	55.6	48.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 0-191 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)</b>												
	Mazda				Mercedes-Benz				Mitsubishi			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	36.0	34.3	36.0	34.3	32.9	29.4	32.9	29.4	37.0	35.6	37.0	35.6
2023	36.6	41.3	36.6	41.3	33.4	33.1	33.4	33.1	37.6	35.9	37.6	35.9
2024	39.8	41.4	39.8	41.4	36.3	33.2	36.3	33.2	40.8	40.5	40.8	40.5
2025	43.2	41.4	43.2	41.4	39.5	33.2	39.5	33.2	44.4	43.1	44.4	43.1
2026	48.0	45.6	48.0	45.6	43.9	37.6	43.9	37.6	49.3	46.9	49.3	46.9
2027	48.0	47.6	50.0	48.0	43.9	38.9	45.7	38.9	49.3	46.9	51.4	46.9
2028	48.0	49.2	52.1	49.6	43.9	41.9	47.6	42.4	49.3	46.9	53.5	46.9
2029	48.0	51.4	54.3	52.0	43.9	43.4	49.6	44.0	49.3	46.9	55.7	46.9
2030	48.0	53.5	56.5	54.3	43.9	45.4	51.6	48.9	49.3	46.9	58.1	46.9
2031	48.0	55.5	58.9	56.3	43.9	47.4	53.8	50.8	49.3	50.8	60.5	58.7
2032	48.0	57.1	61.4	57.9	43.9	48.9	56.0	52.4	49.3	51.4	63.0	59.3

**Table 0-192 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)</b>												
	Nissan				Stellantis				Subaru			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	32.9	30.9	32.9	30.9	30.7	27.2	30.7	27.2	36.5	36.6	36.5	36.6
2023	33.4	33.3	33.4	33.3	31.2	28.3	31.2	28.3	37.0	39.4	37.0	39.4
2024	36.3	34.2	36.3	34.2	33.8	30.4	33.8	30.4	40.2	41.6	40.2	41.6
2025	39.5	36.0	39.5	36.0	36.8	35.8	36.8	35.8	43.7	43.0	43.7	43.0
2026	43.9	38.1	43.9	38.1	40.9	36.2	40.9	36.2	48.6	48.9	48.6	48.9
2027	43.9	38.2	45.7	38.2	40.9	38.0	42.6	39.0	48.6	51.3	50.6	51.3
2028	43.9	40.9	47.6	43.9	40.9	38.0	44.4	39.1	48.6	53.2	52.7	53.3
2029	43.9	42.3	49.6	46.0	40.9	39.7	46.2	41.7	48.6	55.4	54.9	55.4
2030	43.9	44.6	51.7	50.7	40.9	40.8	48.1	43.1	48.6	58.3	57.2	58.3
2031	43.9	45.6	53.8	51.8	40.9	41.8	50.1	44.1	48.6	60.8	59.6	60.8
2032	43.9	46.3	56.1	52.6	40.9	42.5	52.2	45.9	48.6	62.9	62.1	62.9



**Table 0-193 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)												
	Tesla				Toyota				Volvo			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	33.4	154.4	33.4	154.4	33.0	32.7	33.0	32.7	33.4	34.5	33.4	34.5
2023	33.9	154.4	33.9	154.4	33.5	33.6	33.5	33.6	33.9	37.2	33.9	37.2
2024	36.9	154.4	36.9	154.4	36.3	37.2	36.3	37.2	36.8	37.3	36.8	37.3
2025	40.1	154.4	40.1	154.4	39.4	38.3	39.4	38.3	40.0	41.5	40.0	41.5
2026	44.5	154.4	44.5	154.4	43.8	42.5	43.8	42.5	44.5	41.8	44.5	41.8
2027	44.5	154.4	46.4	154.4	43.8	43.4	45.6	43.4	44.5	41.8	46.3	42.4
2028	44.5	154.4	48.3	154.4	43.8	44.7	47.5	44.7	44.5	41.8	48.3	42.4
2029	44.5	154.4	50.3	154.4	43.8	46.1	49.5	46.2	44.5	41.8	50.3	42.8
2030	44.5	154.4	52.4	154.4	43.8	47.8	51.6	47.9	44.5	43.4	52.4	49.1
2031	44.5	154.4	54.6	154.4	43.8	49.8	53.7	50.0	44.5	45.2	54.6	51.1
2032	44.5	154.4	56.9	154.4	43.8	51.5	55.9	52.1	44.5	46.8	56.8	53.7

**Table 0-194 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Light Truck Fleet (mpg)												
	VWA				Total							
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	34.0	31.5	34.0	31.5	32.1	30.1	32.1	30.1	0.0	0.0	0.0	0.0
2023	34.5	33.1	34.5	33.1	32.6	31.3	32.6	31.3	0.0	0.0	0.0	0.0
2024	37.5	38.2	37.5	38.2	35.3	34.0	35.3	34.0	0.0	0.0	0.0	0.0
2025	40.8	40.7	40.8	40.7	38.3	36.4	38.3	36.4	0.0	0.0	0.0	0.0
2026	45.3	41.4	45.3	41.4	42.6	38.9	42.6	38.9	0.0	0.0	0.0	0.0
2027	45.3	41.6	47.2	41.9	42.6	40.4	44.4	41.1	0.0	0.0	0.0	0.0
2028	45.3	42.0	49.2	42.5	42.6	41.0	46.2	42.4	0.0	0.0	0.0	0.0
2029	45.3	43.3	51.2	44.0	42.6	42.1	48.2	44.1	0.0	0.0	0.0	0.0
2030	45.3	44.9	53.4	48.3	42.6	43.1	50.2	45.5	0.0	0.0	0.0	0.0
2031	45.3	46.9	55.6	51.5	42.6	44.3	52.2	47.4	0.0	0.0	0.0	0.0
2032	45.3	48.1	57.9	53.7	42.6	45.2	54.4	48.9	0.0	0.0	0.0	0.0

**Table 0-195 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)												
	BMW				Ford				GM			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	0.0	0.0	0.0	0.0	43.4	40.7	43.4	40.7	44.3	38.3	44.3	38.3
2023	0.0	0.0	0.0	0.0	44.1	40.8	44.1	40.8	45.0	38.6	45.0	38.6
2024	0.0	0.0	0.0	0.0	47.9	56.2	47.9	56.2	48.9	49.6	48.9	49.6
2025	0.0	0.0	0.0	0.0	52.1	57.9	52.1	57.9	53.2	52.3	53.2	52.3
2026	0.0	0.0	0.0	0.0	57.9	57.9	57.9	57.9	59.1	56.3	59.1	56.3
2027	0.0	0.0	0.0	0.0	57.9	58.4	59.0	65.5	59.1	56.5	60.3	56.6
2028	0.0	0.0	0.0	0.0	57.9	58.4	60.2	65.5	59.1	56.5	61.5	56.6
2029	0.0	0.0	0.0	0.0	57.9	58.4	61.5	65.5	59.1	56.5	62.8	61.5
2030	0.0	0.0	0.0	0.0	57.9	58.6	62.7	66.0	59.1	56.5	64.0	61.6
2031	0.0	0.0	0.0	0.0	57.9	59.5	64.0	66.9	59.1	56.5	65.4	62.5
2032	0.0	0.0	0.0	0.0	57.9	60.4	65.3	68.2	59.1	56.6	66.7	63.3

**Table 0-196 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)												
Model Year	Honda				Hyundai KiH				Hyundai KiK			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	44.7	43.4	44.7	43.4	48.7	50.7	48.7	50.7	45.8	45.0	45.8	45.0
2023	45.4	47.0	45.4	47.0	49.5	284.8	49.5	284.8	46.5	45.0	46.5	45.0
2024	49.4	47.2	49.4	47.2	53.8	284.8	53.8	284.8	50.6	61.5	50.6	61.5
2025	53.7	48.8	53.7	48.8	58.4	284.8	58.4	284.8	55.0	61.5	55.0	61.5
2026	59.6	53.6	59.6	53.6	64.9	284.8	64.9	284.8	61.1	61.5	61.1	61.5
2027	59.6	56.0	60.8	57.1	64.9	284.8	66.3	284.8	61.1	61.5	62.3	61.5
2028	59.6	59.0	62.1	60.1	64.9	295.8	67.6	301.4	61.1	61.5	63.6	61.5
2029	59.6	61.0	63.3	62.2	64.9	295.8	69.0	301.4	61.1	62.0	64.9	62.5
2030	59.6	63.5	64.6	64.6	64.9	295.8	70.4	301.4	61.1	63.7	66.2	64.1
2031	59.6	65.8	66.0	67.0	64.9	295.8	71.8	301.4	61.1	65.2	67.6	65.7
2032	59.6	68.3	67.3	69.5	64.9	295.8	73.3	301.4	61.1	66.4	69.0	66.9

**Table 0-197 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)</b>												
	JLR				Karma				Lucid			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	0.0	0.0	0.0	0.0	40.6	66.7	40.6	66.7	40.6	166.5	40.6	166.5
2023	0.0	0.0	0.0	0.0	41.1	66.7	41.1	66.7	41.1	166.5	41.1	166.5
2024	0.0	0.0	0.0	0.0	44.3	66.7	44.3	66.7	44.3	166.5	44.3	166.5
2025	0.0	0.0	0.0	0.0	48.1	66.7	48.1	66.7	48.1	166.5	48.1	166.5
2026	0.0	0.0	0.0	0.0	53.5	138.6	53.5	138.6	53.5	166.5	53.5	166.5
2027	0.0	0.0	0.0	0.0	54.1	138.6	55.2	138.6	54.1	166.5	55.2	166.5
2028	0.0	0.0	0.0	0.0	54.1	138.6	56.3	138.6	54.1	166.5	56.3	166.5
2029	0.0	0.0	0.0	0.0	54.1	138.6	57.5	138.6	54.1	166.5	57.5	166.5
2030	0.0	0.0	0.0	0.0	54.1	138.6	58.6	138.6	54.1	166.5	58.6	166.5
2031	0.0	0.0	0.0	0.0	54.1	138.6	59.8	138.6	54.1	166.5	59.8	166.5
2032	0.0	0.0	0.0	0.0	54.1	138.6	61.1	138.6	54.1	170.6	61.1	170.6

**Table 0-198 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)</b>												
	Mazda				Mercedes-Benz				Mitsubishi			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2027	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2031	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



**Table 0-199 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)</b>												
	Nissan				Stellantis				Subaru			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	44.5	41.7	44.5	41.7	41.4	27.8	41.4	27.8	0.0	0.0	0.0	0.0
2023	45.2	42.8	45.2	42.8	42.0	30.1	42.0	30.1	0.0	0.0	0.0	0.0
2024	49.1	46.4	49.1	46.4	45.7	41.2	45.7	41.2	0.0	0.0	0.0	0.0
2025	53.4	51.4	53.4	51.4	49.6	50.7	49.6	50.7	0.0	0.0	0.0	0.0
2026	59.3	57.1	59.3	57.1	55.1	51.7	55.1	51.7	0.0	0.0	0.0	0.0
2027	59.3	57.3	60.5	57.4	55.1	51.7	56.3	51.7	0.0	0.0	0.0	0.0
2028	59.3	57.5	61.8	57.5	55.1	52.4	57.4	52.4	0.0	0.0	0.0	0.0
2029	59.3	58.7	63.0	58.8	55.1	54.2	58.6	55.7	0.0	0.0	0.0	0.0
2030	59.3	60.8	64.3	61.2	55.1	55.6	59.8	57.5	0.0	0.0	0.0	0.0
2031	59.3	62.1	65.6	62.6	55.1	56.9	61.0	59.8	0.0	0.0	0.0	0.0
2032	59.3	63.2	67.0	64.7	55.1	57.9	62.2	61.1	0.0	0.0	0.0	0.0

**Table 0-200 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)</b>												
	Tesla				Toyota				Volvo			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	40.8	157.5	40.8	157.5	43.1	41.0	43.1	41.0	42.3	42.2	42.3	42.2
2023	41.4	157.5	41.4	157.5	43.7	41.5	43.7	41.5	42.9	45.5	42.9	45.5
2024	45.0	157.5	45.0	157.5	47.5	44.6	47.5	44.6	46.7	45.5	46.7	45.5
2025	48.9	157.5	48.9	157.5	51.7	48.1	51.7	48.1	50.7	49.5	50.7	49.5
2026	54.4	157.5	54.4	157.5	57.4	52.5	57.4	52.5	56.4	53.7	56.4	53.7
2027	54.4	157.5	55.5	157.5	57.4	54.9	58.6	54.9	56.4	53.7	57.5	53.7
2028	54.4	157.5	56.6	157.5	57.4	56.6	59.8	56.6	56.4	53.7	58.7	53.7
2029	54.4	157.5	57.8	157.5	57.4	58.4	61.0	58.4	56.4	53.7	59.9	53.7
2030	54.4	157.5	58.9	157.5	57.4	60.6	62.2	60.6	56.4	55.8	61.1	58.8
2031	54.4	157.5	60.2	157.5	57.4	62.7	63.5	62.7	56.4	58.1	62.3	61.2
2032	54.4	157.5	61.4	157.5	57.4	64.4	64.8	64.4	56.4	60.0	63.6	63.1





**Table 0-201 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Domestic Car Fleet (mpg)</b>												
	VWA				Total							
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	41.4	32.8	41.4	32.8	43.5	44.9	43.5	44.9	0.0	0.0	0.0	0.0
2023	42.0	32.8	42.0	32.8	44.2	46.9	44.2	46.9	0.0	0.0	0.0	0.0
2024	45.7	38.2	45.7	38.2	48.1	53.2	48.1	53.2	0.0	0.0	0.0	0.0
2025	49.6	38.2	49.6	38.2	52.3	56.7	52.3	56.7	0.0	0.0	0.0	0.0
2026	55.2	80.6	55.2	80.6	58.0	61.3	58.0	61.3	0.0	0.0	0.0	0.0
2027	55.2	80.6	56.3	80.6	58.0	62.5	59.2	63.5	0.0	0.0	0.0	0.0
2028	55.2	81.1	57.4	81.1	58.0	63.9	60.4	64.9	0.0	0.0	0.0	0.0
2029	55.2	85.2	58.6	85.2	58.0	65.3	61.7	67.2	0.0	0.0	0.0	0.0
2030	55.2	87.1	59.8	87.1	58.0	67.0	62.9	69.1	0.0	0.0	0.0	0.0
2031	55.2	88.8	61.0	88.8	58.0	68.5	64.2	70.9	0.0	0.0	0.0	0.0
2032	55.2	91.0	62.3	91.0	58.0	69.9	65.5	72.8	0.0	0.0	0.0	0.0



**Table 0-202 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)												
	BMW				Ford				GM			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	43.3	35.4	43.3	35.4	0.0	0.0	0.0	0.0	47.1	41.1	47.1	41.1
2023	44.0	38.7	44.0	38.7	0.0	0.0	0.0	0.0	47.9	41.2	47.9	41.2
2024	47.8	48.1	47.8	48.1	0.0	0.0	0.0	0.0	52.0	48.0	52.0	48.0
2025	52.0	51.7	52.0	51.7	0.0	0.0	0.0	0.0	56.5	51.4	56.5	51.4
2026	57.7	56.2	57.7	56.2	0.0	0.0	0.0	0.0	62.8	58.1	62.8	58.1
2027	57.7	56.2	58.9	56.2	0.0	0.0	0.0	0.0	62.8	58.1	64.1	58.1
2028	57.7	60.2	60.1	60.3	0.0	0.0	0.0	0.0	62.8	58.1	65.4	58.1
2029	57.7	63.1	61.3	63.2	0.0	0.0	0.0	0.0	62.8	58.1	66.8	61.6
2030	57.7	65.9	62.6	65.9	0.0	0.0	0.0	0.0	62.8	58.9	68.1	64.2
2031	57.7	68.5	63.9	68.5	0.0	0.0	0.0	0.0	62.8	58.9	69.5	66.9
2032	57.7	70.6	65.2	70.6	0.0	0.0	0.0	0.0	62.8	59.0	70.9	66.9

**Table 0-203 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)</b>												
	Honda				Hyundai KiH				Hyundai KiK			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	44.9	29.4	44.9	29.4	44.1	42.7	44.1	42.7	44.4	44.1	44.4	44.1
2023	45.6	30.0	45.6	30.0	44.8	44.7	44.8	44.7	45.0	46.9	45.0	46.9
2024	49.5	30.1	49.5	30.1	48.7	45.1	48.7	45.1	49.0	54.0	49.0	54.0
2025	53.8	30.2	53.8	30.2	52.9	48.8	52.9	48.8	53.2	54.0	53.2	54.0
2026	59.8	103.6	59.8	103.6	58.8	54.3	58.8	54.3	59.1	56.9	59.1	56.9
2027	59.8	103.4	61.1	103.4	58.8	56.0	60.0	56.2	59.1	56.9	60.3	56.9
2028	59.8	103.2	62.3	103.2	58.8	56.6	61.2	58.3	59.1	56.9	61.6	56.9
2029	59.8	103.1	63.6	103.1	58.8	58.1	62.5	59.8	59.1	57.3	62.8	60.3
2030	59.8	102.9	64.9	102.9	58.8	59.8	63.8	61.6	59.1	58.8	64.1	61.8
2031	59.8	102.7	66.2	102.7	58.8	61.7	65.1	63.9	59.1	60.2	65.4	63.9
2032	59.8	102.6	67.6	102.6	58.8	63.0	66.4	65.2	59.1	61.4	66.7	65.0

**Table 0-204 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)												
	JLR				Karma				Lucid			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	43.2	29.4	43.2	29.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	43.8	54.5	43.8	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024	47.6	54.5	47.6	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	51.8	54.5	51.8	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	57.5	61.7	57.5	61.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2027	57.5	61.8	58.7	61.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028	57.5	61.8	59.9	61.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029	57.5	63.0	61.1	63.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2030	57.5	65.2	62.4	65.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2031	57.5	67.3	63.6	67.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2032	57.5	69.1	64.9	69.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 0-205 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)</b>												
	Mazda				Mercedes-Benz				Mitsubishi			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	46.1	40.1	46.1	40.1	41.8	34.1	41.8	34.1	47.0	41.4	47.0	41.4
2023	46.8	40.8	46.8	40.8	42.4	41.6	42.4	41.6	47.7	41.7	47.7	41.7
2024	50.9	49.6	50.9	49.6	46.1	43.7	46.1	43.7	51.9	50.4	51.9	50.4
2025	55.3	51.5	55.3	51.5	50.1	45.6	50.1	45.6	56.4	54.1	56.4	54.1
2026	61.5	56.8	61.5	56.8	55.6	54.0	55.6	54.0	62.7	62.0	62.7	62.0
2027	61.5	59.9	62.7	60.4	55.6	55.9	56.8	56.2	62.7	62.0	63.9	62.0
2028	61.5	61.9	64.0	62.4	55.6	55.9	57.9	56.2	62.7	62.0	65.2	62.0
2029	61.5	64.1	65.3	64.6	55.6	58.6	59.1	59.3	62.7	62.0	66.6	62.0
2030	61.5	66.7	66.7	67.2	55.6	60.9	60.3	61.6	62.7	62.0	67.9	62.0
2031	61.5	69.2	68.0	69.7	55.6	63.3	61.6	64.0	62.7	67.0	69.3	69.5
2032	61.5	71.3	69.4	71.8	55.6	65.9	62.8	66.6	62.7	67.8	70.7	70.5

**Table 0-206 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)</b>												
	Nissan				Stellantis				Subaru			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	45.2	44.3	45.2	44.3	44.9	32.2	44.9	32.2	46.0	37.0	46.0	37.0
2023	45.9	60.2	45.9	60.2	45.5	34.1	45.5	34.1	46.7	46.1	46.7	46.1
2024	49.9	62.5	49.9	62.5	49.5	41.0	49.5	41.0	50.7	46.1	50.7	46.1
2025	54.3	62.6	54.3	62.6	53.8	54.3	53.8	54.3	55.1	52.9	55.1	52.9
2026	60.3	62.7	60.3	62.7	59.8	59.2	59.8	59.2	61.3	58.6	61.3	58.6
2027	60.3	62.7	61.5	62.7	59.8	59.2	61.0	59.2	61.3	60.7	62.5	60.7
2028	60.3	62.9	62.8	65.6	59.8	59.2	62.3	59.2	61.3	62.9	63.8	63.0
2029	60.3	64.1	64.0	66.8	59.8	59.7	63.5	59.8	61.3	66.0	65.1	66.0
2030	60.3	65.5	65.4	68.5	59.8	61.7	64.8	61.8	61.3	69.0	66.4	69.0
2031	60.3	66.8	66.7	69.8	59.8	62.9	66.1	63.1	61.3	71.9	67.8	71.9
2032	60.3	67.8	68.0	70.9	59.8	63.9	67.5	66.0	61.3	75.2	69.2	75.2

**Table 0-207 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)												
	Tesla				Toyota				Volvo			
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	42.4	177.7	42.4	177.7	45.3	45.2	45.3	45.2	43.2	60.6	43.2	60.6
2023	43.1	177.7	43.1	177.7	46.0	48.2	46.0	48.2	43.9	61.2	43.9	61.2
2024	46.8	177.7	46.8	177.7	50.0	48.8	50.0	48.8	47.7	62.2	47.7	62.2
2025	50.9	177.7	50.9	177.7	54.3	49.8	54.3	49.8	51.8	65.4	51.8	65.4
2026	56.6	177.7	56.6	177.7	60.4	57.6	60.4	57.6	57.6	66.0	57.6	66.0
2027	56.6	177.7	57.7	177.7	60.4	59.7	61.6	59.7	57.6	66.0	58.7	66.0
2028	56.6	177.7	58.9	177.7	60.4	61.8	62.9	61.8	57.6	66.0	59.9	66.0
2029	56.6	177.7	60.1	177.7	60.4	63.8	64.2	63.8	57.6	67.2	61.2	67.2
2030	56.6	177.7	61.3	177.7	60.4	66.2	65.5	66.2	57.6	69.0	62.4	69.6
2031	56.6	177.7	62.6	177.7	60.4	68.5	66.8	68.5	57.6	71.3	63.7	71.8
2032	56.6	177.7	63.8	177.7	60.4	70.3	68.2	70.3	57.6	73.2	65.0	76.1

**Table 0-208 - Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)**

<b>Comparison of No Action Alternative (Baseline) and Alternative PC2LT4 Required and Achieved CAFE Levels in MYs 2022-2032 for the Imported Car Fleet (mpg)</b>												
	VWA				Total							
	No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4		No Action Alternative (Baseline)		Alternative PC2LT4	
Model Year	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved	Required	Achieved
2022	45.3	38.2	45.3	38.2	44.7	42.7	44.7	42.7	0.0	0.0	0.0	0.0
2023	46.0	39.4	46.0	39.4	45.4	46.3	45.4	46.3	0.0	0.0	0.0	0.0
2024	50.0	44.9	50.0	44.9	49.3	49.6	49.3	49.6	0.0	0.0	0.0	0.0
2025	54.4	48.3	54.4	48.3	53.6	52.2	53.6	52.2	0.0	0.0	0.0	0.0
2026	60.4	52.3	60.4	52.3	59.5	57.9	59.5	57.9	0.0	0.0	0.0	0.0
2027	60.4	54.2	61.6	54.2	59.5	59.3	60.7	59.3	0.0	0.0	0.0	0.0
2028	60.4	59.3	62.9	61.4	59.5	60.9	62.0	61.6	0.0	0.0	0.0	0.0
2029	60.4	61.1	64.2	63.2	59.5	62.5	63.3	63.8	0.0	0.0	0.0	0.0
2030	60.4	63.3	65.5	65.4	59.5	64.5	64.6	65.9	0.0	0.0	0.0	0.0
2031	60.4	65.7	66.8	67.6	59.5	66.6	65.9	68.4	0.0	0.0	0.0	0.0
2032	60.4	67.3	68.2	69.3	59.5	68.1	67.2	70.0	0.0	0.0	0.0	0.0



## Incremental Benefits and Costs

**Table 209 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	29.9	37.8	50.7	68.8
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.2	1.1
Safety Costs Internalized by Drivers	4.3	5.3	6.6	8.7
Subtotal - Incremental Private Costs	34.2	43.3	57.5	78.6
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	3.0	3.6	5.3	5.3
Safety Costs Not Internalized by Drivers	1.7	1.7	4.6	5.0
Loss in Fuel Tax Revenue	7.9	10.0	11.3	15.6
Subtotal - Incremental External Costs	12.6	15.4	21.2	26.0
Total Incremental Social Costs	46.8	58.6	78.7	104.5
<b>Private Benefits</b>				
Reduced Fuel Costs	37.6	47.7	55.1	75.9
Benefits from Additional Driving	7.3	9.0	11.0	14.1
Less Frequent Refueling	2.0	2.7	3.1	4.6
Subtotal - Incremental Private Benefits	46.9	59.4	69.1	94.6
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	1.5	1.9	2.1	2.9
Reduced Climate Damages, Average SCC	42.4	53.9	61.9	85.8
Reduced Health Damages	0.2	0.3	0.2	0.4
Subtotal - Incremental External Benefits	44.1	56.1	64.3	89.1
Total Incremental Social Benefits, Average SCC	59.5	75.5	87.5	120.1
<b>Net Incremental Social Benefits, Average SCC</b>				
Net Incremental Social Benefits, Average SCC	12.7	16.8	8.8	15.6

**Table 210 - Incremental Benefits and Costs Over the Lifetimes of Passenger Car Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Passenger Car Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	8.3	10.9	15.7	23.9
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.0	0.1	0.4
Safety Costs Internalized by Drivers	0.3	0.6	1.0	2.3
Subtotal - Incremental Private Costs	8.6	11.5	16.7	26.6
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	-0.3	0.0	1.4	2.2
Safety Costs Not Internalized by Drivers	-0.3	-0.1	2.4	3.1
Loss in Fuel Tax Revenue	0.4	0.8	1.0	2.5
Subtotal - Incremental External Costs	-0.2	0.6	4.9	7.9
Total Incremental Social Costs	8.4	12.1	21.6	34.5
<b>Private Benefits</b>				
Reduced Fuel Costs	2.3	4.4	6.0	14.4
Benefits from Additional Driving	0.4	0.9	1.5	3.5
Less Frequent Refueling	0.2	0.4	0.5	1.2
Subtotal - Incremental Private Benefits	2.9	5.7	8.0	19.0
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	0.1	0.1	0.2	0.5
Reduced Climate Damages, Average SCC	2.5	4.8	6.6	15.9
Reduced Health Damages	0.0	0.0	-0.1	-0.1
Subtotal - Incremental External Benefits	2.6	5.0	6.7	16.3
Total Incremental Social Benefits, Average SCC	3.6	7.1	9.8	23.5
<b>Net Incremental Social Benefits, Average SCC</b>				
Net Incremental Social Benefits, Average SCC	-4.7	-5.1	-11.7	-10.9

**Table 211 - Incremental Benefits and Costs Over the Lifetimes of Light Truck Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Light Truck Fleet Produced Through 2032 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	21.6	26.9	35.0	44.9
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.2	0.8
Safety Costs Internalized by Drivers	4.0	4.8	5.6	6.3
<b>Subtotal - Incremental Private Costs</b>	<b>25.6</b>	<b>31.8</b>	<b>40.7</b>	<b>52.0</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	3.3	3.6	3.9	3.2
Safety Costs Not Internalized by Drivers	2.0	1.8	2.2	1.8
Loss in Fuel Tax Revenue	7.5	9.3	10.3	13.1
<b>Subtotal - Incremental External Costs</b>	<b>12.8</b>	<b>14.7</b>	<b>16.4</b>	<b>18.1</b>
<b>Total Incremental Social Costs</b>	<b>38.5</b>	<b>46.5</b>	<b>57.1</b>	<b>70.1</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	35.3	43.3	49.1	61.5
Benefits from Additional Driving	6.9	8.1	9.4	10.6
Less Frequent Refueling	1.8	2.3	2.6	3.5
<b>Subtotal - Incremental Private Benefits</b>	<b>43.9</b>	<b>53.7</b>	<b>61.1</b>	<b>75.6</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	1.4	1.7	1.9	2.4
Reduced Climate Damages, Average SCC	39.9	49.1	55.3	69.9
Reduced Health Damages	0.2	0.3	0.3	0.5
<b>Subtotal - Incremental External Benefits</b>	<b>41.5</b>	<b>51.1</b>	<b>57.5</b>	<b>72.9</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>55.8</b>	<b>68.4</b>	<b>77.7</b>	<b>96.6</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
<b>Net Incremental Social Benefits, Average SCC</b>	<b>17.4</b>	<b>21.9</b>	<b>20.6</b>	<b>26.5</b>

**Table 212 - Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Total Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	21.5	27.1	36.1	48.5
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.2	0.8
Safety Costs Internalized by Drivers	2.3	2.9	3.6	4.7
Subtotal - Incremental Private Costs	23.8	30.0	39.8	54.0
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	1.7	2.1	3.1	3.4
Safety Costs Not Internalized by Drivers	1.2	1.4	3.1	4.3
Loss in Fuel Tax Revenue	4.4	5.6	6.2	8.5
Subtotal - Incremental External Costs	7.4	9.1	12.4	16.3
Total Incremental Social Costs	31.2	39.1	52.2	70.3
<b>Private Benefits</b>				
Reduced Fuel Costs	20.6	26.0	30.0	40.7
Benefits from Additional Driving	4.0	4.9	6.0	7.6
Less Frequent Refueling	1.1	1.5	1.7	2.5
Subtotal - Incremental Private Benefits	25.6	32.4	37.6	50.9
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	0.8	1.0	1.1	1.6
Reduced Climate Damages, Average SCC	42.4	53.9	61.9	85.8
Reduced Health Damages	0.1	0.1	0.1	0.1
Subtotal - Incremental External Benefits	43.3	55.0	63.2	87.5
Total Incremental Social Benefits, Average SCC	37.5	47.5	54.9	74.8
<b>Net Incremental Social Benefits, Average SCC</b>				
Net Incremental Social Benefits, Average SCC	6.3	8.4	2.7	4.5

**Table 213 - Incremental Benefits and Costs Over the Lifetimes of Passenger Car Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Passenger Car Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	6.0	7.8	11.2	16.9
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.0	0.1	0.2
Safety Costs Internalized by Drivers	0.1	0.3	0.5	1.3
Subtotal - Incremental Private Costs	6.2	8.2	11.8	18.4
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	-0.1	0.1	0.9	1.6
Safety Costs Not Internalized by Drivers	0.0	0.2	1.7	2.7
Loss in Fuel Tax Revenue	0.2	0.4	0.5	1.3
Subtotal - Incremental External Costs	0.1	0.7	3.2	5.6
Total Incremental Social Costs	6.3	8.9	14.9	24.0
<b>Private Benefits</b>				
Reduced Fuel Costs	1.2	2.3	3.1	7.5
Benefits from Additional Driving	0.2	0.5	0.8	1.9
Less Frequent Refueling	0.1	0.2	0.3	0.6
Subtotal - Incremental Private Benefits	1.5	3.0	4.2	10.0
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	0.0	0.1	0.1	0.2
Reduced Climate Damages, Average SCC	2.5	4.8	6.6	15.9
Reduced Health Damages	0.0	0.0	-0.1	-0.1
Subtotal - Incremental External Benefits	2.5	4.9	6.7	16.0
Total Incremental Social Benefits, Average SCC	2.2	4.3	6.0	14.3
<b>Net Incremental Social Benefits, Average SCC</b>				
Net Incremental Social Benefits, Average SCC	-4.1	-4.5	-8.9	-9.7

**Table 214 - Incremental Benefits and Costs Over the Lifetimes of Light Truck Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs Over the Lifetimes of Light Truck Fleet Produced Through 2032 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	15.5	19.2	24.9	31.7
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.0	0.1	0.5
Safety Costs Internalized by Drivers	2.2	2.6	3.0	3.4
<b>Subtotal - Incremental Private Costs</b>	<b>17.7</b>	<b>21.9</b>	<b>28.0</b>	<b>35.6</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	1.8	2.0	2.2	1.8
Safety Costs Not Internalized by Drivers	1.2	1.2	1.4	1.6
Loss in Fuel Tax Revenue	4.2	5.2	5.7	7.2
<b>Subtotal - Incremental External Costs</b>	<b>7.3</b>	<b>8.4</b>	<b>9.2</b>	<b>10.6</b>
<b>Total Incremental Social Costs</b>	<b>24.9</b>	<b>30.2</b>	<b>37.3</b>	<b>46.3</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	19.4	23.7	26.8	33.3
Benefits from Additional Driving	3.8	4.4	5.1	5.8
Less Frequent Refueling	1.0	1.3	1.4	1.9
<b>Subtotal - Incremental Private Benefits</b>	<b>24.1</b>	<b>29.4</b>	<b>33.4</b>	<b>40.9</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	0.8	0.9	1.0	1.3
Reduced Climate Damages, Average SCC	39.9	49.1	55.3	69.9
Reduced Health Damages	0.1	0.1	0.1	0.2
<b>Subtotal - Incremental External Benefits</b>	<b>40.7</b>	<b>50.1</b>	<b>56.5</b>	<b>71.4</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>35.3</b>	<b>43.1</b>	<b>48.9</b>	<b>60.5</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
<b>Net Incremental Social Benefits, Average SCC</b>	<b>10.4</b>	<b>12.9</b>	<b>11.6</b>	<b>14.2</b>

**Table 215 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Total Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Total Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	77.7	104.7	170.5	270.0
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.1	0.1	0.5	1.9
Safety Costs Internalized by Drivers	10.4	13.7	17.7	26.4
<b>Subtotal - Incremental Private Costs</b>	<b>88.2</b>	<b>118.5</b>	<b>188.7</b>	<b>298.2</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	7.4	9.7	12.6	18.9
Safety Costs Not Internalized by Drivers	1.0	1.8	4.1	7.7
Loss in Fuel Tax Revenue	19.7	26.8	34.5	61.1
<b>Subtotal - Incremental External Costs</b>	<b>28.1</b>	<b>38.3</b>	<b>51.2</b>	<b>87.7</b>
<b>Total Incremental Social Costs</b>	<b>116.3</b>	<b>156.8</b>	<b>239.9</b>	<b>385.9</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	97.6	131.7	170.6	291.0
Benefits from Additional Driving	17.6	22.8	29.2	41.7
Less Frequent Refueling	0.6	1.9	0.0	-2.7
<b>Subtotal - Incremental Private Benefits</b>	<b>115.8</b>	<b>156.4</b>	<b>199.8</b>	<b>330.1</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	3.8	5.2	6.7	12.0
Reduced Climate Damages, Average SCC	7.1	9.6	12.4	21.3
Reduced Health Damages	1.5	2.0	2.7	5.5
<b>Subtotal - Incremental External Benefits</b>	<b>12.4</b>	<b>16.8</b>	<b>21.8</b>	<b>38.9</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>150.5</b>	<b>203.3</b>	<b>260.8</b>	<b>436.9</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
	34.2	46.5	21.0	51.0

**Table 216 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Passenger Car Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Passenger Car Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	20.5	30.5	52.0	90.0
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.0	0.1	0.6
Safety Costs Internalized by Drivers	0.4	1.0	2.3	6.7
<b>Subtotal - Incremental Private Costs</b>	<b>20.9</b>	<b>31.6</b>	<b>54.4</b>	<b>97.2</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	-1.4	-2.7	-1.1	1.1
Safety Costs Not Internalized by Drivers	-1.9	-3.4	0.1	1.2
Loss in Fuel Tax Revenue	-0.4	-0.3	2.0	12.2
<b>Subtotal - Incremental External Costs</b>	<b>-3.7</b>	<b>-6.4</b>	<b>1.0</b>	<b>14.5</b>
<b>Total Incremental Social Costs</b>	<b>17.2</b>	<b>25.2</b>	<b>55.4</b>	<b>111.7</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	0.2	2.7	13.9	62.4
Benefits from Additional Driving	0.7	1.7	3.6	9.7
Less Frequent Refueling	3.4	6.9	6.3	2.6
<b>Subtotal - Incremental Private Benefits</b>	<b>4.3</b>	<b>11.3</b>	<b>23.8</b>	<b>74.7</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	-0.1	-0.1	0.4	2.4
Reduced Climate Damages, Average SCC	0.0	0.1	1.0	4.5
Reduced Health Damages	-0.1	-0.2	0.0	1.7
<b>Subtotal - Incremental External Benefits</b>	<b>-0.3</b>	<b>-0.2</b>	<b>1.3</b>	<b>8.6</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>3.9</b>	<b>11.5</b>	<b>28.1</b>	<b>97.8</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
<b>Net Incremental Social Benefits, Average SCC</b>	<b>-13.3</b>	<b>-13.7</b>	<b>-27.3</b>	<b>-14.0</b>



**Table 217 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Light Truck Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Light Truck Fleet Produced Through MY 2050 (2021\$ BILLIONS), 3% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	57.2	74.2	118.5	180.0
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.3	1.3
Safety Costs Internalized by Drivers	10.0	12.7	15.4	19.7
<b>Subtotal - Incremental Private Costs</b>	<b>67.3</b>	<b>87.0</b>	<b>134.2</b>	<b>201.0</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	8.8	12.4	13.7	17.7
Safety Costs Not Internalized by Drivers	2.9	5.2	4.0	6.5
Loss in Fuel Tax Revenue	20.1	27.1	32.4	49.0
<b>Subtotal - Incremental External Costs</b>	<b>31.8</b>	<b>44.7</b>	<b>50.2</b>	<b>73.2</b>
<b>Total Incremental Social Costs</b>	<b>99.1</b>	<b>131.6</b>	<b>184.4</b>	<b>274.2</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	97.4	129.0	156.7	228.6
Benefits from Additional Driving	16.9	21.1	25.6	32.0
Less Frequent Refueling	-2.8	-5.0	-6.3	-5.3
<b>Subtotal - Incremental Private Benefits</b>	<b>111.5</b>	<b>145.1</b>	<b>176.0</b>	<b>255.4</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	3.9	5.3	6.3	9.6
Reduced Climate Damages, Average SCC	7.1	9.4	11.4	16.8
Reduced Health Damages	1.7	2.2	2.7	3.8
<b>Subtotal - Incremental External Benefits</b>	<b>12.7</b>	<b>17.0</b>	<b>20.5</b>	<b>30.2</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>146.6</b>	<b>191.8</b>	<b>232.8</b>	<b>339.1</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
	47.4	60.2	48.3	65.0

**Table 218 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Total Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Total Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	45.6	60.8	96.1	149.3
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.3	1.2
Safety Costs Internalized by Drivers	5.0	6.6	8.5	12.5
<b>Subtotal - Incremental Private Costs</b>	<b>50.7</b>	<b>67.5</b>	<b>104.8</b>	<b>163.1</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	3.7	4.8	6.2	9.2
Safety Costs Not Internalized by Drivers	0.8	1.3	2.7	5.0
Loss in Fuel Tax Revenue	9.7	13.1	16.5	28.7
<b>Subtotal - Incremental External Costs</b>	<b>14.2</b>	<b>19.2</b>	<b>25.4</b>	<b>42.9</b>
<b>Total Incremental Social Costs</b>	<b>64.9</b>	<b>86.7</b>	<b>130.2</b>	<b>206.0</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	47.2	63.5	81.2	135.9
Benefits from Additional Driving	8.6	11.1	14.1	20.0
Less Frequent Refueling	0.7	1.3	0.6	-0.3
<b>Subtotal - Incremental Private Benefits</b>	<b>56.5</b>	<b>75.8</b>	<b>95.9</b>	<b>155.5</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	1.8	2.5	3.2	5.6
Reduced Climate Damages, Average SCC	7.1	9.6	12.4	21.3
Reduced Health Damages	0.6	0.7	1.0	2.0
<b>Subtotal - Incremental External Benefits</b>	<b>9.5</b>	<b>12.8</b>	<b>16.6</b>	<b>28.9</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>88.3</b>	<b>118.8</b>	<b>151.6</b>	<b>252.3</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
<b>Net Incremental Social Benefits, Average SCC</b>	<b>23.4</b>	<b>32.1</b>	<b>21.4</b>	<b>46.4</b>

**Table 219 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Passenger Car Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Passenger Car Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	12.0	17.4	29.1	49.9
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.0	0.1	0.4
Safety Costs Internalized by Drivers	0.2	0.5	1.1	3.2
<b>Subtotal - Incremental Private Costs</b>	<b>12.2</b>	<b>17.9</b>	<b>30.3</b>	<b>53.5</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	-0.6	-1.0	-0.1	1.1
Safety Costs Not Internalized by Drivers	-0.6	-1.1	0.8	1.7
Loss in Fuel Tax Revenue	-0.1	0.0	1.0	5.6
<b>Subtotal - Incremental External Costs</b>	<b>-1.3</b>	<b>-2.2</b>	<b>1.7</b>	<b>8.4</b>
<b>Total Incremental Social Costs</b>	<b>10.9</b>	<b>15.7</b>	<b>32.0</b>	<b>61.9</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	0.4	1.7	6.9	28.8
Benefits from Additional Driving	0.4	0.9	1.8	4.7
Less Frequent Refueling	1.5	3.0	2.8	1.3
<b>Subtotal - Incremental Private Benefits</b>	<b>2.3</b>	<b>5.6</b>	<b>11.4</b>	<b>34.9</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	0.0	0.0	0.2	1.1
Reduced Climate Damages, Average SCC	0.0	0.1	1.0	4.5
Reduced Health Damages	-0.1	-0.1	0.0	0.6
<b>Subtotal - Incremental External Benefits</b>	<b>-0.1</b>	<b>0.0</b>	<b>1.1</b>	<b>6.2</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>2.0</b>	<b>5.9</b>	<b>15.5</b>	<b>55.5</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
	<b>-8.9</b>	<b>-9.8</b>	<b>-16.5</b>	<b>-6.4</b>

**Table 220 - Incremental Benefits and Costs for Calendar Years 2022-2050 for Light Truck Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC**

<b>Incremental Benefits and Costs for Calendar Years 2022-2050 for Light Truck Fleet Produced Through MY 2050 (2021\$ BILLIONS), 7% Percent Discount Rate, by Alternative, Average SCC</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Private Costs</b>				
Technology Costs to Increase Fuel Economy	33.6	43.4	67.0	99.5
Increased Maintenance and Repair Costs	0.0	0.0	0.0	0.0
Sacrifice in Other Vehicle Attributes	0.0	0.0	0.0	0.0
Consumer Surplus Loss from Reduced New Vehicle Sales	0.0	0.1	0.2	0.8
Safety Costs Internalized by Drivers	4.8	6.1	7.4	9.3
<b>Subtotal - Incremental Private Costs</b>	<b>38.5</b>	<b>49.6</b>	<b>74.5</b>	<b>109.6</b>
<b>External Costs</b>				
Congestion and Noise Costs from Rebound-Effect Driving	4.2	5.8	6.3	8.1
Safety Costs Not Internalized by Drivers	1.5	2.4	1.9	3.3
Loss in Fuel Tax Revenue	9.8	13.1	15.5	23.1
<b>Subtotal - Incremental External Costs</b>	<b>15.5</b>	<b>21.4</b>	<b>23.7</b>	<b>34.5</b>
<b>Total Incremental Social Costs</b>	<b>53.9</b>	<b>71.0</b>	<b>98.3</b>	<b>144.1</b>
<b>Private Benefits</b>				
Reduced Fuel Costs	46.8	61.7	74.3	107.0
Benefits from Additional Driving	8.2	10.2	12.3	15.3
Less Frequent Refueling	-0.8	-1.7	-2.1	-1.7
<b>Subtotal - Incremental Private Benefits</b>	<b>54.2</b>	<b>70.2</b>	<b>84.5</b>	<b>120.6</b>
<b>External Benefits</b>				
Reduction in Petroleum Market Externality	1.9	2.5	3.0	4.5
Reduced Climate Damages, Average SCC	7.1	9.4	11.4	16.8
Reduced Health Damages	0.6	0.8	1.0	1.4
<b>Subtotal - Incremental External Benefits</b>	<b>9.6</b>	<b>12.8</b>	<b>15.5</b>	<b>22.7</b>
<b>Total Incremental Social Benefits, Average SCC</b>	<b>86.2</b>	<b>112.8</b>	<b>136.2</b>	<b>196.9</b>
<b>Net Incremental Social Benefits, Average SCC</b>				
	<b>32.3</b>	<b>41.9</b>	<b>37.9</b>	<b>52.8</b>

## Technology Costs and Civil Penalties per Vehicle, by Model Year

**Table 221 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Total)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	138	599	1,009	1,277	1,684	1,758	1,745	1,769	1,800	1,931	1,889
Alternative PC1LT3	138	599	1,009	1,277	1,684	2,070	2,200	2,287	2,345	2,475	2,490
Alternative PC2LT4	138	599	1,009	1,277	1,684	2,127	2,322	2,485	2,577	2,741	2,821
Alternative PC3LT5	138	599	1,009	1,277	1,684	2,248	2,488	2,726	2,897	3,125	3,492
Alternative PC6LT8	138	599	1,009	1,277	1,684	2,425	2,893	3,465	4,115	4,684	5,375

**Table 222 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Total)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	203	383	791	947	1,288	1,323	1,292	1,271	1,276	1,279	1,227
Alternative PC1LT3	203	383	791	947	1,288	1,615	1,690	1,696	1,687	1,685	1,614
Alternative PC2LT4	203	383	791	947	1,288	1,673	1,789	1,887	1,867	1,850	1,784
Alternative PC3LT5	203	383	791	947	1,288	1,794	1,953	2,153	2,145	2,171	2,244
Alternative PC6LT8	203	383	791	947	1,288	1,998	2,384	2,860	3,279	3,542	3,833

**Table 223 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Total)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	98	721	1,123	1,440	1,873	1,962	1,954	1,999	2,043	2,237	2,202
Alternative PC1LT3	98	721	1,123	1,440	1,873	2,281	2,434	2,558	2,649	2,845	2,904
Alternative PC2LT4	98	721	1,123	1,440	1,873	2,339	2,568	2,757	2,905	3,160	3,312
Alternative PC3LT5	98	721	1,123	1,440	1,873	2,459	2,734	2,988	3,244	3,572	4,087
Alternative PC6LT8	98	721	1,123	1,440	1,873	2,623	3,127	3,740	4,498	5,217	6,108

**Table 224 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	446	346	966	1,444	1,571	1,425	1,651	1,820	1,912	2,024	1,981
Alternative PC1LT3	446	346	966	1,444	1,571	1,567	1,799	1,950	2,017	2,116	2,064
Alternative PC2LT4	446	346	966	1,444	1,571	1,648	1,867	2,059	2,181	2,329	2,272
Alternative PC3LT5	446	346	966	1,444	1,571	1,721	1,951	2,191	2,363	2,554	2,561
Alternative PC6LT8	446	346	966	1,444	1,571	1,971	2,440	2,913	3,405	3,943	4,444



**Table 225 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Ford)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	76	1,467	2,173	2,234	2,474	2,496	2,392	2,285	2,154	2,191	2,152
Alternative PC1LT3	76	1,467	2,173	2,234	2,474	2,903	3,089	3,175	3,026	2,994	2,933
Alternative PC2LT4	76	1,467	2,173	2,234	2,474	3,062	3,258	3,368	3,218	3,340	3,488
Alternative PC3LT5	76	1,467	2,173	2,234	2,474	3,062	3,258	3,368	3,496	3,706	3,951
Alternative PC6LT8	76	1,467	2,173	2,234	2,474	3,224	3,650	4,030	4,877	5,419	6,095

**Table 226 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (GM)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	283	160	1,532	1,919	2,069	2,009	1,890	1,756	1,653	2,318	2,204
Alternative PC1LT3	283	160	1,532	1,919	2,069	2,821	2,866	2,960	3,043	3,822	3,877
Alternative PC2LT4	283	160	1,532	1,919	2,069	2,886	3,013	3,098	3,287	4,107	4,252
Alternative PC3LT5	283	160	1,532	1,919	2,069	2,964	3,164	3,353	3,653	4,689	5,310
Alternative PC6LT8	283	160	1,532	1,919	2,069	3,175	3,633	4,111	4,749	6,098	7,180

**Table 227 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	297	310	419	1,037	1,177	1,249	1,290	1,340	1,370	1,325
Alternative PC1LT3	0	297	310	419	1,037	1,332	1,391	1,421	1,458	1,477	1,424
Alternative PC2LT4	0	297	310	419	1,037	1,350	1,423	1,485	1,565	1,582	1,559
Alternative PC3LT5	0	297	310	419	1,037	1,670	1,782	1,839	1,959	1,960	1,928
Alternative PC6LT8	0	297	310	419	1,037	1,907	2,194	2,552	2,708	3,562	3,826

**Table 228 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	560	554	960	1,497	1,537	1,536	1,581	1,632	1,692	1,652
Alternative PC1LT3	0	560	554	960	1,497	2,698	3,377	3,356	3,343	3,277	3,178
Alternative PC2LT4	0	560	554	960	1,497	2,779	3,796	3,751	3,713	3,661	3,569
Alternative PC3LT5	0	560	554	960	1,497	2,859	3,732	3,693	3,666	3,721	5,256
Alternative PC6LT8	0	560	554	960	1,497	3,116	4,077	4,505	4,976	5,482	7,499

**Table 229 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	78	564	566	1,173	1,084	1,018	979	1,053	1,101	1,087
Alternative PC1LT3	0	78	564	566	1,173	1,638	1,710	2,029	2,087	2,134	2,100
Alternative PC2LT4	0	78	564	566	1,173	1,708	1,861	3,142	3,210	3,394	3,322
Alternative PC3LT5	0	78	564	566	1,173	1,785	2,019	3,436	3,545	3,776	5,824
Alternative PC6LT8	0	78	564	566	1,173	2,015	2,587	4,435	5,270	5,618	7,792

**Table 230 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (JLR)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	499	1,485	1,965	1,907	1,488	1,673	1,569	1,510	1,596	1,610	1,635
Alternative PC1LT3	499	1,485	1,965	1,907	1,488	1,878	1,977	2,125	2,535	2,376	2,474
Alternative PC2LT4	499	1,485	1,965	1,907	1,488	1,936	2,127	2,344	2,836	2,774	3,006
Alternative PC3LT5	499	1,485	1,965	1,907	1,488	2,008	2,280	2,584	3,173	3,192	3,558
Alternative PC6LT8	499	1,485	1,965	1,907	1,488	2,229	2,771	3,350	4,302	4,673	5,513

**Table 231 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC1LT3	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC2LT4	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC3LT5	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC6LT8	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543

**Table 232 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Lucid)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	-62



**Table 233 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mazda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	613	616	618	1,496	1,676	1,816	1,910	2,006	2,072	2,044
Alternative PC1LT3	0	613	616	618	1,496	1,712	1,850	1,943	2,036	2,101	2,071
Alternative PC2LT4	0	613	616	618	1,496	1,738	1,864	1,973	2,076	2,138	2,106
Alternative PC3LT5	0	613	616	618	1,496	5,613	5,634	7,574	7,513	7,271	7,007
Alternative PC6LT8	0	613	616	618	1,496	6,049	6,091	9,445	12,199	11,667	11,539

**Table 234 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	638	767	774	1,101	1,983	1,901	1,578	1,750	1,934	2,066	2,084
Alternative PC1LT3	638	767	774	1,101	1,983	2,052	1,885	1,974	2,152	2,263	2,267
Alternative PC2LT4	638	767	774	1,101	1,983	2,133	2,044	2,157	2,232	2,371	2,450
Alternative PC3LT5	638	767	774	1,101	1,983	2,213	2,210	2,417	2,553	2,721	2,862
Alternative PC6LT8	638	767	774	1,101	1,983	2,454	2,745	3,238	3,754	4,287	4,877

**Table 235 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	226	253	1,296	1,424	1,976	1,846	1,745	1,635	1,541	1,400	1,356
Alternative PC1LT3	226	253	1,296	1,424	1,976	1,951	2,002	2,060	2,157	1,937	1,904
Alternative PC2LT4	226	253	1,296	1,424	1,976	2,018	2,186	2,336	2,550	2,041	1,992
Alternative PC3LT5	226	253	1,296	1,424	1,976	2,106	2,376	2,620	2,958	3,242	3,136
Alternative PC6LT8	226	253	1,296	1,424	1,976	2,387	2,987	3,559	4,320	4,308	5,022

**Table 236 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Nissan)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34	1,292	1,410	1,760	1,873	2,295	2,196	2,232	2,258	2,245	2,174
Alternative PC1LT3	34	1,292	1,410	1,760	1,873	2,390	2,450	2,470	2,482	2,452	2,370
Alternative PC2LT4	34	1,292	1,410	1,760	1,873	2,429	2,691	2,752	2,810	2,766	2,714
Alternative PC3LT5	34	1,292	1,410	1,760	1,873	2,503	2,839	2,974	3,055	3,019	3,015
Alternative PC6LT8	34	1,292	1,410	1,760	1,873	2,716	3,392	3,779	3,947	4,321	4,822

**Table 237 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Stellantis)**

Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Stellantis)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	465	1,060	1,698	2,588	2,562	2,628	2,508	2,630	2,727	2,768	2,736
Alternative PC1LT3	465	1,060	1,698	2,588	2,562	2,842	2,901	3,016	3,151	3,238	3,586
Alternative PC2LT4	465	1,060	1,698	2,588	2,562	2,917	3,055	3,380	3,590	3,739	4,167
Alternative PC3LT5	465	1,060	1,698	2,588	2,562	2,978	3,198	3,610	3,921	4,134	4,672
Alternative PC6LT8	465	1,060	1,698	2,588	2,562	3,195	3,673	4,385	5,777	6,271	7,238

**Table 238 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	383	326	373	1,418	1,658	1,838	1,959	2,101	2,192	2,175
Alternative PC1LT3	0	383	326	373	1,418	1,659	1,839	1,960	2,101	2,193	2,175
Alternative PC2LT4	0	383	326	373	1,418	1,661	1,839	1,960	2,101	2,193	2,175
Alternative PC3LT5	0	383	326	373	1,418	1,676	1,847	1,969	2,109	2,200	2,180
Alternative PC6LT8	0	383	326	373	1,418	1,712	1,909	2,683	3,137	3,141	3,082

**Table 239 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 240 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	163	235	254	1,100	1,177	1,327	1,414	1,516	1,597	1,586
Alternative PC1LT3	0	163	235	254	1,100	1,178	1,328	1,415	1,516	1,597	1,586
Alternative PC2LT4	0	163	235	254	1,100	1,181	1,331	1,419	1,524	1,606	1,659
Alternative PC3LT5	0	163	235	254	1,100	1,187	1,444	1,589	1,727	1,831	1,958
Alternative PC6LT8	0	163	235	254	1,100	1,239	1,790	2,261	2,761	3,261	3,471



**Table 241 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	86	55	913	850	758	686	553	781	1,023	1,052
Alternative PC1LT3	0	86	55	913	850	941	1,036	1,067	1,120	1,310	1,368
Alternative PC2LT4	0	86	55	913	850	991	1,163	1,265	1,309	1,531	1,618
Alternative PC3LT5	0	86	55	913	850	1,053	1,290	1,463	1,599	1,876	2,023
Alternative PC6LT8	0	86	55	913	850	1,248	1,800	2,265	2,791	3,430	3,919

**Table 242 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (VWA)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Total Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	295	1,078	1,291	1,571	1,733	1,921	1,836	1,982	2,065	2,122	2,080
Alternative PC1LT3	295	1,078	1,291	1,571	1,733	2,090	2,109	2,242	2,492	2,533	2,466
Alternative PC2LT4	295	1,078	1,291	1,571	1,733	2,167	2,252	2,426	2,775	2,765	2,745
Alternative PC3LT5	295	1,078	1,291	1,571	1,733	2,249	2,396	2,664	3,081	3,108	3,191
Alternative PC6LT8	295	1,078	1,291	1,571	1,733	2,498	2,902	3,449	4,242	4,600	5,177

**Table 243 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	821	592	1,842	2,016	1,987	1,781	1,894	1,924	1,886	1,893	1,781
Alternative PC1LT3	821	592	1,842	2,016	1,987	1,870	1,897	1,926	1,887	1,893	1,780
Alternative PC2LT4	821	592	1,842	2,016	1,987	1,959	1,886	1,903	1,887	1,894	1,780
Alternative PC3LT5	821	592	1,842	2,016	1,987	2,048	1,893	1,910	1,894	1,900	1,785
Alternative PC6LT8	821	592	1,842	2,016	1,987	2,328	2,381	2,583	2,835	3,187	3,491

**Table 244 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Ford)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	6	1,393	1,645	1,497	1,337	1,233	1,105	934	950	916
Alternative PC1LT3	0	6	1,393	1,645	1,497	1,419	1,313	1,183	1,031	1,083	1,081
Alternative PC2LT4	0	6	1,393	1,645	1,497	2,067	1,944	1,800	1,660	1,647	1,627
Alternative PC3LT5	0	6	1,393	1,645	1,497	2,067	1,944	1,800	1,633	1,609	1,641
Alternative PC6LT8	0	6	1,393	1,645	1,497	2,225	2,100	2,313	6,217	6,560	6,900

**Table 245 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (GM)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	473	8	1,557	1,700	1,933	1,772	1,675	1,568	1,504	1,433	1,363
Alternative PC1LT3	473	8	1,557	1,700	1,933	2,860	2,817	3,154	3,052	3,106	2,973
Alternative PC2LT4	473	8	1,557	1,700	1,933	2,949	3,005	3,062	3,011	2,999	2,912
Alternative PC3LT5	473	8	1,557	1,700	1,933	3,041	3,208	3,507	3,607	4,310	5,805
Alternative PC6LT8	473	8	1,557	1,700	1,933	3,326	3,843	4,491	5,027	6,037	8,134

**Table 246 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	1	305	309	429	881	970	961	950	948	940	881
Alternative PC1LT3	1	305	309	429	881	1,059	1,043	1,026	1,017	1,002	939
Alternative PC2LT4	1	305	309	429	881	1,060	1,044	1,026	1,017	1,003	939
Alternative PC3LT5	1	305	309	429	881	1,556	1,539	1,505	1,477	1,441	1,356
Alternative PC6LT8	1	305	309	429	881	1,836	1,912	2,140	2,060	2,272	2,240

**Table 247 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	882	866	1,146	1,646	1,703	1,710	1,717	1,730	1,752	1,685
Alternative PC1LT3	0	882	866	1,146	1,646	2,841	3,797	3,736	3,680	3,563	3,390
Alternative PC2LT4	0	882	866	1,146	1,646	2,927	3,902	3,834	3,772	3,705	3,526
Alternative PC3LT5	0	882	866	1,146	1,646	3,013	4,122	4,042	3,967	3,856	3,739
Alternative PC6LT8	0	882	866	1,146	1,646	3,299	4,587	4,939	5,302	5,717	6,074

**Table 248 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	42	853	820	914	838	783	755	788	811	787
Alternative PC1LT3	0	42	853	820	914	1,721	1,712	1,701	1,701	1,718	1,648
Alternative PC2LT4	0	42	853	820	914	1,788	1,863	3,600	3,522	3,440	3,272
Alternative PC3LT5	0	42	853	820	914	1,867	2,024	3,948	3,839	3,756	3,610
Alternative PC6LT8	0	42	853	820	914	2,105	2,655	4,971	5,948	5,762	5,387



**Table 249 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (JLR)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	4,392	4,108	3,902	3,739	3,394	3,142	2,939	2,876	2,849	2,694
Alternative PC1LT3	0	4,392	4,108	3,902	3,739	3,395	3,148	2,955	2,890	2,856	2,698
Alternative PC2LT4	0	4,392	4,108	3,902	3,739	3,397	3,150	2,954	2,890	2,856	2,695
Alternative PC3LT5	0	4,392	4,108	3,902	3,739	3,393	3,300	3,222	3,077	3,110	3,018
Alternative PC6LT8	0	4,392	4,108	3,902	3,739	3,558	3,912	4,172	4,422	4,816	5,235

**Table 250 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC1LT3	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC2LT4	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC3LT5	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC6LT8	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543

**Table 251 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Lucid)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	-62

**Table 252 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mazda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	773	688	750	1,299	1,503	1,549	1,546	1,561	1,570	1,497
Alternative PC1LT3	0	773	688	750	1,299	1,587	1,631	1,623	1,633	1,639	1,562
Alternative PC2LT4	0	773	688	750	1,299	1,675	1,630	1,623	1,634	1,639	1,563
Alternative PC3LT5	0	773	688	750	1,299	1,779	1,848	12,453	12,097	11,524	10,900
Alternative PC6LT8	0	773	688	750	1,299	2,074	2,520	14,536	14,027	13,305	12,943

**Table 253 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	909	1,271	1,254	1,286	1,979	1,764	1,612	1,716	1,821	1,899	1,885
Alternative PC1LT3	909	1,271	1,254	1,286	1,979	1,861	1,802	1,766	1,867	1,941	1,925
Alternative PC2LT4	909	1,271	1,254	1,286	1,979	1,950	1,970	1,892	1,914	1,984	1,965
Alternative PC3LT5	909	1,271	1,254	1,286	1,979	2,038	2,154	2,177	2,192	2,222	2,177
Alternative PC6LT8	909	1,271	1,254	1,286	1,979	2,305	2,749	3,074	3,489	3,880	4,279

**Table 254 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	403	358	1,189	1,337	2,131	1,974	1,853	1,719	1,605	1,450	1,388
Alternative PC1LT3	403	358	1,189	1,337	2,131	1,975	1,900	1,870	1,852	1,638	1,614
Alternative PC2LT4	403	358	1,189	1,337	2,131	2,019	2,099	2,169	2,268	1,652	1,608
Alternative PC3LT5	403	358	1,189	1,337	2,131	2,122	2,313	2,467	2,715	1,986	1,928
Alternative PC6LT8	403	358	1,189	1,337	2,131	2,433	2,970	3,483	4,164	3,104	3,775

**Table 255 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Nissan)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	58	684	838	1,108	1,288	1,390	1,314	1,324	1,379	1,383	1,336
Alternative PC1LT3	58	684	838	1,108	1,288	1,391	1,315	1,325	1,379	1,384	1,336
Alternative PC2LT4	58	684	838	1,108	1,288	1,396	1,517	1,533	1,490	1,498	1,527
Alternative PC3LT5	58	684	838	1,108	1,288	1,471	1,661	1,749	1,700	1,731	1,754
Alternative PC6LT8	58	684	838	1,108	1,288	1,674	2,270	2,575	2,813	3,046	3,387

**Table 256 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Stellantis)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	1,707	883	3,107	3,545	3,679	3,706	3,526	3,286	3,283	3,269	3,177
Alternative PC1LT3	1,707	883	3,107	3,545	3,679	3,785	3,696	3,433	3,416	3,395	3,299
Alternative PC2LT4	1,707	883	3,107	3,545	3,679	3,869	3,868	3,682	3,652	3,606	3,538
Alternative PC3LT5	1,707	883	3,107	3,545	3,679	3,945	4,051	3,955	4,041	3,907	3,890
Alternative PC6LT8	1,707	883	3,107	3,545	3,679	4,227	4,638	4,860	5,334	5,566	5,907



**Table 257 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	942	885	1,252	1,646	1,627	1,620	1,556	1,512	1,470	1,351
Alternative PC1LT3	0	942	885	1,252	1,646	1,627	1,620	1,556	1,513	1,470	1,351
Alternative PC2LT4	0	942	885	1,252	1,646	1,642	1,620	1,557	1,513	1,470	1,351
Alternative PC3LT5	0	942	885	1,252	1,646	1,760	1,690	1,621	1,571	1,524	1,402
Alternative PC6LT8	0	942	885	1,252	1,646	2,041	2,056	2,156	2,539	2,410	2,414

**Table 258 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 259 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	118	149	247	907	988	1,084	1,109	1,146	1,169	1,124
Alternative PC1LT3	0	118	149	247	907	989	1,085	1,109	1,146	1,170	1,124
Alternative PC2LT4	0	118	149	247	907	989	1,085	1,109	1,146	1,170	1,124
Alternative PC3LT5	0	118	149	247	907	1,007	1,108	1,143	1,195	1,222	1,174
Alternative PC6LT8	0	118	149	247	907	1,093	1,465	1,754	2,035	2,341	2,328

**Table 260 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	25	-22	317	344	340	316	156	279	423	428
Alternative PC1LT3	0	25	-22	317	344	362	367	233	342	464	500
Alternative PC2LT4	0	25	-22	317	344	389	423	314	427	542	643
Alternative PC3LT5	0	25	-22	317	344	416	478	396	523	630	863
Alternative PC6LT8	0	25	-22	317	344	496	1,000	1,265	1,801	2,307	2,486

**Table 261 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (VWA)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Passenger Car Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	686	697	1,046	1,224	1,731	2,340	2,001	1,998	2,000	2,040	1,955
Alternative PC1LT3	686	697	1,046	1,224	1,731	2,422	2,088	2,076	2,071	2,085	1,996
Alternative PC2LT4	686	697	1,046	1,224	1,731	2,504	2,212	2,180	2,168	2,177	2,087
Alternative PC3LT5	686	697	1,046	1,224	1,731	2,600	2,341	2,385	2,385	2,332	2,307
Alternative PC6LT8	686	697	1,046	1,224	1,731	2,875	2,818	3,156	3,516	3,737	4,216

**Table 262 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	78	76	899	1,188	1,103	1,433	1,727	1,936	2,144	2,163
Alternative PC1LT3	0	78	76	899	1,188	1,295	1,712	1,971	2,133	2,318	2,323
Alternative PC2LT4	0	78	76	899	1,188	1,369	1,850	2,197	2,442	2,725	2,722
Alternative PC3LT5	0	78	76	899	1,188	1,428	2,002	2,437	2,781	3,147	3,276
Alternative PC6LT8	0	78	76	899	1,188	1,649	2,494	3,201	3,909	4,624	5,321

**Table 263 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Ford)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	86	1,643	2,261	2,296	2,574	2,612	2,507	2,401	2,276	2,316	2,277
Alternative PC1LT3	86	1,643	2,261	2,296	2,574	3,052	3,264	3,371	3,224	3,186	3,120
Alternative PC2LT4	86	1,643	2,261	2,296	2,574	3,161	3,388	3,521	3,372	3,510	3,677
Alternative PC3LT5	86	1,643	2,261	2,296	2,574	3,161	3,389	3,521	3,680	3,917	4,187
Alternative PC6LT8	86	1,643	2,261	2,296	2,574	3,324	3,803	4,197	4,746	5,305	6,013

**Table 264 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (GM)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (GM)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	220	206	1,525	1,977	2,104	2,068	1,943	1,803	1,691	2,542	2,418
Alternative PC1LT3	220	206	1,525	1,977	2,104	2,811	2,878	2,912	3,041	4,003	4,107
Alternative PC2LT4	220	206	1,525	1,977	2,104	2,871	3,015	3,107	3,356	4,387	4,593
Alternative PC3LT5	220	206	1,525	1,977	2,104	2,945	3,153	3,316	3,664	4,785	5,183
Alternative PC6LT8	220	206	1,525	1,977	2,104	3,137	3,581	4,018	4,681	6,114	6,936



**Table 265 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	288	312	410	1,180	1,363	1,504	1,590	1,688	1,757	1,726
Alternative PC1LT3	0	288	312	410	1,180	1,575	1,698	1,768	1,848	1,903	1,862
Alternative PC2LT4	0	288	312	410	1,180	1,610	1,758	1,885	2,049	2,103	2,121
Alternative PC3LT5	0	288	312	410	1,180	1,773	1,996	2,131	2,384	2,425	2,450
Alternative PC6LT8	0	288	312	410	1,180	1,969	2,443	2,910	3,276	4,714	5,270

**Table 266 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	94	132	724	1,315	1,338	1,330	1,422	1,516	1,619	1,613
Alternative PC1LT3	0	94	132	724	1,315	2,528	2,878	2,909	2,943	2,932	2,922
Alternative PC2LT4	0	94	132	724	1,315	2,601	3,671	3,653	3,643	3,609	3,622
Alternative PC3LT5	0	94	132	724	1,315	2,675	3,271	3,283	3,310	3,559	7,114
Alternative PC6LT8	0	94	132	724	1,315	2,897	3,474	3,999	4,593	5,199	9,240

**Table 267 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	124	223	284	1,451	1,344	1,264	1,211	1,329	1,409	1,407
Alternative PC1LT3	0	124	223	284	1,451	1,551	1,707	2,368	2,488	2,574	2,582
Alternative PC2LT4	0	124	223	284	1,451	1,625	1,860	2,671	2,886	3,346	3,376
Alternative PC3LT5	0	124	223	284	1,451	1,699	2,013	2,910	3,240	3,797	8,203
Alternative PC6LT8	0	124	223	284	1,451	1,920	2,518	3,887	4,571	5,467	10,370

**Table 268 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (JLR)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	513	1,411	1,914	1,862	1,440	1,637	1,536	1,481	1,569	1,583	1,613
Alternative PC1LT3	513	1,411	1,914	1,862	1,440	1,846	1,952	2,107	2,527	2,366	2,469
Alternative PC2LT4	513	1,411	1,914	1,862	1,440	1,905	2,105	2,331	2,835	2,772	3,012
Alternative PC3LT5	513	1,411	1,914	1,862	1,440	1,979	2,258	2,571	3,175	3,194	3,569
Alternative PC6LT8	513	1,411	1,914	1,862	1,440	2,201	2,748	3,333	4,300	4,670	5,520

**Table 269 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 270 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Lucid)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 271 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mazda)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	586	604	598	1,524	1,701	1,853	1,961	2,068	2,143	2,121
Alternative PC1LT3	0	586	604	598	1,524	1,729	1,880	1,986	2,092	2,166	2,142
Alternative PC2LT4	0	586	604	598	1,524	1,746	1,896	2,020	2,137	2,208	2,183
Alternative PC3LT5	0	586	604	598	1,524	6,147	6,156	6,911	6,881	6,676	6,452
Alternative PC6LT8	0	586	604	598	1,524	6,602	6,581	8,755	11,949	11,439	11,339

**Table 272 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	367	304	363	953	1,987	2,006	1,553	1,775	2,019	2,194	2,238
Alternative PC1LT3	367	304	363	953	1,987	2,198	1,947	2,129	2,366	2,509	2,531
Alternative PC2LT4	367	304	363	953	1,987	2,272	2,100	2,354	2,471	2,666	2,824
Alternative PC3LT5	367	304	363	953	1,987	2,346	2,253	2,594	2,824	3,103	3,395
Alternative PC6LT8	367	304	363	953	1,987	2,567	2,742	3,359	3,952	4,596	5,340



**Table 273 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	131	1,412	1,513	1,822	1,720	1,641	1,553	1,479	1,350	1,325
Alternative PC1LT3	0	131	1,412	1,513	1,822	1,928	2,100	2,242	2,451	2,229	2,190
Alternative PC2LT4	0	131	1,412	1,513	1,822	2,017	2,269	2,496	2,821	2,422	2,371
Alternative PC3LT5	0	131	1,412	1,513	1,822	2,091	2,437	2,765	3,191	4,470	4,337
Alternative PC6LT8	0	131	1,412	1,513	1,822	2,342	3,003	3,631	4,470	5,480	6,260

**Table 274 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Nissan)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	2,082	2,103	2,503	2,517	3,274	3,141	3,197	3,199	3,181	3,090
Alternative PC1LT3	0	2,082	2,103	2,503	2,517	3,466	3,659	3,683	3,658	3,611	3,498
Alternative PC2LT4	0	2,082	2,103	2,503	2,517	3,540	3,941	4,039	4,216	4,142	4,013
Alternative PC3LT5	0	2,082	2,103	2,503	2,517	3,614	4,094	4,264	4,497	4,414	4,403
Alternative PC6LT8	0	2,082	2,103	2,503	2,517	3,835	4,584	5,041	5,146	5,694	6,399

**Table 275 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Stellantis)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	264	1,086	1,503	2,464	2,422	2,495	2,383	2,550	2,659	2,707	2,681
Alternative PC1LT3	264	1,086	1,503	2,464	2,422	2,726	2,804	2,966	3,118	3,218	3,622
Alternative PC2LT4	264	1,086	1,503	2,464	2,422	2,800	2,957	3,344	3,583	3,755	4,246
Alternative PC3LT5	264	1,086	1,503	2,464	2,422	2,859	3,094	3,568	3,906	4,162	4,770
Alternative PC6LT8	264	1,086	1,503	2,464	2,422	3,069	3,556	4,328	5,830	6,358	7,405

**Table 276 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	284	234	237	1,384	1,663	1,870	2,018	2,186	2,299	2,298
Alternative PC1LT3	0	284	234	237	1,384	1,663	1,870	2,018	2,187	2,300	2,298
Alternative PC2LT4	0	284	234	237	1,384	1,663	1,870	2,018	2,187	2,300	2,297
Alternative PC3LT5	0	284	234	237	1,384	1,663	1,870	2,019	2,187	2,300	2,297
Alternative PC6LT8	0	284	234	237	1,384	1,664	1,887	2,758	3,223	3,248	3,182

**Table 277 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 278 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	193	289	259	1,208	1,280	1,458	1,578	1,716	1,831	1,841
Alternative PC1LT3	0	193	289	259	1,208	1,280	1,459	1,578	1,716	1,831	1,841
Alternative PC2LT4	0	193	289	259	1,208	1,285	1,463	1,585	1,727	1,844	1,955
Alternative PC3LT5	0	193	289	259	1,208	1,285	1,625	1,826	2,014	2,165	2,395
Alternative PC6LT8	0	193	289	259	1,208	1,319	1,965	2,529	3,148	3,762	4,106

**Table 279 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	113	86	1,142	1,038	910	819	696	962	1,243	1,283
Alternative PC1LT3	0	113	86	1,142	1,038	1,151	1,277	1,364	1,400	1,620	1,688
Alternative PC2LT4	0	113	86	1,142	1,038	1,211	1,430	1,603	1,627	1,893	1,979
Alternative PC3LT5	0	113	86	1,142	1,038	1,284	1,582	1,842	1,986	2,331	2,454
Alternative PC6LT8	0	113	86	1,142	1,038	1,521	2,087	2,619	3,145	3,839	4,451

**Table 280 - Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (VWA)**

<b>Estimated Average Per Vehicle Technology and Civil Penalties Costs (\$), Light Truck Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	15	1,328	1,441	1,769	1,734	1,693	1,747	1,974	2,100	2,168	2,149
Alternative PC1LT3	15	1,328	1,441	1,769	1,734	1,910	2,120	2,331	2,719	2,778	2,725
Alternative PC2LT4	15	1,328	1,441	1,769	1,734	1,984	2,273	2,556	3,101	3,087	3,107
Alternative PC3LT5	15	1,328	1,441	1,769	1,734	2,058	2,426	2,811	3,455	3,531	3,682
Alternative PC6LT8	15	1,328	1,441	1,769	1,734	2,294	2,947	3,604	4,628	5,068	5,710



## Regulatory Costs and Civil Penalties per Vehicle, by Model Year

Table 281 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Total)

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Total)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	138	744	1,195	1,500	1,920	1,998	1,977	1,993	2,012	2,132	2,077
Alternative PC1LT3	138	744	1,195	1,500	1,920	2,309	2,432	2,510	2,558	2,676	2,678
Alternative PC2LT4	138	744	1,195	1,500	1,920	2,367	2,555	2,708	2,790	2,942	3,008
Alternative PC3LT5	138	744	1,195	1,500	1,920	2,488	2,720	2,950	3,110	3,326	3,679
Alternative PC6LT8	138	744	1,195	1,500	1,920	2,664	3,126	3,689	4,328	4,886	5,562

**Table 282 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Total)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Total)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	159	436	868	1,078	1,417	1,462	1,412	1,389	1,386	1,383	1,312
Alternative PC1LT3	159	436	868	1,078	1,417	1,782	1,861	1,867	1,847	1,817	1,731
Alternative PC2LT4	159	436	868	1,078	1,417	1,847	1,966	2,087	2,069	2,033	1,966
Alternative PC3LT5	159	436	868	1,078	1,417	1,964	2,136	2,373	2,391	2,441	2,517
Alternative PC6LT8	159	436	868	1,078	1,417	2,166	2,616	3,175	3,671	4,039	4,393

**Table 283 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Total)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Total)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	125	918	1,367	1,708	2,159	2,248	2,239	2,270	2,302	2,484	2,438
Alternative PC1LT3	125	918	1,367	1,708	2,159	2,555	2,696	2,805	2,886	3,078	3,125
Alternative PC2LT4	125	918	1,367	1,708	2,159	2,609	2,826	2,992	3,122	3,369	3,502
Alternative PC3LT5	125	918	1,367	1,708	2,159	2,732	2,990	3,213	3,441	3,740	4,232
Alternative PC6LT8	125	918	1,367	1,708	2,159	2,896	3,360	3,922	4,628	5,281	6,118

**Table 284 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	446	491	1,127	1,613	1,703	1,577	1,781	1,948	2,030	2,124	2,066
Alternative PC1LT3	446	491	1,127	1,613	1,703	1,719	1,929	2,078	2,135	2,216	2,150
Alternative PC2LT4	446	491	1,127	1,613	1,703	1,800	1,997	2,188	2,299	2,429	2,357
Alternative PC3LT5	446	491	1,127	1,613	1,703	1,873	2,081	2,320	2,482	2,654	2,646
Alternative PC6LT8	446	491	1,127	1,613	1,703	2,123	2,571	3,042	3,524	4,043	4,529

**Table 285 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Ford)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Ford)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	76	1,737	2,470	2,526	2,741	2,759	2,652	2,541	2,407	2,434	2,384
Alternative PC1LT3	76	1,737	2,470	2,526	2,741	3,167	3,349	3,432	3,278	3,237	3,165
Alternative PC2LT4	76	1,737	2,470	2,526	2,741	3,325	3,519	3,624	3,470	3,583	3,720
Alternative PC3LT5	76	1,737	2,470	2,526	2,741	3,325	3,518	3,625	3,748	3,949	4,183
Alternative PC6LT8	76	1,737	2,470	2,526	2,741	3,488	3,910	4,287	5,130	5,662	6,327

**Table 286 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (GM)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (GM)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	283	355	1,728	2,171	2,313	2,250	2,128	1,991	1,884	2,545	2,422
Alternative PC1LT3	283	355	1,728	2,171	2,313	3,063	3,104	3,195	3,275	4,049	4,095
Alternative PC2LT4	283	355	1,728	2,171	2,313	3,128	3,252	3,333	3,518	4,334	4,469
Alternative PC3LT5	283	355	1,728	2,171	2,313	3,205	3,402	3,589	3,884	4,916	5,528
Alternative PC6LT8	283	355	1,728	2,171	2,313	3,416	3,872	4,346	4,981	6,326	7,398

**Table 287 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	464	536	736	1,307	1,437	1,498	1,522	1,552	1,564	1,467
Alternative PC1LT3	0	464	536	736	1,307	1,591	1,641	1,653	1,670	1,671	1,565
Alternative PC2LT4	0	464	536	736	1,307	1,610	1,673	1,716	1,777	1,777	1,701
Alternative PC3LT5	0	464	536	736	1,307	1,930	2,031	2,071	2,171	2,154	2,069
Alternative PC6LT8	0	464	536	736	1,307	2,166	2,444	2,783	2,920	3,757	3,967

**Table 288 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Hyundai KiH)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Hyundai KiH)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	597	592	1,049	1,632	1,702	1,696	1,734	1,778	1,830	1,786
Alternative PC1LT3	0	597	592	1,049	1,632	2,863	3,536	3,508	3,489	3,416	3,312
Alternative PC2LT4	0	597	592	1,049	1,632	2,944	3,956	3,904	3,859	3,800	3,703
Alternative PC3LT5	0	597	592	1,049	1,632	3,024	3,892	3,845	3,812	3,860	5,390
Alternative PC6LT8	0	597	592	1,049	1,632	3,281	4,236	4,658	5,122	5,621	7,632



**Table 289 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Hyundai KiK)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Hyundai KiK)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	122	579	564	1,219	1,159	1,092	1,051	1,123	1,168	1,151
Alternative PC1LT3	0	122	579	564	1,219	1,713	1,783	2,102	2,156	2,201	2,165
Alternative PC2LT4	0	122	579	564	1,219	1,783	1,935	3,214	3,280	3,461	3,387
Alternative PC3LT5	0	122	579	564	1,219	1,860	2,093	3,508	3,615	3,843	5,888
Alternative PC6LT8	0	122	579	564	1,219	2,090	2,661	4,508	5,339	5,685	7,856

**Table 290 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (JLR)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (JLR)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	499	1,599	2,118	2,115	1,718	1,901	1,793	1,731	1,813	1,808	1,819
Alternative PC1LT3	499	1,599	2,118	2,115	1,718	2,105	2,201	2,345	2,752	2,575	2,657
Alternative PC2LT4	499	1,599	2,118	2,115	1,718	2,163	2,351	2,565	3,054	2,973	3,189
Alternative PC3LT5	499	1,599	2,118	2,115	1,718	2,235	2,504	2,805	3,390	3,391	3,741
Alternative PC6LT8	499	1,599	2,118	2,115	1,718	2,456	2,996	3,571	4,520	4,871	5,697

**Table 291 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC1LT3	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC2LT4	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC3LT5	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC6LT8	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543

**Table 292 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Lucid)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Lucid)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	-62

**Table 293 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mazda)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mazda)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	736	807	872	1,797	1,974	2,109	2,198	2,283	2,340	2,303
Alternative PC1LT3	0	736	807	872	1,797	2,010	2,143	2,230	2,314	2,369	2,330
Alternative PC2LT4	0	736	807	872	1,797	2,036	2,157	2,260	2,354	2,406	2,366
Alternative PC3LT5	0	736	807	872	1,797	5,911	5,927	7,862	7,790	7,539	7,266
Alternative PC6LT8	0	736	807	872	1,797	6,347	6,384	9,733	12,476	11,935	11,798

**Table 294 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	638	853	893	1,309	2,271	2,271	1,960	2,162	2,338	2,460	2,470
Alternative PC1LT3	638	853	893	1,309	2,271	2,422	2,267	2,387	2,556	2,658	2,653
Alternative PC2LT4	638	853	893	1,309	2,271	2,503	2,427	2,570	2,636	2,765	2,836
Alternative PC3LT5	638	853	893	1,309	2,271	2,583	2,593	2,830	2,958	3,116	3,247
Alternative PC6LT8	638	853	893	1,309	2,271	2,824	3,127	3,651	4,159	4,682	5,262

**Table 295 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	226	261	1,333	1,471	2,039	1,908	1,806	1,695	1,600	1,462	1,421
Alternative PC1LT3	226	261	1,333	1,471	2,039	2,013	2,063	2,120	2,217	2,000	1,969
Alternative PC2LT4	226	261	1,333	1,471	2,039	2,080	2,246	2,396	2,609	2,104	2,057
Alternative PC3LT5	226	261	1,333	1,471	2,039	2,168	2,437	2,680	3,017	3,305	3,201
Alternative PC6LT8	226	261	1,333	1,471	2,039	2,449	3,048	3,619	4,380	4,371	5,088

**Table 296 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Nissan)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Nissan)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	34	1,361	1,515	1,932	2,089	2,508	2,407	2,437	2,457	2,438	2,363
Alternative PC1LT3	34	1,361	1,515	1,932	2,089	2,603	2,661	2,676	2,681	2,646	2,558
Alternative PC2LT4	34	1,361	1,515	1,932	2,089	2,642	2,901	2,958	3,009	2,960	2,902
Alternative PC3LT5	34	1,361	1,515	1,932	2,089	2,716	3,049	3,180	3,254	3,212	3,203
Alternative PC6LT8	34	1,361	1,515	1,932	2,089	2,929	3,603	3,985	4,146	4,514	5,010



**Table 297 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Stellantis)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Stellantis)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	465	1,394	2,031	2,898	2,867	2,920	2,785	2,892	2,973	3,000	2,956
Alternative PC1LT3	465	1,394	2,031	2,898	2,867	3,134	3,178	3,278	3,397	3,470	3,807
Alternative PC2LT4	465	1,394	2,031	2,898	2,867	3,209	3,333	3,643	3,837	3,971	4,388
Alternative PC3LT5	465	1,394	2,031	2,898	2,867	3,270	3,475	3,872	4,167	4,366	4,892
Alternative PC6LT8	465	1,394	2,031	2,898	2,867	3,488	3,950	4,648	6,024	6,503	7,459

**Table 298 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Subaru)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Subaru)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	439	450	563	1,644	1,934	2,104	2,210	2,335	2,413	2,384
Alternative PC1LT3	0	439	450	563	1,644	1,934	2,105	2,211	2,336	2,413	2,384
Alternative PC2LT4	0	439	450	563	1,644	1,936	2,105	2,211	2,336	2,413	2,384
Alternative PC3LT5	0	439	450	563	1,644	1,951	2,113	2,220	2,344	2,420	2,389
Alternative PC6LT8	0	439	450	563	1,644	1,987	2,175	2,934	3,372	3,361	3,292

**Table 299 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	5	9	14	15	15	14	14	14	14	13
Alternative PC1LT3	0	5	9	14	15	15	15	14	14	14	13
Alternative PC2LT4	0	5	9	14	15	15	15	14	14	14	13
Alternative PC3LT5	0	5	9	14	15	15	15	14	14	14	13
Alternative PC6LT8	0	5	9	14	15	15	15	15	14	14	13

**Table 300 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	211	416	482	1,390	1,462	1,602	1,671	1,754	1,818	1,794
Alternative PC1LT3	0	211	416	482	1,390	1,463	1,603	1,672	1,755	1,818	1,794
Alternative PC2LT4	0	211	416	482	1,390	1,466	1,606	1,677	1,762	1,827	1,867
Alternative PC3LT5	0	211	416	482	1,390	1,473	1,720	1,847	1,966	2,052	2,166
Alternative PC6LT8	0	211	416	482	1,390	1,525	2,066	2,518	2,999	3,483	3,679

**Table 301 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	131	167	1,051	1,020	926	852	717	942	1,181	1,202
Alternative PC1LT3	0	131	167	1,051	1,020	1,109	1,202	1,230	1,281	1,469	1,517
Alternative PC2LT4	0	131	167	1,051	1,020	1,160	1,330	1,429	1,471	1,689	1,768
Alternative PC3LT5	0	131	167	1,051	1,020	1,221	1,456	1,627	1,761	2,034	2,172
Alternative PC6LT8	0	131	167	1,051	1,020	1,416	1,966	2,429	2,953	3,589	4,068

**Table 302 - Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (VWA)**

Estimated Average Per Vehicle Regulatory Costs (\$), Total Fleet for Manufacturer (VWA)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	295	1,242	1,483	1,790	1,972	2,157	2,066	2,196	2,261	2,303	2,249
Alternative PC1LT3	295	1,242	1,483	1,790	1,972	2,327	2,339	2,457	2,689	2,714	2,635
Alternative PC2LT4	295	1,242	1,483	1,790	1,972	2,404	2,482	2,640	2,972	2,946	2,913
Alternative PC3LT5	295	1,242	1,483	1,790	1,972	2,485	2,626	2,878	3,278	3,289	3,360
Alternative PC6LT8	295	1,242	1,483	1,790	1,972	2,735	3,132	3,664	4,438	4,781	5,346

**Table 303 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (BMW)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	631	622	1,860	2,024	1,951	1,789	1,859	1,889	1,845	1,842	1,722
Alternative PC1LT3	631	622	1,860	2,024	1,951	1,968	2,022	1,990	1,919	1,902	1,722
Alternative PC2LT4	631	622	1,860	2,024	1,951	2,066	2,089	2,088	2,079	2,102	1,871
Alternative PC3LT5	631	622	1,860	2,024	1,951	2,154	2,180	2,222	2,256	2,312	2,150
Alternative PC6LT8	631	622	1,860	2,024	1,951	2,441	2,713	2,969	3,314	3,668	3,918

**Table 304 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Ford)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Ford)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	133	74	1,394	1,611	1,464	1,304	1,201	1,073	902	916	878
Alternative PC1LT3	133	74	1,394	1,611	1,464	1,386	1,281	1,152	1,000	1,049	1,043
Alternative PC2LT4	133	74	1,394	1,611	1,464	2,034	1,912	1,769	1,629	1,776	1,937
Alternative PC3LT5	133	74	1,394	1,611	1,464	2,034	1,911	1,768	1,901	2,107	2,379
Alternative PC6LT8	133	74	1,394	1,611	1,464	2,326	2,445	2,587	6,588	6,873	7,277



**Table 305 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (GM)**

Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (GM)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	411	280	1,570	1,741	1,942	1,781	1,684	1,577	1,513	1,442	1,368
Alternative PC1LT3	411	280	1,570	1,741	1,942	2,949	2,979	3,526	3,540	3,396	3,342
Alternative PC2LT4	411	280	1,570	1,741	1,942	3,035	3,164	3,574	3,682	3,553	3,613
Alternative PC3LT5	411	280	1,570	1,741	1,942	3,136	3,356	4,135	4,350	5,063	6,720
Alternative PC6LT8	411	280	1,570	1,741	1,942	3,413	3,954	4,963	5,540	6,556	8,688

**Table 306 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	339	380	710	1,132	1,204	1,179	1,152	1,133	1,109	955
Alternative PC1LT3	0	339	380	710	1,132	1,293	1,261	1,227	1,201	1,171	1,013
Alternative PC2LT4	0	339	380	710	1,132	1,294	1,262	1,228	1,201	1,171	1,013
Alternative PC3LT5	0	339	380	710	1,132	1,770	1,757	1,706	1,661	1,610	1,430
Alternative PC6LT8	0	339	380	710	1,132	2,045	2,337	2,670	2,599	3,048	3,157

**Table 307 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	911	897	1,210	1,734	1,847	1,849	1,850	1,857	1,873	1,802
Alternative PC1LT3	0	911	897	1,210	1,734	2,957	3,937	3,869	3,808	3,685	3,507
Alternative PC2LT4	0	911	897	1,210	1,734	3,045	4,042	3,968	3,899	3,826	3,642
Alternative PC3LT5	0	911	897	1,210	1,734	3,133	4,261	4,176	4,102	4,070	3,940
Alternative PC6LT8	0	911	897	1,210	1,734	3,415	4,615	5,046	5,458	5,963	6,645

**Table 308 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	60	872	806	933	913	857	828	858	878	851
Alternative PC1LT3	0	60	872	806	933	1,877	1,944	1,773	1,803	1,785	1,712
Alternative PC2LT4	0	60	872	806	933	1,951	2,099	3,785	3,784	3,546	3,337
Alternative PC3LT5	0	60	872	806	933	2,033	2,260	4,137	4,251	4,074	3,756
Alternative PC6LT8	0	60	872	806	933	2,276	2,842	5,082	6,232	6,216	6,094

**Table 309 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (JLR)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (JLR)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	1,162	4,315	4,072	3,866	3,704	3,679	3,435	3,103	2,916	2,878	2,715
Alternative PC1LT3	1,162	4,315	4,072	3,866	3,704	3,836	3,735	3,559	3,449	3,183	2,890
Alternative PC2LT4	1,162	4,315	4,072	3,866	3,704	3,890	3,858	3,728	3,681	3,484	3,273
Alternative PC3LT5	1,162	4,315	4,072	3,866	3,704	3,949	3,980	3,914	4,027	3,901	3,821
Alternative PC6LT8	1,162	4,315	4,072	3,866	3,704	4,140	4,386	4,525	4,878	5,061	5,393

**Table 310 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Karma)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC1LT3	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC2LT4	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC3LT5	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543
Alternative PC6LT8	0	0	0	0	-2,171	-2,499	-2,671	-2,960	-3,214	-3,343	-3,543

**Table 311 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Lucid)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Lucid)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	-62
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	-62

**Table 312 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mazda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mazda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	858	813	889	1,450	1,651	1,695	1,688	1,700	1,705	1,629
Alternative PC1LT3	0	858	813	889	1,450	1,735	1,776	1,766	1,772	1,774	1,694
Alternative PC2LT4	0	858	813	889	1,450	1,750	1,776	1,766	1,772	1,774	1,694
Alternative PC3LT5	0	858	813	889	1,450	1,771	1,903	12,596	12,236	11,660	11,032
Alternative PC6LT8	0	858	813	889	1,450	1,837	2,027	14,679	14,165	13,440	13,340



**Table 313 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	904	1,375	1,433	1,926	2,452	2,304	1,876	1,976	2,076	2,148	2,129
Alternative PC1LT3	904	1,375	1,433	1,926	2,452	2,474	2,175	2,169	2,122	2,191	2,169
Alternative PC2LT4	904	1,375	1,433	1,926	2,452	2,554	2,349	2,381	2,179	2,278	2,326
Alternative PC3LT5	904	1,375	1,433	1,926	2,452	2,634	2,526	2,637	2,568	2,737	2,816
Alternative PC6LT8	904	1,375	1,433	1,926	2,452	2,870	3,076	3,435	3,755	4,211	4,675

**Table 314 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	345	312	1,249	1,418	2,222	2,064	1,942	1,806	1,691	1,537	1,475
Alternative PC1LT3	345	312	1,249	1,418	2,222	2,182	2,215	2,236	2,281	1,725	1,702
Alternative PC2LT4	345	312	1,249	1,418	2,222	2,255	2,402	2,501	2,636	1,739	1,695
Alternative PC3LT5	345	312	1,249	1,418	2,222	2,352	2,593	2,763	3,001	2,073	2,016
Alternative PC6LT8	345	312	1,249	1,418	2,222	2,646	3,172	3,634	4,279	3,508	4,256

**Table 315 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Nissan)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Nissan)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	31	743	932	1,267	1,473	1,795	1,493	1,499	1,549	1,550	1,498
Alternative PC1LT3	31	743	932	1,267	1,473	1,882	1,494	1,500	1,550	1,550	1,499
Alternative PC2LT4	31	743	932	1,267	1,473	1,926	1,675	1,667	1,660	1,664	1,689
Alternative PC3LT5	31	743	932	1,267	1,473	2,005	1,852	1,936	1,870	1,897	1,975
Alternative PC6LT8	31	743	932	1,267	1,473	2,230	2,545	2,934	3,012	3,482	4,288

**Table 316 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Stellantis)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	1,194	881	3,228	3,614	3,747	3,558	3,441	3,339	3,331	3,312	3,217
Alternative PC1LT3	1,194	881	3,228	3,614	3,747	3,598	3,746	3,500	3,464	3,519	3,372
Alternative PC2LT4	1,194	881	3,228	3,614	3,747	3,725	3,963	3,770	3,869	4,046	4,031
Alternative PC3LT5	1,194	881	3,228	3,614	3,747	3,825	4,157	4,069	4,266	4,569	4,687
Alternative PC6LT8	1,194	881	3,228	3,614	3,747	4,155	4,751	4,948	5,471	5,973	6,465

**Table 317 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	1,014	976	1,409	1,820	1,798	1,787	1,718	1,669	1,622	1,500
Alternative PC1LT3	0	1,014	976	1,409	1,820	1,798	1,788	1,719	1,670	1,623	1,500
Alternative PC2LT4	0	1,014	976	1,409	1,820	1,802	1,788	1,719	1,670	1,623	1,500
Alternative PC3LT5	0	1,014	976	1,409	1,820	1,827	1,857	1,783	1,729	1,677	1,550
Alternative PC6LT8	0	1,014	976	1,409	1,820	1,882	2,224	2,318	2,696	2,563	2,563

**Table 318 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Tesla)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 319 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	206	340	455	1,135	1,213	1,300	1,310	1,331	1,341	1,285
Alternative PC1LT3	0	206	340	455	1,135	1,213	1,301	1,310	1,332	1,341	1,285
Alternative PC2LT4	0	206	340	455	1,135	1,213	1,301	1,310	1,332	1,341	1,285
Alternative PC3LT5	0	206	340	455	1,135	1,221	1,310	1,329	1,380	1,394	1,335
Alternative PC6LT8	0	206	340	455	1,135	1,284	1,715	2,151	2,861	3,230	2,847

**Table 320 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (Volvo)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	45	45	399	407	387	363	202	339	481	484
Alternative PC1LT3	0	45	45	399	407	468	593	515	388	522	557
Alternative PC2LT4	0	45	45	399	407	518	708	689	473	641	699
Alternative PC3LT5	0	45	45	399	407	578	824	861	673	866	909
Alternative PC6LT8	0	45	45	399	407	762	1,279	1,555	1,766	2,230	2,594



**Table 321 - Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (VWA)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Passenger Car Fleet for Manufacturer (VWA)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	424	529	1,100	1,303	1,811	2,097	2,078	2,067	2,061	2,094	2,004
Alternative PC1LT3	424	529	1,100	1,303	1,811	2,263	2,379	2,353	2,132	2,140	2,045
Alternative PC2LT4	424	529	1,100	1,303	1,811	2,362	2,583	2,588	2,345	2,232	2,136
Alternative PC3LT5	424	529	1,100	1,303	1,811	2,466	2,780	2,861	2,712	2,630	2,566
Alternative PC6LT8	424	529	1,100	1,303	1,811	2,769	3,435	3,735	3,955	4,159	4,539

**Table 322 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (BMW)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (BMW)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	226	349	382	1,221	1,474	1,385	1,711	2,001	2,196	2,380	2,380
Alternative PC1LT3	226	349	382	1,221	1,474	1,495	1,847	2,156	2,328	2,500	2,540
Alternative PC2LT4	226	349	382	1,221	1,474	1,561	1,915	2,276	2,495	2,726	2,802
Alternative PC3LT5	226	349	382	1,221	1,474	1,621	1,993	2,406	2,682	2,963	3,103
Alternative PC6LT8	226	349	382	1,221	1,474	1,837	2,444	3,106	3,710	4,381	5,091

**Table 323 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Ford)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Ford)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	69	1,938	2,592	2,622	2,872	2,905	2,796	2,686	2,556	2,587	2,536
Alternative PC1LT3	69	1,938	2,592	2,622	2,872	3,345	3,553	3,656	3,504	3,457	3,380
Alternative PC2LT4	69	1,938	2,592	2,622	2,872	3,454	3,678	3,806	3,652	3,765	3,901
Alternative PC3LT5	69	1,938	2,592	2,622	2,872	3,454	3,678	3,806	3,931	4,134	4,367
Alternative PC6LT8	69	1,938	2,592	2,622	2,872	3,604	4,054	4,452	4,987	5,541	6,230

**Table 324 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (GM)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (GM)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	240	377	1,773	2,286	2,408	2,368	2,239	2,094	1,977	2,824	2,690
Alternative PC1LT3	240	377	1,773	2,286	2,408	3,091	3,135	3,114	3,209	4,214	4,286
Alternative PC2LT4	240	377	1,773	2,286	2,408	3,151	3,273	3,274	3,478	4,532	4,688
Alternative PC3LT5	240	377	1,773	2,286	2,408	3,223	3,414	3,455	3,768	4,879	5,222
Alternative PC6LT8	240	377	1,773	2,286	2,408	3,417	3,851	4,196	4,843	6,268	7,067

**Table 325 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Honda)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	598	692	761	1,466	1,645	1,782	1,848	1,924	1,974	1,929
Alternative PC1LT3	0	598	692	761	1,466	1,857	1,976	2,026	2,085	2,120	2,064
Alternative PC2LT4	0	598	692	761	1,466	1,892	2,036	2,143	2,285	2,321	2,324
Alternative PC3LT5	0	598	692	761	1,466	2,073	2,274	2,389	2,621	2,643	2,652
Alternative PC6LT8	0	598	692	761	1,466	2,274	2,539	2,882	3,202	4,389	4,705

**Table 326 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiH)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	142	181	845	1,506	1,527	1,513	1,597	1,683	1,779	1,767
Alternative PC1LT3	0	142	181	845	1,506	2,751	3,061	3,084	3,111	3,092	3,076
Alternative PC2LT4	0	142	181	845	1,506	2,823	3,854	3,828	3,810	3,769	3,776
Alternative PC3LT5	0	142	181	845	1,506	2,894	3,454	3,459	3,468	3,608	7,165
Alternative PC6LT8	0	142	181	845	1,506	3,120	3,789	4,206	4,726	5,211	8,839

**Table 327 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Hyundai KiK)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	200	233	294	1,527	1,419	1,338	1,283	1,399	1,475	1,471
Alternative PC1LT3	0	200	233	294	1,527	1,541	1,617	2,441	2,524	2,640	2,646
Alternative PC2LT4	0	200	233	294	1,527	1,607	1,765	2,627	2,756	3,371	3,440
Alternative PC3LT5	0	200	233	294	1,527	1,678	1,919	2,863	2,954	3,599	8,179
Alternative PC6LT8	0	200	233	294	1,527	1,895	2,474	3,920	4,419	5,126	9,746

**Table 328 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (JLR)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (JLR)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	481	1,530	2,072	2,076	1,675	1,863	1,759	1,703	1,790	1,785	1,800
Alternative PC1LT3	481	1,530	2,072	2,076	1,675	2,069	2,169	2,320	2,738	2,562	2,652
Alternative PC2LT4	481	1,530	2,072	2,076	1,675	2,127	2,319	2,541	3,041	2,962	3,187
Alternative PC3LT5	481	1,530	2,072	2,076	1,675	2,199	2,473	2,782	3,377	3,380	3,739
Alternative PC6LT8	481	1,530	2,072	2,076	1,675	2,421	2,967	3,551	4,512	4,867	5,704



**Table 329 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Karma)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Karma)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 330 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Lucid)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Lucid)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	0	0	0	0	0	0	0	0	0	0
Alternative PC1LT3	0	0	0	0	0	0	0	0	0	0	0
Alternative PC2LT4	0	0	0	0	0	0	0	0	0	0	0
Alternative PC3LT5	0	0	0	0	0	0	0	0	0	0	0
Alternative PC6LT8	0	0	0	0	0	0	0	0	0	0	0

**Table 331 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mazda)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mazda)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	715	806	870	1,847	2,019	2,166	2,268	2,364	2,429	2,398
Alternative PC1LT3	0	715	806	870	1,847	2,048	2,194	2,294	2,388	2,452	2,420
Alternative PC2LT4	0	715	806	870	1,847	2,075	2,209	2,328	2,434	2,494	2,461
Alternative PC3LT5	0	715	806	870	1,847	6,487	6,482	7,218	7,178	6,962	6,730
Alternative PC6LT8	0	715	806	870	1,847	6,974	6,983	9,063	12,245	11,726	11,579

**Table 332 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mercedes-Benz)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	371	374	430	814	2,131	2,245	2,024	2,302	2,536	2,699	2,733
Alternative PC1LT3	371	374	430	814	2,131	2,383	2,336	2,549	2,883	3,015	3,026
Alternative PC2LT4	371	374	430	814	2,131	2,463	2,485	2,712	2,980	3,138	3,229
Alternative PC3LT5	371	374	430	814	2,131	2,544	2,643	2,973	3,250	3,406	3,583
Alternative PC6LT8	371	374	430	814	2,131	2,789	3,166	3,811	4,461	5,040	5,718

**Table 333 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Mitsubishi)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	74	201	1,425	1,525	1,858	1,755	1,675	1,587	1,513	1,390	1,368
Alternative PC1LT3	74	201	1,425	1,525	1,858	1,849	1,917	2,009	2,155	2,269	2,233
Alternative PC2LT4	74	201	1,425	1,525	1,858	1,910	2,096	2,296	2,584	2,461	2,414
Alternative PC3LT5	74	201	1,425	1,525	1,858	1,990	2,287	2,601	3,032	4,509	4,380
Alternative PC6LT8	74	201	1,425	1,525	1,858	2,257	2,928	3,605	4,476	5,210	5,913

**Table 334 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Nissan)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Nissan)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	39	2,165	2,222	2,689	2,769	3,281	3,385	3,434	3,429	3,404	3,306
Alternative PC1LT3	39	2,165	2,222	2,689	2,769	3,380	3,903	3,920	3,888	3,833	3,714
Alternative PC2LT4	39	2,165	2,222	2,689	2,769	3,413	4,208	4,319	4,445	4,365	4,229
Alternative PC3LT5	39	2,165	2,222	2,689	2,769	3,483	4,325	4,489	4,727	4,636	4,555
Alternative PC6LT8	39	2,165	2,222	2,689	2,769	3,681	4,726	5,086	5,345	5,626	5,803

**Table 335 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Stellantis)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Stellantis)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	347	1,470	1,865	2,805	2,756	2,842	2,705	2,838	2,929	2,962	2,924
Alternative PC1LT3	347	1,470	1,865	2,805	2,756	3,077	3,109	3,252	3,389	3,463	3,861
Alternative PC2LT4	347	1,470	1,865	2,805	2,756	3,146	3,256	3,627	3,833	3,961	4,433
Alternative PC3LT5	347	1,470	1,865	2,805	2,756	3,202	3,392	3,849	4,155	4,341	4,918
Alternative PC6LT8	347	1,470	1,865	2,805	2,756	3,406	3,853	4,612	6,090	6,569	7,583

**Table 336 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Subaru)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	338	363	432	1,618	1,954	2,150	2,281	2,433	2,530	2,516
Alternative PC1LT3	0	338	363	432	1,618	1,954	2,151	2,282	2,433	2,530	2,516
Alternative PC2LT4	0	338	363	432	1,618	1,956	2,151	2,282	2,433	2,530	2,516
Alternative PC3LT5	0	338	363	432	1,618	1,969	2,151	2,282	2,433	2,530	2,515
Alternative PC6LT8	0	338	363	432	1,618	2,003	2,168	3,022	3,469	3,478	3,401



**Table 337 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Tesla)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Tesla)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	100	177	252	248	244	240	237	233	229	226
Alternative PC1LT3	0	100	177	252	248	244	240	237	233	229	226
Alternative PC2LT4	0	100	177	252	248	244	240	237	233	229	226
Alternative PC3LT5	0	100	177	252	248	244	240	237	233	229	226
Alternative PC6LT8	0	100	177	252	248	244	240	237	233	229	226

**Table 338 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Toyota)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	214	463	499	1,532	1,599	1,766	1,865	1,982	2,079	2,075
Alternative PC1LT3	0	214	463	499	1,532	1,599	1,766	1,866	1,983	2,079	2,074
Alternative PC2LT4	0	214	463	499	1,532	1,604	1,771	1,872	1,994	2,092	2,188
Alternative PC3LT5	0	214	463	499	1,532	1,610	1,940	2,122	2,281	2,413	2,628
Alternative PC6LT8	0	214	463	499	1,532	1,656	2,254	2,713	3,073	3,620	4,141

**Table 339 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Volvo)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (Volvo)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	0	170	217	1,302	1,248	1,123	1,029	902	1,160	1,438	1,466
Alternative PC1LT3	0	170	217	1,302	1,248	1,343	1,422	1,486	1,602	1,815	1,871
Alternative PC2LT4	0	170	217	1,302	1,248	1,393	1,553	1,692	1,829	2,073	2,163
Alternative PC3LT5	0	170	217	1,302	1,248	1,455	1,684	1,899	2,152	2,461	2,641
Alternative PC6LT8	0	170	217	1,302	1,248	1,654	2,213	2,739	3,377	4,083	4,616

**Table 340 - Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (VWA)**

Estimated Average Per Vehicle Regulatory Costs (\$), Light Truck Fleet for Manufacturer (VWA)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
No Action Alternative (Baseline)	202	1,709	1,718	2,069	2,061	2,190	2,060	2,266	2,369	2,417	2,383
Alternative PC1LT3	202	1,709	1,718	2,069	2,061	2,361	2,318	2,512	2,988	3,027	2,959
Alternative PC2LT4	202	1,709	1,718	2,069	2,061	2,426	2,428	2,668	3,308	3,336	3,341
Alternative PC3LT5	202	1,709	1,718	2,069	2,061	2,495	2,544	2,887	3,581	3,648	3,800
Alternative PC6LT8	202	1,709	1,718	2,069	2,061	2,716	2,971	3,627	4,696	5,118	5,792

## Incremental Societal Impacts

**Table 341 - Incremental Total Societal Costs (\$b) by Year and Alternative for Total Fleet, Discounted at 3%**

Incremental Total Societal Costs (\$b) by Year and Alternative for Total Fleet, Discounted at 3%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	5.8	0.4	0.4	0.4	0.5	4.1	5.5	6.9	7.0	7.6	8.3	46.8
Alternative PC2LT4	8.1	0.6	0.6	0.6	0.6	4.5	6.3	8.6	9.0	9.5	10.4	58.6
Alternative PC3LT5	14.0	1.1	1.1	1.1	1.2	5.4	7.6	10.2	10.9	11.8	14.2	78.7
Alternative PC6LT8	27.7	2.0	2.0	2.1	2.2	5.7	7.8	10.7	12.9	13.8	17.7	104.5

**Table 342 - Incremental Total Societal Costs (\$b) by Year and Alternative for Passenger Car Fleet, Discounted at 3%**

<b>Incremental Total Societal Costs (\$b) by Year and Alternative for Passenger Car Fleet, Discounted at 3%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	3.3	0.2	0.1	0.1	0.1	0.3	0.4	0.7	0.9	1.1	1.2	8.4
Alternative PC2LT4	4.6	0.2	0.2	0.2	0.2	0.3	0.6	0.9	1.2	1.6	2.1	12.1
Alternative PC3LT5	7.9	0.4	0.4	0.4	0.4	0.6	1.2	1.3	2.2	2.7	4.2	21.6
Alternative PC6LT8	15.6	0.8	0.7	0.6	0.6	0.4	1.2	1.5	2.6	3.7	6.6	34.5

**Table 343 - Incremental Total Societal Costs (\$b) by Year and Alternative for Light Truck Fleet, Discounted at 3%**

Incremental Total Societal Costs (\$b) by Year and Alternative for Light Truck Fleet, Discounted at 3%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	2.5	0.2	0.3	0.3	0.3	3.8	5.1	6.2	6.2	6.5	7.1	38.5
Alternative PC2LT4	3.4	0.3	0.4	0.4	0.4	4.1	5.7	7.7	7.7	7.9	8.3	46.5
Alternative PC3LT5	6.1	0.6	0.7	0.8	0.8	4.8	6.4	8.9	8.7	9.1	10.0	57.1
Alternative PC6LT8	12.1	1.2	1.3	1.4	1.6	5.3	6.6	9.2	10.3	10.1	11.1	70.1

**Table 344 - Incremental Total Societal Costs (\$b) by Year and Alternative for Total Fleet, Discounted at 7%**

Incremental Total Societal Costs (\$b) by Year and Alternative for Total Fleet, Discounted at 7%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	3.7	0.2	0.2	0.2	0.2	3.1	4.0	4.8	4.7	4.8	5.1	31.2
Alternative PC2LT4	5.1	0.3	0.3	0.3	0.3	3.4	4.6	6.0	6.1	6.2	6.5	39.1
Alternative PC3LT5	8.7	0.6	0.6	0.6	0.6	4.1	5.5	7.2	7.4	7.7	9.1	52.2
Alternative PC6LT8	17.3	1.1	1.1	1.1	1.2	4.2	5.8	7.7	9.2	9.6	12.0	70.3



**Table 345 - Incremental Total Societal Costs (\$b) by Year and Alternative for Passenger Car Fleet, Discounted at 7%**

<b>Incremental Total Societal Costs (\$b) by Year and Alternative for Passenger Car Fleet, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	2.1	0.1	0.1	0.1	0.1	0.4	0.5	0.7	0.7	0.8	0.8	6.3
Alternative PC2LT4	3.0	0.1	0.1	0.1	0.1	0.4	0.6	0.9	1.0	1.2	1.4	8.9
Alternative PC3LT5	5.0	0.2	0.2	0.2	0.2	0.6	1.0	1.2	1.7	1.9	2.7	14.9
Alternative PC6LT8	10.0	0.5	0.4	0.4	0.4	0.5	1.1	1.4	2.2	2.8	4.4	24.0

**Table 346 - Incremental Total Societal Costs (\$b) by Year and Alternative for Light Truck Fleet, Discounted at 7%**

Incremental Total Societal Costs (\$b) by Year and Alternative for Light Truck Fleet, Discounted at 7%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	1.5	0.1	0.1	0.2	0.2	2.8	3.6	4.2	4.0	4.1	4.3	24.9
Alternative PC2LT4	2.1	0.2	0.2	0.2	0.2	3.0	4.0	5.2	5.1	5.0	5.1	30.2
Alternative PC3LT5	3.7	0.4	0.4	0.4	0.4	3.5	4.5	6.0	5.8	5.8	6.5	37.3
Alternative PC6LT8	7.3	0.7	0.7	0.8	0.8	3.7	4.6	6.3	7.0	6.8	7.6	46.3

**Table 347 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 3%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 3%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-3.4	-0.2	-0.2	-0.2	-0.2	5.5	8.6	11.0	11.6	12.7	14.1	59.5
Alternative PC2LT4	-4.7	-0.3	-0.3	-0.3	-0.3	6.1	10.4	13.8	15.2	16.7	18.9	75.5
Alternative PC3LT5	-8.3	-0.5	-0.5	-0.5	-0.5	6.5	11.9	15.9	18.6	20.7	24.3	87.5
Alternative PC6LT8	-16.3	-1.0	-0.9	-0.9	-0.9	6.6	14.3	21.3	27.6	31.4	38.8	120.1

**Table 348 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 3%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 3%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-1.8	-0.1	0.0	0.0	0.0	0.5	0.8	1.2	1.0	1.1	1.0	3.6
Alternative PC2LT4	-2.5	-0.1	-0.1	-0.1	-0.1	0.8	1.3	2.0	1.9	1.9	1.9	7.1
Alternative PC3LT5	-4.3	-0.2	-0.1	-0.1	-0.1	0.9	1.7	2.7	2.9	3.2	3.2	9.8
Alternative PC6LT8	-8.6	-0.3	-0.2	-0.2	-0.2	1.0	3.5	5.4	6.6	7.6	8.9	23.5

**Table 349 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 3%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 3%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-1.6	-0.1	-0.1	-0.1	-0.1	5.0	7.9	9.9	10.6	11.6	13.1	55.8
Alternative PC2LT4	-2.2	-0.2	-0.2	-0.2	-0.2	5.3	9.1	11.8	13.3	14.8	17.1	68.4
Alternative PC3LT5	-4.0	-0.4	-0.4	-0.4	-0.4	5.6	10.2	13.2	15.7	17.4	21.1	77.7
Alternative PC6LT8	-7.7	-0.7	-0.7	-0.7	-0.7	5.6	10.8	15.9	21.1	23.8	30.0	96.6

**Table 350 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 7%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-2.3	-0.1	-0.1	-0.1	-0.1	3.8	5.7	7.1	7.3	7.8	8.5	37.5
Alternative PC2LT4	-3.2	-0.2	-0.2	-0.2	-0.2	4.2	6.9	9.0	9.6	10.3	11.4	47.5
Alternative PC3LT5	-5.6	-0.3	-0.3	-0.3	-0.3	4.4	7.9	10.3	11.8	12.7	14.6	54.9
Alternative PC6LT8	-11.1	-0.6	-0.6	-0.6	-0.6	4.6	9.6	13.9	17.5	19.4	23.4	74.8

**Table 351 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 7%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-1.3	0.0	0.0	0.0	0.0	0.4	0.5	0.8	0.7	0.7	0.6	2.2
Alternative PC2LT4	-1.8	-0.1	0.0	0.0	0.0	0.6	0.9	1.3	1.2	1.2	1.1	4.3
Alternative PC3LT5	-3.0	-0.1	-0.1	-0.1	-0.1	0.6	1.2	1.8	1.8	2.0	1.9	6.0
Alternative PC6LT8	-5.9	-0.2	-0.2	-0.1	-0.1	0.7	2.3	3.5	4.2	4.7	5.3	14.3

**Table 352 - Incremental Total Societal Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 7%**

<b>Incremental Total Societal Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-1.1	-0.1	-0.1	-0.1	-0.1	3.4	5.2	6.4	6.7	7.2	7.9	35.3
Alternative PC2LT4	-1.5	-0.1	-0.1	-0.1	-0.1	3.6	6.1	7.6	8.4	9.1	10.3	43.1
Alternative PC3LT5	-2.6	-0.2	-0.2	-0.2	-0.2	3.8	6.8	8.6	9.9	10.7	12.7	48.9
Alternative PC6LT8	-5.2	-0.5	-0.4	-0.4	-0.5	3.9	7.2	10.3	13.3	14.7	18.0	60.5



**Table 353 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 3%**

Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 3%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-9.1	-0.6	-0.6	-0.6	-0.6	1.4	3.1	4.1	4.6	5.2	5.8	12.7
Alternative PC2LT4	-12.8	-0.8	-0.8	-0.8	-0.9	1.7	4.1	5.2	6.3	7.2	8.5	16.8
Alternative PC3LT5	-22.3	-1.6	-1.6	-1.6	-1.7	1.0	4.3	5.7	7.7	8.8	10.1	8.8
Alternative PC6LT8	-44.0	-3.0	-2.9	-3.0	-3.1	0.9	6.5	10.6	14.8	17.6	21.1	15.6

**Table 354 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 3%**

Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 3%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-5.1	-0.2	-0.2	-0.2	-0.2	0.3	0.4	0.4	0.2	0.1	-0.2	-4.7
Alternative PC2LT4	-7.1	-0.3	-0.3	-0.2	-0.2	0.5	0.7	1.2	0.7	0.3	-0.2	-5.1
Alternative PC3LT5	-12.2	-0.6	-0.5	-0.5	-0.5	0.3	0.6	1.4	0.7	0.5	-1.0	-11.7
Alternative PC6LT8	-24.2	-1.1	-0.9	-0.9	-0.8	0.6	2.3	3.9	4.0	3.9	2.3	-10.9

**Table 355 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 3%**

<b>Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 3%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-4.0	-0.4	-0.4	-0.4	-0.5	1.1	2.7	3.7	4.4	5.1	6.0	17.4
Alternative PC2LT4	-5.6	-0.5	-0.6	-0.6	-0.6	1.2	3.4	4.1	5.6	6.9	8.7	21.9
Alternative PC3LT5	-10.1	-1.0	-1.1	-1.1	-1.2	0.7	3.7	4.3	7.0	8.3	11.1	20.6
Alternative PC6LT8	-19.8	-1.9	-2.0	-2.1	-2.3	0.3	4.3	6.7	10.8	13.7	18.9	26.5

**Table 356 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 7%**

Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Total Fleet, Average SCC Level, Discounted at 7%												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-6.0	-0.4	-0.3	-0.3	-0.4	0.7	1.7	2.3	2.6	3.0	3.4	6.3
Alternative PC2LT4	-8.3	-0.5	-0.5	-0.5	-0.5	0.8	2.3	2.9	3.6	4.1	4.9	8.4
Alternative PC3LT5	-14.3	-0.9	-0.9	-0.9	-1.0	0.4	2.4	3.1	4.3	5.0	5.5	2.7
Alternative PC6LT8	-28.4	-1.8	-1.7	-1.7	-1.8	0.4	3.8	6.1	8.3	9.8	11.4	4.5

**Table 357 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 7%**

<b>Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Passenger Car Fleet, Average SCC Level, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-3.4	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	-0.1	-0.1	-0.2	-4.1
Alternative PC2LT4	-4.7	-0.2	-0.2	-0.1	-0.1	0.2	0.2	0.5	0.2	0.0	-0.2	-4.5
Alternative PC3LT5	-8.0	-0.3	-0.3	-0.3	-0.3	0.0	0.2	0.6	0.2	0.1	-0.7	-8.9
Alternative PC6LT8	-15.9	-0.7	-0.6	-0.5	-0.5	0.2	1.2	2.1	2.0	1.9	1.0	-9.7

**Table 358 - Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 7%**

<b>Incremental Total Societal Net Benefits (\$b) by Year and Alternative for Light Truck Fleet, Average SCC Level, Discounted at 7%</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	-2.6	-0.2	-0.2	-0.2	-0.3	0.6	1.7	2.2	2.7	3.1	3.6	10.4
Alternative PC2LT4	-3.6	-0.3	-0.3	-0.3	-0.4	0.7	2.1	2.5	3.4	4.1	5.1	12.9
Alternative PC3LT5	-6.3	-0.6	-0.6	-0.6	-0.7	0.3	2.2	2.6	4.2	4.9	6.2	11.6
Alternative PC6LT8	-12.5	-1.1	-1.2	-1.2	-1.3	0.2	2.6	4.0	6.4	7.9	10.5	14.2

## Labor Impacts

**Table 359 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Total)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	889,223	889,223	889,223	889,223	889,223
2023	958,999	958,999	958,999	958,999	958,999
2024	954,900	954,900	954,900	954,900	954,900
2025	961,923	961,923	961,923	961,923	961,923
2026	997,446	997,446	997,446	997,446	997,446
2027	1,027,684	1,030,450	1,030,492	1,030,632	1,029,130
2028	1,039,834	1,043,156	1,043,030	1,043,175	1,040,830
2029	1,027,165	1,031,898	1,032,627	1,032,452	1,028,081
2030	1,006,042	1,011,125	1,011,966	1,011,814	1,009,092
2031	991,822	997,489	998,005	998,438	996,318
2032	986,394	992,635	993,167	995,593	992,190

**Table 360 - Estimated Labor Utilization (1000s of Person-Years), Passenger Car Fleet for Manufacturer(Total)**

<b>Estimated Labor Utilization (1000s of Person-Years), Passenger Car Fleet for Manufacturer(Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	301,378	301,378	301,378	301,378	301,378
2023	302,997	302,997	302,997	302,997	302,997
2024	288,178	288,178	288,178	288,178	288,178
2025	276,848	276,848	276,848	276,848	276,848
2026	279,603	279,603	279,603	279,603	279,603
2027	283,588	282,347	282,276	282,801	282,073
2028	284,617	282,968	282,962	283,563	282,749
2029	279,447	278,232	277,354	277,260	275,877
2030	274,463	273,568	272,968	273,518	271,804
2031	272,493	271,930	271,700	272,602	271,582
2032	271,586	271,370	271,516	274,611	274,056



**Table 361 - Estimated Labor Utilization (1000s of Person-Years), Light Truck Fleet for Manufacturer(Total)**

<b>Estimated Labor Utilization (1000s of Person-Years), Light Truck Fleet for Manufacturer(Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	587,845	587,845	587,845	587,845	587,845
2023	656,003	656,003	656,003	656,003	656,003
2024	666,722	666,722	666,722	666,722	666,722
2025	685,075	685,075	685,075	685,075	685,075
2026	717,843	717,843	717,843	717,843	717,843
2027	744,096	748,103	748,216	747,831	747,057
2028	755,217	760,188	760,067	759,612	758,081
2029	747,718	753,666	755,273	755,192	752,204
2030	731,579	737,557	738,997	738,296	737,289
2031	719,328	725,560	726,305	725,837	724,736
2032	714,808	721,265	721,651	720,983	718,134

**Table 362 - Estimated Labor Utilization (1000s of Person-Years), Domestic Car Fleet for Manufacturer(Total)**

<b>Estimated Labor Utilization (1000s of Person-Years), Domestic Car Fleet for Manufacturer(Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	192,782	192,782	192,782	192,782	192,782
2023	193,909	193,909	193,909	193,909	193,909
2024	185,436	185,436	185,436	185,436	185,436
2025	178,443	178,443	178,443	178,443	178,443
2026	179,698	179,698	179,698	179,698	179,698
2027	182,188	181,449	181,459	182,082	181,627
2028	182,623	181,592	181,610	182,278	181,859
2029	179,143	178,530	177,944	178,118	177,349
2030	175,796	175,382	174,990	175,593	174,668
2031	174,394	174,203	174,035	175,137	174,570
2032	173,665	173,697	173,794	176,793	176,325

**Table 363 - Estimated Labor Utilization (1000s of Person-Years), Imported Car Fleet for Manufacturer(Total)**

<b>Estimated Labor Utilization (1000s of Person-Years), Imported Car Fleet for Manufacturer(Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	108,595	108,595	108,595	108,595	108,595
2023	109,088	109,088	109,088	109,088	109,088
2024	102,743	102,743	102,743	102,743	102,743
2025	98,405	98,405	98,405	98,405	98,405
2026	99,905	99,905	99,905	99,905	99,905
2027	101,400	100,898	100,816	100,719	100,445
2028	101,994	101,377	101,352	101,285	100,890
2029	100,304	99,703	99,410	99,141	98,527
2030	98,667	98,186	97,978	97,925	97,136
2031	98,100	97,727	97,665	97,465	97,012
2032	97,921	97,673	97,722	97,818	97,730

**Table 364 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(BMW)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(BMW)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	17,028	17,028	17,028	17,028	17,028
2023	18,359	18,359	18,359	18,359	18,359
2024	18,278	18,278	18,278	18,278	18,278
2025	18,649	18,649	18,649	18,649	18,649
2026	19,258	19,258	19,258	19,258	19,258
2027	19,815	19,786	19,779	19,757	19,730
2028	20,146	20,102	20,084	20,052	19,993
2029	19,975	19,943	19,927	19,892	19,786
2030	19,572	19,532	19,507	19,453	19,289
2031	19,230	19,190	19,155	19,098	18,875
2032	19,116	19,093	19,068	18,941	18,732

**Table 365 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Ford)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Ford)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	145,816	145,816	145,816	145,816	145,816
2023	163,378	163,378	163,378	163,378	163,378
2024	165,192	165,192	165,192	165,192	165,192
2025	167,248	167,248	167,248	167,248	167,248
2026	173,266	173,266	173,266	173,266	173,266
2027	178,931	180,103	180,456	180,253	180,072
2028	180,815	182,665	182,938	182,625	182,163
2029	178,260	180,652	181,027	180,730	179,928
2030	173,675	175,865	176,136	175,618	174,646
2031	170,048	171,986	172,086	171,569	170,019
2032	168,846	170,593	170,504	169,279	167,178

**Table 366 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(GM)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(GM)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	124,843	124,843	124,843	124,843	124,843
2023	135,268	135,268	135,268	135,268	135,268
2024	138,583	138,583	138,583	138,583	138,583
2025	141,336	141,336	141,336	141,336	141,336
2026	145,637	145,637	145,637	145,637	145,637
2027	150,193	151,769	151,716	151,546	151,354
2028	151,729	153,358	153,221	152,962	152,524
2029	149,508	151,391	151,210	150,959	150,140
2030	145,759	147,676	147,491	147,073	145,848
2031	145,106	147,885	147,565	147,844	146,127
2032	143,936	146,938	146,512	147,827	145,642

**Table 367 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Honda)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Honda)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	129,568	129,568	129,568	129,568	129,568
2023	137,597	137,597	137,597	137,597	137,597
2024	134,768	134,768	134,768	134,768	134,768
2025	134,223	134,223	134,223	134,223	134,223
2026	139,089	139,089	139,089	139,089	139,089
2027	143,169	143,393	143,392	144,359	144,117
2028	144,766	144,795	144,791	145,904	146,050
2029	142,802	142,768	142,783	143,747	143,604
2030	139,829	139,757	139,930	140,981	140,458
2031	137,562	137,487	137,641	138,536	139,500
2032	136,601	136,506	136,737	137,354	138,101

**Table 368 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Hyundai KiH)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Hyundai KiH)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	23,989	23,989	23,989	23,989	23,989
2023	25,219	25,219	25,219	25,219	25,219
2024	24,631	24,631	24,631	24,631	24,631
2025	24,865	24,865	24,865	24,865	24,865
2026	25,573	25,573	25,573	25,573	25,573
2027	26,192	26,179	26,166	26,138	26,092
2028	26,412	26,470	26,449	26,437	26,346
2029	26,041	26,089	26,048	26,012	25,853
2030	25,488	25,533	25,491	25,445	25,190
2031	25,090	25,119	25,106	25,110	24,855
2032	24,951	24,976	24,956	24,935	24,794



**Table 369 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Hyundai KiK)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Hyundai KiK)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	28,944	28,944	28,944	28,944	28,944
2023	30,450	30,450	30,450	30,450	30,450
2024	29,915	29,915	29,915	29,915	29,915
2025	29,669	29,669	29,669	29,669	29,669
2026	30,915	30,915	30,915	30,915	30,915
2027	31,695	31,620	31,605	31,570	31,516
2028	31,967	31,859	31,832	31,784	31,665
2029	31,516	31,411	31,387	31,337	31,187
2030	30,892	30,789	30,762	30,766	30,519
2031	30,410	30,388	30,468	30,462	30,287
2032	30,265	30,281	30,432	33,454	33,157

**Table 370 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(JLR)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(JLR)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	921	921	921	921	921
2023	1,017	1,017	1,017	1,017	1,017
2024	1,023	1,023	1,023	1,023	1,023
2025	1,040	1,040	1,040	1,040	1,040
2026	1,074	1,074	1,074	1,074	1,074
2027	1,109	1,108	1,108	1,107	1,105
2028	1,123	1,122	1,121	1,119	1,116
2029	1,112	1,110	1,109	1,108	1,102
2030	1,088	1,091	1,090	1,087	1,078
2031	1,066	1,068	1,066	1,063	1,051
2032	1,060	1,063	1,059	1,051	1,036

**Table 371 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Karma)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Karma)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2	2	2	2	2
2023	2	2	2	2	2
2024	2	2	2	2	2
2025	2	2	2	2	2
2026	2	2	2	2	2
2027	2	2	2	2	2
2028	2	2	2	2	2
2029	2	2	2	2	2
2030	2	2	2	2	2
2031	2	2	2	2	2
2032	2	2	2	2	2

**Table 372 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Lucid)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Lucid)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	48	48	48	48	48
2023	48	48	48	48	48
2024	45	45	45	45	45
2025	43	43	43	43	43
2026	43	43	43	43	43
2027	43	43	43	43	43
2028	44	43	43	43	43
2029	43	42	42	42	42
2030	42	42	42	41	41
2031	42	41	41	41	41
2032	42	41	41	41	41

**Table 373 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mazda)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mazda)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2,148	2,148	2,148	2,148	2,148
2023	2,320	2,320	2,320	2,320	2,320
2024	2,318	2,318	2,318	2,318	2,318
2025	2,340	2,340	2,340	2,340	2,340
2026	2,421	2,421	2,421	2,421	2,421
2027	2,499	2,497	2,497	2,642	2,654
2028	2,531	2,527	2,525	2,666	2,672
2029	2,500	2,495	2,494	2,677	2,685
2030	2,442	2,437	2,434	2,604	2,603
2031	2,392	2,386	2,382	2,539	2,528
2032	2,377	2,370	2,364	2,501	2,481

**Table 374 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mercedes-Benz)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mercedes-Benz)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	8,861	8,861	8,861	8,861	8,861
2023	9,592	9,592	9,592	9,592	9,592
2024	9,557	9,557	9,557	9,557	9,557
2025	9,653	9,653	9,653	9,653	9,653
2026	10,123	10,123	10,123	10,123	10,123
2027	10,456	10,442	10,438	10,427	10,413
2028	10,611	10,640	10,630	10,613	10,581
2029	10,549	10,573	10,566	10,547	10,489
2030	10,366	10,381	10,369	10,340	10,253
2031	10,195	10,207	10,188	10,158	10,039
2032	10,151	10,155	10,127	10,058	9,910

**Table 375 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mitsubishi)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Mitsubishi)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,413	1,413	1,413	1,413	1,413
2023	1,471	1,471	1,471	1,471	1,471
2024	1,429	1,429	1,429	1,429	1,429
2025	1,410	1,410	1,410	1,410	1,410
2026	1,435	1,435	1,435	1,435	1,435
2027	1,469	1,465	1,464	1,462	1,460
2028	1,481	1,475	1,474	1,472	1,466
2029	1,459	1,453	1,450	1,447	1,437
2030	1,428	1,422	1,420	1,416	1,400
2031	1,405	1,407	1,406	1,417	1,400
2032	1,399	1,402	1,401	1,409	1,390

**Table 376 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Nissan)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Nissan)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	59,204	59,204	59,204	59,204	59,204
2023	62,205	62,205	62,205	62,205	62,205
2024	60,853	60,853	60,853	60,853	60,853
2025	60,925	60,925	60,925	60,925	60,925
2026	62,286	62,286	62,286	62,286	62,286
2027	63,864	63,695	63,663	63,595	63,479
2028	64,512	64,670	64,833	64,736	64,576
2029	63,688	63,812	64,006	63,850	63,513
2030	62,428	62,535	62,887	63,078	62,551
2031	61,496	61,597	61,927	62,093	61,661
2032	61,207	61,301	61,627	61,703	61,434



**Table 377 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Stellantis)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Stellantis)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	95,067	95,067	95,067	95,067	95,067
2023	108,854	108,854	108,854	108,854	108,854
2024	111,942	111,942	111,942	111,942	111,942
2025	117,365	117,365	117,365	117,365	117,365
2026	120,670	120,670	120,670	120,670	120,670
2027	124,892	125,723	125,684	125,542	125,409
2028	126,001	126,787	126,673	126,453	126,133
2029	124,469	125,975	126,894	126,702	126,062
2030	121,840	123,455	124,251	123,885	126,035
2031	119,272	120,742	121,409	121,152	122,640
2032	118,356	120,325	120,822	120,032	121,046

**Table 378 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Subaru)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Subaru)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	38,667	38,667	38,667	38,667	38,667
2023	41,933	41,933	41,933	41,933	41,933
2024	41,699	41,699	41,699	41,699	41,699
2025	42,077	42,077	42,077	42,077	42,077
2026	44,224	44,224	44,224	44,224	44,224
2027	45,784	45,717	45,699	45,649	45,586
2028	46,474	46,369	46,329	46,267	46,201
2029	45,973	45,859	45,822	45,752	45,905
2030	45,037	44,910	44,855	44,739	45,305
2031	44,206	44,082	44,002	43,879	44,209
2032	43,928	43,785	43,670	43,390	43,530

**Table 379 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Tesla)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Tesla)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	58,893	58,893	58,893	58,893	58,893
2023	59,132	59,132	59,132	59,132	59,132
2024	55,814	55,814	55,814	55,814	55,814
2025	53,506	53,506	53,506	53,506	53,506
2026	53,699	53,699	53,699	53,699	53,699
2027	54,510	54,246	54,204	54,151	54,009
2028	54,726	54,371	54,329	54,268	53,962
2029	53,752	53,406	53,221	53,030	52,578
2030	52,748	52,463	52,320	52,194	51,452
2031	52,301	52,063	51,981	51,779	50,953
2032	52,178	52,002	51,974	51,897	51,046

**Table 380 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Toyota)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Toyota)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	143,598	143,598	143,598	143,598	143,598
2023	151,382	151,382	151,382	151,382	151,382
2024	148,299	148,299	148,299	148,299	148,299
2025	147,068	147,068	147,068	147,068	147,068
2026	156,907	156,907	156,907	156,907	156,907
2027	161,955	161,543	161,462	161,288	161,006
2028	165,252	164,660	164,521	164,552	164,144
2029	164,368	163,761	163,498	163,500	162,708
2030	162,464	161,877	161,619	161,758	161,192
2031	161,198	160,659	160,399	160,548	161,115
2032	161,224	160,695	160,721	160,612	161,724

**Table 381 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Volvo)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(Volvo)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2,633	2,633	2,633	2,633	2,633
2023	2,736	2,736	2,736	2,736	2,736
2024	2,653	2,653	2,653	2,653	2,653
2025	2,626	2,626	2,626	2,626	2,626
2026	2,674	2,674	2,674	2,674	2,674
2027	2,734	2,727	2,725	2,722	2,717
2028	2,755	2,744	2,742	2,738	2,727
2029	2,712	2,701	2,696	2,689	2,670
2030	2,660	2,652	2,651	2,644	2,614
2031	2,625	2,618	2,617	2,608	2,571
2032	2,614	2,608	2,607	2,598	2,557

**Table 382 - Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(VWA)**

<b>Estimated Labor Utilization (1000s of Person-Years), Total Fleet for Manufacturer(VWA)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	7,579	7,579	7,579	7,579	7,579
2023	8,036	8,036	8,036	8,036	8,036
2024	7,900	7,900	7,900	7,900	7,900
2025	7,878	7,878	7,878	7,878	7,878
2026	8,150	8,150	8,150	8,150	8,150
2027	8,369	8,392	8,388	8,379	8,365
2028	8,486	8,498	8,493	8,483	8,466
2029	8,439	8,454	8,445	8,430	8,389
2030	8,283	8,707	8,711	8,690	8,615
2031	8,177	8,561	8,564	8,541	8,444
2032	8,142	8,498	8,543	8,509	8,390

**Table 383 - Changes in Work Loss Days (thousand instances), Total Fleet through MY 2032**

<b>Changes in Work Loss Days (thousand instances), Total Fleet through MY 2032</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Work Loss Days from Upstream Emissions	2.9	3.6	0.6	3.0
Work Loss Days from Tailpipe Emissions	-10.6	-15.0	-10.6	-19.6
Total Work Loss Days	-7.8	-11.4	-9.9	-16.6

**Table 384 - Changes in Work Loss Days (thousand instances), Passenger Car Fleet through MY 2032**

<b>Changes in Work Loss Days (thousand instances), Passenger Car Fleet through MY 2032</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Work Loss Days from Upstream Emissions	-0.9	-1.7	-2.1	-4.3
Work Loss Days from Tailpipe Emissions	0.8	1.4	3.6	5.5
Total Work Loss Days	-0.1	-0.2	1.5	1.2



**Table 385 - Changes in Work Loss Days (thousand instances), Light Truck Fleet through MY 2032**

<b>Changes in Work Loss Days (thousand instances), Light Truck Fleet through MY 2032</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Work Loss Days from Upstream Emissions	3.8	5.2	2.8	7.3
Work Loss Days from Tailpipe Emissions	-11.5	-16.4	-14.2	-25.1
Total Work Loss Days	-7.6	-11.2	-11.4	-17.8

## Compliance Impacts

**Table -386 - Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	35.8	36.1	39.0	42.2	46.8	48.4	50.1	51.9	53.8	55.7	57.8	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	7%	11%	15%	19%	24%	N/A
Average Achieved (mpg)	34.1	35.5	38.4	40.9	43.8	45.9	47.3	49.1	50.7	52.8	54.4	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	4.4	6.6	8.8	9.2	9.6	10.6	49.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	4.4	6.6	8.8	9.2	9.6	10.6	49.2
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	1.3	2.4	2.2	2.4	2.3	3.1	13.7
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.7	9.0	11.0	11.7	11.9	13.6	62.9
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.04	-0.06	-0.07	-0.07	-0.07	-0.08	-0.4

**Table -387 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.1	44.8	48.7	52.9	58.8	60.0	61.2	62.5	63.7	65.1	66.4	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	6%	8%	11%	13%	N/A
Average Achieved (mpg)	43.7	46.6	51.3	54.3	59.5	61.3	63.2	65.4	67.5	69.6	71.4	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.4	2.0	2.8	2.7	2.7	2.6	14.2
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.4	2.0	2.8	2.7	2.7	2.6	14.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.2	0.1	0.0	0.0	1.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.9	2.7	3.3	3.2	3.1	3.1	17.3
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.03	-0.04	-0.05	-0.04	-0.03	-0.02	-0.2

**Table -388 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	32.1	32.6	35.3	38.3	42.6	44.4	46.2	48.2	50.2	52.2	54.4	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	9%	13%	18%	23%	28%	N/A
Average Achieved (mpg)	30.1	31.3	34.0	36.4	38.9	41.1	42.4	44.1	45.5	47.4	48.9	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.0	4.6	6.0	6.5	6.9	8.0	35.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.0	4.6	6.0	6.5	6.9	8.0	35.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	2.4	2.3	3.1	12.7
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.8	6.3	7.7	8.4	8.9	10.6	45.6
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.03	-0.04	-0.06	-0.2

**Table -389 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	43.5	44.2	48.1	52.3	58.0	59.2	60.4	61.7	62.9	64.2	65.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	6%	8%	11%	13%	N/A
Average Achieved (mpg)	44.9	46.9	53.2	56.7	61.3	63.5	64.9	67.2	69.1	70.9	72.8	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.9	0.9	0.9	1.0	5.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.9	0.9	0.9	1.0	5.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.4
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.2	1.2	1.2	1.3	6.7
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.02	-0.01	-0.01	-0.1

**Table -390 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.7	45.4	49.3	53.6	59.5	60.7	62.0	63.3	64.6	65.9	67.2	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	6%	8%	11%	13%	N/A
Average Achieved (mpg)	42.7	46.3	49.6	52.2	57.9	59.3	61.6	63.8	65.9	68.4	70.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.2	1.9	1.8	1.8	1.7	9.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.2	1.8	1.8	1.8	1.7	9.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.5
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.1	1.6	2.2	2.0	1.9	1.8	10.6
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.02	-0.02	-0.01	-0.1

**Table -391 - Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC3LT5**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC3LT5</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	35.8	36.1	39.0	42.2	46.8	48.9	51.2	53.5	56.1	58.7	61.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	5%	10%	15%	20%	26%	32%	N/A
Average Achieved (mpg)	34.1	35.5	38.4	40.9	43.8	45.9	47.6	49.5	51.4	53.6	55.5	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.6	8.1	10.9	11.8	12.6	17.2	66.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.6	8.1	10.9	11.8	12.6	17.2	66.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	1.9	3.4	3.7	4.6	4.9	6.1	24.7
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	7.5	11.5	14.6	16.4	17.5	23.3	90.8
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.06	-0.09	-0.10	-0.12	-0.12	-0.17	-0.7

**Table -392 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC3LT5**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC3LT5												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.1	44.8	48.7	52.9	58.8	60.6	62.5	64.4	66.4	68.5	70.6	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	13%	16%	20%	N/A
Average Achieved (mpg)	43.7	46.6	51.3	54.3	59.5	61.4	63.6	66.0	68.6	71.2	73.3	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	2.5	3.7	3.8	4.1	4.7	20.5
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	2.5	3.7	3.8	4.1	4.7	20.4
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.5	0.3	0.1	0.1	2.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	2.4	3.5	4.7	4.7	5.0	5.7	26.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.03	-0.04	-0.07	-0.05	-0.05	-0.02	-0.3



**Table -393 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC3LT5**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC3LT5</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	32.1	32.6	35.3	38.3	42.6	44.9	47.2	49.7	52.3	55.1	58.0	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	5%	11%	17%	23%	29%	36%	N/A
Average Achieved (mpg)	30.1	31.3	34.0	36.4	38.9	41.1	42.6	44.4	46.1	48.1	49.8	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.9	5.6	7.3	8.0	8.5	12.5	45.8
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.9	5.6	7.3	8.0	8.5	12.5	45.7
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	1.3	2.7	3.2	4.3	4.8	6.0	22.4
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.1	8.0	10.0	11.7	12.5	17.6	64.8
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.03	-0.06	-0.07	-0.14	-0.4

**Table -394 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC3LT5**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC3LT5												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	43.5	44.2	48.1	52.3	58.0	59.9	61.7	63.6	65.5	67.6	69.7	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	13%	16%	20%	N/A
Average Achieved (mpg)	44.9	46.9	53.2	56.7	61.3	63.6	65.2	67.7	70.2	72.8	75.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.9	1.1	1.3	1.4	1.7	2.4	8.8
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.9	1.1	1.3	1.4	1.7	2.4	8.8
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.2	0.0	0.1	1.2
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.2	1.6	1.7	1.9	2.2	3.0	11.7
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.02	-0.02	-0.03	-0.03	-0.02	-0.01	-0.1

**Table -395 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC3LT5**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC3LT5												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.7	45.4	49.3	53.6	59.5	61.4	63.3	65.2	67.2	69.3	71.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	13%	16%	20%	N/A
Average Achieved (mpg)	42.7	46.3	49.6	52.2	57.9	59.3	62.2	64.5	67.0	69.8	71.7	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.4	2.4	2.4	2.4	2.3	11.6
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.4	2.4	2.4	2.4	2.3	11.6
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.1	0.0	0.0	1.1
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.3	1.9	2.9	2.8	2.7	2.7	14.4
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.02	-0.02	-0.04	-0.03	-0.02	-0.01	-0.1

**Table -396 - Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC6LT8**

Compliance Impacts and Cumulative Industry Costs by Model Year for Total and Total Fleet, Alternative PC6LT8												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	35.8	36.1	39.0	42.2	46.8	50.5	54.5	58.9	63.7	68.9	74.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	8%	17%	26%	36%	47%	59%	N/A
Average Achieved (mpg)	34.1	35.5	38.4	40.9	43.8	46.0	47.9	50.3	52.6	55.3	58.3	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.7	8.9	13.0	17.2	19.6	26.3	90.6
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.3
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	5.7	8.9	13.0	17.1	19.5	26.2	90.4
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	4.6	8.8	12.8	17.1	20.2	23.6	87.1
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	10.2	17.7	25.7	34.2	39.8	49.8	177.4
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.08	-0.14	-0.20	-0.26	-0.31	-0.39	-1.4

**Table -397 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC6LT8**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandPassenger Car Fleet, Alternative PC6LT8												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.1	44.8	48.7	52.9	58.8	62.5	66.5	70.8	75.3	80.1	85.2	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	6%	13%	20%	28%	36%	45%	N/A
Average Achieved (mpg)	43.7	46.6	51.3	54.3	59.5	61.4	65.2	68.8	72.6	76.8	81.7	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	3.1	4.6	6.1	7.1	9.0	31.5
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	3.1	4.6	6.0	7.1	9.0	31.5
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	1.6	2.2	2.9	3.2	3.3	3.1	16.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	3.4	5.8	8.4	10.6	12.2	14.3	54.8
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.05	-0.07	-0.11	-0.12	-0.13	-0.10	-0.6

**Table -398 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC6LT8**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandLight Truck Fleet, Alternative PC6LT8												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	32.1	32.6	35.3	38.3	42.6	46.3	50.3	54.7	59.5	64.6	70.3	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	9%	18%	28%	40%	52%	65%	N/A
Average Achieved (mpg)	30.1	31.3	34.0	36.4	38.9	41.1	42.7	44.8	46.7	48.9	51.3	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	4.0	5.9	8.4	11.1	12.5	17.3	59.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	4.0	5.8	8.4	11.1	12.4	17.2	58.9
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	3.0	6.6	9.9	13.9	16.9	20.5	70.8
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	6.8	11.9	17.3	23.6	27.5	35.5	122.7
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.03	-0.07	-0.09	-0.14	-0.18	-0.29	-0.8

**Table -399 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC6LT8**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandDomestic Car Fleet, Alternative PC6LT8												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	43.5	44.2	48.1	52.3	58.0	61.7	65.7	69.9	74.3	79.1	84.1	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	6%	13%	20%	28%	36%	45%	N/A
Average Achieved (mpg)	44.9	46.9	53.2	56.7	61.3	63.7	67.2	71.6	75.7	79.5	83.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.9	1.4	1.8	2.7	3.3	4.2	14.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.9	1.4	1.8	2.7	3.3	4.2	14.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.3	1.4	1.4	1.4	7.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	2.7	3.5	4.6	5.6	6.8	25.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.06	-0.06	-0.06	-0.05	-0.3

**Table -400 - Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC6LT8**

Compliance Impacts and Cumulative Industry Costs by Model Year for TotalandImported Car Fleet, Alternative PC6LT8												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	44.7	45.4	49.3	53.6	59.5	63.3	67.4	71.7	76.2	81.1	86.3	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	6%	13%	20%	28%	36%	45%	N/A
Average Achieved (mpg)	42.7	46.3	49.6	52.2	57.9	59.4	63.4	66.3	69.9	74.4	80.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.7	2.8	3.3	3.8	4.8	17.2
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.7	2.8	3.3	3.8	4.8	17.2
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.5	1.8	1.9	1.8	9.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.7	3.1	4.9	6.0	6.6	7.5	29.8
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.06	-0.06	-0.06	-0.05	-0.3



**Table -401 - Compliance Impacts and Cumulative Industry Costs by Model Year for BMW and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for BMW and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	37.6	37.9	41.0	44.4	49.3	50.8	52.4	54.1	55.9	57.8	59.7	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	7%	10%	14%	17%	21%	N/A
Average Achieved (mpg)	32.9	34.8	38.0	41.5	46.5	46.4	48.4	50.7	53.1	55.3	58.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -402 - Compliance Impacts and Cumulative Industry Costs by Model Year for Ford and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Ford and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	31.4	31.8	34.3	37.2	41.4	42.9	44.7	46.5	48.4	50.3	52.3	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	12%	17%	22%	27%	N/A
Average Achieved (mpg)	29.0	30.1	33.5	34.3	36.4	41.1	43.0	45.1	45.2	45.9	46.7	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.1	1.6	2.0	1.9	1.8	1.7	10.2
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.1	1.6	2.0	1.9	1.8	1.7	10.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	1.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.1	1.6	2.0	1.9	2.1	2.4	11.1
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01	-0.01	-0.01	0.0

**Table -403 - Compliance Impacts and Cumulative Industry Costs by Model Year for GM and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for GM and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	32.5	32.9	35.2	38.2	42.3	43.8	45.6	47.2	49.1	51.0	53.0	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	12%	16%	21%	25%	N/A
Average Achieved (mpg)	29.1	29.0	33.7	37.1	38.3	39.8	40.0	40.4	40.7	43.3	44.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.4	1.5	1.7	1.7	2.3	2.4	11.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.4	1.5	1.7	1.7	2.3	2.4	11.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.4	0.8	1.1	1.5	1.2	1.5	6.5
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.8	2.3	2.7	3.2	3.5	4.0	17.5
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	0.0

**Table -404 - Compliance Impacts and Cumulative Industry Costs by Model Year for Honda and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Honda and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	39.1	39.4	42.7	46.2	51.2	52.8	54.5	56.2	58.1	60.1	62.0	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	7%	10%	14%	18%	21%	N/A
Average Achieved (mpg)	37.8	40.2	40.2	41.7	45.7	49.0	51.3	53.3	56.1	58.2	60.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	1.7
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	1.7
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	1.7
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.0

**Table -405 - Compliance Impacts and Cumulative Industry Costs by Model Year for Hyundai KiH and Total Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Hyundai KiH and Total Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	39.6	40.0	43.3	46.8	51.9	53.5	55.1	56.8	58.6	60.5	62.3	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	13%	17%	20%	N/A
Average Achieved (mpg)	39.1	40.8	41.0	44.9	49.0	50.1	53.6	54.9	56.6	58.5	60.4	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.0	2.1	2.0	1.8	1.7	1.7	10.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.0	2.1	2.0	1.8	1.7	1.7	10.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	1.1	2.1	2.0	1.8	1.7	1.7	10.4
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	0.0

**Table -406 - Compliance Impacts and Cumulative Industry Costs by Model Year for Hyundai KiK and Total Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Hyundai KiK and Total Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	39.5	39.8	43.1	46.7	51.7	53.3	55.0	56.7	58.5	60.5	62.4	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	7%	10%	13%	17%	21%	N/A
Average Achieved (mpg)	38.5	40.5	44.7	44.7	49.3	49.2	49.2	52.7	54.1	57.4	59.5	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	1.3	1.2	1.4	1.3	5.7
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	1.3	1.2	1.4	1.3	5.7
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.0	0.6
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.4	0.5	1.4	1.3	1.4	1.3	6.3
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -407 - Compliance Impacts and Cumulative Industry Costs by Model Year for JLR and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for JLR and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	32.9	33.4	36.2	39.4	43.7	45.5	47.4	49.4	51.4	53.6	55.8	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	13%	18%	23%	28%	N/A
Average Achieved (mpg)	27.4	34.2	36.7	36.8	38.9	39.8	39.8	40.7	42.8	46.4	49.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.4
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -408 - Compliance Impacts and Cumulative Industry Costs by Model Year for Karma and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Karma and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	6%	8%	11%	13%	N/A
Average Achieved (mpg)	66.7	66.7	66.7	66.7	138.6	138.6	138.6	138.6	138.6	138.6	138.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0



**Table -409 - Compliance Impacts and Cumulative Industry Costs by Model Year for Lucid and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Lucid and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	40.6	41.1	44.3	48.1	53.5	55.2	56.3	57.5	58.6	59.8	61.1	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	6%	8%	11%	13%	N/A
Average Achieved (mpg)	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	170.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -410 - Compliance Impacts and Cumulative Industry Costs by Model Year for Mazda and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Mazda and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	37.3	37.8	41.0	44.4	49.4	51.3	53.3	55.4	57.6	59.9	62.3	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	12%	17%	21%	26%	N/A
Average Achieved (mpg)	35.1	41.2	42.4	42.5	46.8	49.2	50.8	53.2	55.6	57.7	59.3	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -411 - Compliance Impacts and Cumulative Industry Costs by Model Year for Mercedes-Benz and Total Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Mercedes-Benz and Total Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	36.8	37.2	40.2	43.6	48.4	49.9	51.5	53.3	55.0	56.9	58.8	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	7%	10%	14%	18%	22%	N/A
Average Achieved (mpg)	31.6	36.7	37.3	37.8	43.4	44.9	47.4	49.4	53.6	55.8	57.8	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.6
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -412 - Compliance Impacts and Cumulative Industry Costs by Model Year for Mitsubishi and Total Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Mitsubishi and Total Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	42.0	42.5	45.9	49.8	55.2	56.9	58.7	60.5	62.5	64.6	66.6	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	14%	17%	21%	N/A
Average Achieved (mpg)	38.6	38.8	45.1	48.0	53.4	53.3	53.3	53.2	53.3	63.6	64.4	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -413 - Compliance Impacts and Cumulative Industry Costs by Model Year for Nissan and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Nissan and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	38.9	39.3	42.4	46.0	50.9	52.4	54.1	55.8	57.6	59.5	61.4	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	6%	10%	13%	17%	21%	N/A
Average Achieved (mpg)	36.8	39.6	41.4	43.8	46.6	46.7	50.8	52.5	56.4	57.7	59.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.5	0.5	2.4
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.5	0.5	2.4
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.3
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.5	0.5	0.5	0.5	2.7
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.0

**Table -414 - Compliance Impacts and Cumulative Industry Costs by Model Year for Stellantis and Total Fleet, Alternative PC2LT4**

<b>Compliance Impacts and Cumulative Industry Costs by Model Year for Stellantis and Total Fleet, Alternative PC2LT4</b>												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
<b>Fuel Economy</b>												
Average Required (mpg)	31.9	32.3	34.9	38.0	42.1	43.8	45.6	47.3	49.2	51.1	53.2	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	12%	17%	21%	26%	N/A
Average Achieved (mpg)	27.3	28.5	31.4	37.0	37.5	40.1	40.2	42.8	44.4	45.4	47.3	N/A
<b>Total Regulatory Costs</b>												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.0	1.1	1.0	1.7	5.5
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.0	1.1	1.0	1.7	5.5
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.3	0.4	0.7	0.7	3.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.4	1.5	1.7	2.4	8.5
<b>Sales Impacts</b>												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	0.0

**Table -415 - Compliance Impacts and Cumulative Industry Costs by Model Year for Subaru and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Subaru and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	37.8	38.2	41.4	44.9	50.0	51.9	53.9	56.0	58.2	60.5	62.9	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	8%	12%	17%	21%	26%	N/A
Average Achieved (mpg)	36.7	40.3	42.2	44.1	50.0	52.3	54.3	56.6	59.5	62.0	64.2	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -416 - Compliance Impacts and Cumulative Industry Costs by Model Year for Tesla and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Tesla and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	40.7	41.2	44.8	48.6	54.1	55.2	56.4	57.7	58.9	60.3	61.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	2%	4%	7%	9%	11%	14%	N/A
Average Achieved (mpg)	160.7	160.7	160.7	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0



**Table -417 - Compliance Impacts and Cumulative Industry Costs by Model Year for Toyota and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Toyota and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	37.1	37.4	40.4	43.6	48.4	50.0	51.8	53.6	55.5	57.5	59.5	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	3%	7%	11%	15%	19%	23%	N/A
Average Achieved (mpg)	36.6	37.7	40.6	41.7	46.6	47.8	49.2	50.8	52.7	54.9	57.0	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.1

**Table -418 - Compliance Impacts and Cumulative Industry Costs by Model Year for Volvo and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for Volvo and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	36.0	36.4	39.4	42.6	47.4	49.0	50.8	52.7	54.6	56.7	58.7	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	7%	11%	16%	20%	24%	N/A
Average Achieved (mpg)	39.0	41.3	41.3	45.3	45.8	46.3	46.2	46.7	52.7	54.8	57.6	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.2
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table -419 - Compliance Impacts and Cumulative Industry Costs by Model Year for VWA and Total Fleet, Alternative PC2LT4**

Compliance Impacts and Cumulative Industry Costs by Model Year for VWA and Total Fleet, Alternative PC2LT4												
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Fuel Economy												
Average Required (mpg)	37.9	38.2	41.3	44.8	49.6	51.3	53.1	55.0	57.0	59.0	61.1	N/A
Change from Baseline (%)	0%	0%	0%	0%	0%	4%	7%	11%	15%	19%	23%	N/A
Average Achieved (mpg)	33.8	35.2	40.3	42.9	45.0	45.8	47.8	49.4	53.4	56.5	58.7	N/A
Total Regulatory Costs												
Tech. (non-Off-Cycle/non-AC) Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.4	1.3
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.4	1.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.6
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.4	0.4	0.4	2.0
Sales Impacts												
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0



**Table 420 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Total)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Total)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	46.7	54.3	57.8	61.5	74.5
Percent Change from Baseline	0%	16%	24%	32%	59%
Average Achieved (mpg)	50.8	53.4	54.4	55.5	58.3
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	56.3	8.0	10.6	17.2	26.3
Off-Cycle Technology Costs (\$b)	2.7	5.3	5.3	5.3	5.3
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	59.0	13.3	15.9	22.6	31.6
Total Civil Penalties (\$b)	0.0	0.9	3.1	6.1	23.6
Total Regulatory Costs (\$b)	61.9	8.8	13.6	23.3	49.8
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.28	-0.40	-0.65	-1.39

**Table 421 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Passenger Car Fleet by Alternative for Manufacturer (Total)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Passenger Car Fleet by Alternative for Manufacturer (Total)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	58.8	62.4	66.4	70.6	85.2
Percent Change from Baseline	0%	6%	13%	20%	45%
Average Achieved (mpg)	69.0	70.2	71.4	73.3	81.7
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	11.7	1.8	2.6	4.7	9.0
Off-Cycle Technology Costs (\$b)	0.4	0.7	0.7	0.7	0.7
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	12.1	2.6	3.4	5.5	9.7
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.1	3.1
Total Regulatory Costs (\$b)	12.6	2.0	3.1	5.7	14.3
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.16	-0.21	-0.27	-0.58

**Table 422 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Light Truck Fleet by Alternative for Manufacturer (Total)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Light Truck Fleet by Alternative for Manufacturer (Total)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	42.6	51.2	54.4	58.0	70.3
Percent Change from Baseline	0%	20%	28%	36%	65%
Average Achieved (mpg)	45.2	48.0	48.9	49.8	51.3
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	44.6	6.2	8.0	12.5	17.3
Off-Cycle Technology Costs (\$b)	2.3	4.6	4.6	4.6	4.6
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	46.9	10.7	12.6	17.1	21.9
Total Civil Penalties (\$b)	0.0	0.9	3.1	6.0	20.5
Total Regulatory Costs (\$b)	49.4	6.9	10.6	17.6	35.5
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.12	-0.19	-0.38	-0.81

**Table 423 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Domestic Car Fleet by Alternative for Manufacturer (Total)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Domestic Car Fleet by Alternative for Manufacturer (Total)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	58.0	61.6	65.5	69.7	84.1
Percent Change from Baseline	0%	6%	13%	20%	45%
Average Achieved (mpg)	69.9	71.6	72.8	75.0	83.6
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	5.2	0.8	1.0	2.4	4.2
Off-Cycle Technology Costs (\$b)	0.1	0.3	0.3	0.3	0.3
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	5.4	1.1	1.2	2.7	4.5
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.1	1.4
Total Regulatory Costs (\$b)	5.6	0.9	1.3	3.0	6.8
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.08	-0.10	-0.13	-0.29



**Table 424 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Imported Car Fleet by Alternative for Manufacturer (Total)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Imported Car Fleet by Alternative for Manufacturer (Total)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	59.5	63.2	67.2	71.5	86.3
Percent Change from Baseline	0%	6%	13%	20%	45%
Average Achieved (mpg)	68.1	68.9	70.0	71.7	80.0
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	6.5	1.0	1.7	2.3	4.8
Off-Cycle Technology Costs (\$b)	0.2	0.5	0.5	0.5	0.5
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	6.7	1.5	2.1	2.8	5.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	1.8
Total Regulatory Costs (\$b)	7.0	1.0	1.8	2.7	7.5
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.08	-0.11	-0.14	-0.29

**Table 425 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (BMW)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (BMW)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	49.2	56.1	59.7	63.5	76.9
Percent Change from Baseline	0%	14%	21%	29%	56%
Average Achieved (mpg)	56.8	58.2	58.6	58.7	60.5
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	1.4	0.0	0.0	0.0	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.1	0.1	0.1	0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	1.5	0.1	0.1	0.1	0.2
Total Civil Penalties (\$b)	0.0	0.0	0.1	0.2	0.7
Total Regulatory Costs (\$b)	1.5	0.0	0.1	0.2	0.8
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.01	-0.02	-0.04

**Table 426 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Ford)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Ford)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	41.4	49.2	52.3	55.7	67.5
Percent Change from Baseline	0%	19%	27%	35%	63%
Average Achieved (mpg)	41.2	46.1	46.7	46.7	46.8
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	7.8	1.4	1.7	1.7	2.1
Off-Cycle Technology Costs (\$b)	0.4	0.8	0.8	0.8	0.8
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	8.2	2.2	2.5	2.5	3.0
Total Civil Penalties (\$b)	0.0	0.0	0.7	1.5	4.7
Total Regulatory Costs (\$b)	8.6	1.4	2.4	3.1	6.8
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.02	-0.04	-0.07	-0.15

**Table 427 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (GM)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (GM)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	42.3	49.8	53.0	56.5	68.4
Percent Change from Baseline	0%	18%	25%	34%	62%
Average Achieved (mpg)	40.3	43.8	44.0	44.2	44.2
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	8.6	2.5	2.4	3.6	3.5
Off-Cycle Technology Costs (\$b)	0.4	0.8	0.8	0.8	0.8
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	9.0	3.3	3.3	4.5	4.3
Total Civil Penalties (\$b)	0.0	0.8	1.5	2.3	5.9
Total Regulatory Costs (\$b)	9.5	3.2	4.0	5.9	9.3
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.03	-0.05	-0.08	-0.17

**Table 428 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Honda)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Honda)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	51.1	58.3	62.0	66.1	79.9
Percent Change from Baseline	0%	14%	21%	29%	56%
Average Achieved (mpg)	57.1	58.6	60.6	63.1	68.1
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	3.8	0.1	0.3	0.8	2.1
Off-Cycle Technology Costs (\$b)	0.2	0.4	0.4	0.4	0.4
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	4.0	0.5	0.7	1.2	2.5
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	1.3
Total Regulatory Costs (\$b)	4.2	0.1	0.3	0.8	3.5
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.03	-0.04	-0.07	-0.14

**Table 429 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Hyundai KiH)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Hyundai KiH)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	51.9	58.6	62.3	66.4	80.3
Percent Change from Baseline	0%	13%	20%	28%	55%
Average Achieved (mpg)	56.5	57.8	60.4	62.9	66.7
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	2.9	1.3	1.7	3.1	3.8
Off-Cycle Technology Costs (\$b)	0.1	0.2	0.2	0.2	0.2
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	3.0	1.5	1.9	3.2	4.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.1	1.2
Total Regulatory Costs (\$b)	3.1	1.3	1.7	3.1	5.0
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.02	-0.03	-0.04	-0.09

**Table 430 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Hyundai KiK)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Hyundai KiK)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	51.7	58.6	62.4	66.4	80.3
Percent Change from Baseline	0%	13%	21%	28%	55%
Average Achieved (mpg)	53.6	57.0	59.5	62.6	67.7
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	1.3	0.6	1.3	2.8	3.3
Off-Cycle Technology Costs (\$b)	0.0	0.1	0.1	0.1	0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	1.4	0.7	1.4	2.9	3.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.7
Total Regulatory Costs (\$b)	1.4	0.6	1.3	2.8	4.0
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.02	-0.03	-0.06

**Table 431 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (JLR)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (JLR)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	43.7	52.4	55.8	59.4	72.0
Percent Change from Baseline	0%	20%	28%	36%	65%
Average Achieved (mpg)	46.2	49.0	49.0	49.0	49.0
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.3	0.0	0.1	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.3	0.1	0.1	0.1	0.1
Total Civil Penalties (\$b)	0.0	0.0	0.1	0.1	0.3
Total Regulatory Costs (\$b)	0.3	0.1	0.1	0.2	0.3
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	-0.01



**Table 432 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Karma)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Karma)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	54.1	57.4	61.1	64.9	78.4
Percent Change from Baseline	0%	6%	13%	20%	45%
Average Achieved (mpg)	138.6	138.6	138.6	138.6	138.6
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00

**Table 433 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Lucid)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Lucid)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	54.1	57.4	61.1	64.9	78.4
Percent Change from Baseline	0%	6%	13%	20%	45%
Average Achieved (mpg)	170.6	170.6	170.6	170.6	170.6
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	0.00	0.00

**Table 434 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mazda)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mazda)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	49.3	58.5	62.3	66.3	80.3
Percent Change from Baseline	0%	19%	26%	34%	63%
Average Achieved (mpg)	58.5	58.6	59.3	63.6	72.3
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.8	0.0	0.0	0.9	1.7
Off-Cycle Technology Costs (\$b)	0.0	0.1	0.1	0.1	0.1
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.8	0.1	0.1	1.0	1.8
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.1
Total Regulatory Costs (\$b)	0.9	0.0	0.0	0.9	1.8
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	-0.01	-0.02

**Table 435 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mercedes-Benz)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mercedes-Benz)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	48.3	55.3	58.8	62.6	75.7
Percent Change from Baseline	0%	14%	22%	30%	57%
Average Achieved (mpg)	55.1	57.4	57.8	58.6	58.8
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	1.1	0.0	0.1	0.1	0.1
Off-Cycle Technology Costs (\$b)	0.1	0.2	0.2	0.2	0.2
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	1.2	0.2	0.3	0.3	0.3
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.1	0.6
Total Regulatory Costs (\$b)	1.3	0.0	0.1	0.2	0.7
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.01	-0.01	-0.03

**Table 436 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mitsubishi)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Mitsubishi)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	55.1	62.6	66.6	70.9	85.8
Percent Change from Baseline	0%	14%	21%	29%	56%
Average Achieved (mpg)	58.4	63.4	64.4	68.0	70.8
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.3	0.1	0.1	0.2	0.2
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.3	0.1	0.1	0.2	0.2
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.2
Total Regulatory Costs (\$b)	0.3	0.1	0.1	0.2	0.4
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	-0.01	-0.01

**Table 437 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Nissan)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Nissan)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	50.9	57.7	61.4	65.4	79.1
Percent Change from Baseline	0%	13%	21%	28%	55%
Average Achieved (mpg)	54.3	56.1	59.0	61.3	66.1
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	4.3	0.2	0.5	0.8	1.5
Off-Cycle Technology Costs (\$b)	0.2	0.3	0.3	0.3	0.3
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	4.5	0.5	0.8	1.1	1.8
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.1	1.0
Total Regulatory Costs (\$b)	4.7	0.2	0.5	0.8	2.5
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.02	-0.03	-0.05	-0.10

**Table 438 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Stellantis)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Stellantis)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	42.1	50.0	53.2	56.7	68.7
Percent Change from Baseline	0%	19%	26%	34%	63%
Average Achieved (mpg)	43.8	46.9	47.3	47.5	47.7
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	9.5	1.4	1.7	1.8	2.9
Off-Cycle Technology Costs (\$b)	0.4	0.8	0.8	0.8	0.8
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	9.9	2.2	2.5	2.5	3.7
Total Civil Penalties (\$b)	0.0	0.0	0.7	1.5	4.6
Total Regulatory Costs (\$b)	10.3	1.5	2.4	3.3	7.5
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.02	-0.04	-0.07	-0.15

**Table 439 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Subaru)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Subaru)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	49.9	59.2	62.9	67.0	81.2
Percent Change from Baseline	0%	19%	26%	34%	63%
Average Achieved (mpg)	64.2	64.2	64.2	64.3	75.3
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	3.6	0.0	0.0	0.0	0.7
Off-Cycle Technology Costs (\$b)	0.2	0.3	0.3	0.3	0.3
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	3.7	0.3	0.3	0.3	1.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	3.9	0.0	0.0	0.0	0.7
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.02	-0.03	-0.07



**Table 440 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Tesla)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Tesla)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	54.1	57.8	61.5	65.5	79.0
Percent Change from Baseline	0%	7%	14%	21%	46%
Average Achieved (mpg)	160.6	160.6	160.6	160.6	160.6
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.0
Total Regulatory Costs (\$b)	0.0	0.0	0.0	0.0	0.0
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.02	-0.03	-0.05

**Table 441 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Toyota)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Toyota)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	48.4	56.0	59.5	63.4	76.7
Percent Change from Baseline	0%	16%	23%	31%	59%
Average Achieved (mpg)	56.5	56.5	57.0	59.6	68.5
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	7.7	0.0	0.2	0.9	3.6
Off-Cycle Technology Costs (\$b)	0.5	0.9	0.9	0.9	0.9
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	8.2	0.9	1.1	1.8	4.5
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.8
Total Regulatory Costs (\$b)	8.7	0.0	0.2	0.8	4.4
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.05	-0.07	-0.11	-0.23

**Table 442 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Volvo)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (Volvo)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	47.3	55.2	58.7	62.5	75.8
Percent Change from Baseline	0%	17%	24%	32%	60%
Average Achieved (mpg)	51.2	54.6	57.6	59.7	60.2
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	0.3	0.0	0.1	0.1	0.1
Off-Cycle Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	0.3	0.1	0.1	0.2	0.2
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.0	0.3
Total Regulatory Costs (\$b)	0.3	0.0	0.1	0.1	0.4
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	0.00	0.00	-0.01	-0.01

**Table 443 - Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (VWA)**

<b>Compliance Impacts and Cumulative Industry Costs for MY 2022 to 2032 Total Fleet by Alternative for Manufacturer (VWA)</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fuel Economy</b>					
Average Required (mpg)	49.6	57.4	61.1	65.0	78.7
Percent Change from Baseline	0%	16%	23%	31%	59%
Average Achieved (mpg)	53.8	56.1	58.7	60.0	60.9
<b>Total Regulatory Costs</b>					
Technology Application Costs (\$b)	2.6	0.2	0.4	0.5	0.5
Off-Cycle Technology Costs (\$b)	0.1	0.2	0.2	0.2	0.2
A/C Efficiency Technology Costs (\$b)	0.0	0.0	0.0	0.0	0.0
Subtotal Technology Costs (\$b)	2.7	0.5	0.6	0.7	0.8
Total Civil Penalties (\$b)	0.0	0.0	0.0	0.2	1.3
Total Regulatory Costs (\$b)	2.8	0.2	0.4	0.7	1.9
<b>Sales Impacts</b>					
Sales Change from Baseline (m)	0.00	-0.01	-0.02	-0.03	-0.06

## Powertrain Technology Penetration Rate, by Model Year

**Table 444 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, No Action Alternative (Baseline)**

Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, No Action Alternative (Baseline)											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	12	17	20	20	20	21	21	20	20	19
Cylinder Deactivation	5	4	2	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	32	31	30	28	27	26	24	24	23	22
Variable Geometry Turbo	1	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	53	52	48	42	37	33	31	29	28	27	26
Mild Hybrid Powertrains	3.6	3.7	2.3	2.2	1.9	1.8	2.0	1.5	1.5	1.5	1.4
Strong Hybrid Powertrains Total	6.9	7.0	11.4	17.2	18.8	24.6	25.3	25.9	25.1	22.3	21.9
Plug-In Hybrid Powertrains	1.7	1.4	1.4	0.3	0.3	0.4	0.4	0.7	0.7	2.9	2.9
Battery Electric Vehicles (BEVs)	5.2	8.5	12.5	15.1	21.0	21.9	23.2	25.2	27.7	30.3	32.3
BEV 1	0.3	2.7	3.1	3.3	4.6	4.8	5.1	5.5	6.0	6.4	6.7
BEV 2	1.6	2.6	6.2	7.8	11.5	11.9	12.5	13.5	14.8	16.1	17.1
BEV 3	2.3	2.4	2.3	3.2	4.2	4.4	4.8	5.4	6.2	7.0	7.6
BEV 4	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	26	23	20	17	16	15	14	14	13
9-Speed Automatic	11	8	8	4	0	0	0	0	0	0	0
10-Speed Automatic	12	15	16	18	19	15	15	14	14	13	13
DCT Transmissions	4	4	3	3	2	2	2	2	1	1	1
CVT Transmissions	23	22	21	20	18	19	18	18	17	16	16

**Table 445 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	17	20	23	26	29	28	30	29	28	27	27
Cylinder Deactivation	1	1	1	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	31	27	26	21	21	20	19	18	18	17
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	38	36	33	32	26	24	23	21	20	20	19
Mild Hybrid Powertrains	2.1	2.1	1.7	2.2	1.8	1.6	2.3	2.3	2.2	2.2	2.1
Strong Hybrid Powertrains Total	5.4	4.6	5.9	8.4	11.3	13.0	13.5	13.5	13.0	12.7	12.8
Plug-In Hybrid Powertrains	1.2	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	12.4	17.4	22.8	24.4	31.1	32.0	33.4	35.5	38.1	40.4	42.2
BEV 1	0.6	4.8	5.6	5.7	8.7	9.3	10.0	10.9	12.0	13.0	13.7
BEV 2	3.8	4.5	9.1	10.4	13.5	13.7	14.2	14.9	15.9	16.7	17.4
BEV 3	5.6	5.7	5.7	5.9	6.5	6.6	6.8	7.3	7.8	8.3	8.7
BEV 4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	5	4	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	23	23	20	19	16	12	10	9	9	9	8
9-Speed Automatic	4	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	3	3	5	7	5	5	5	5	5	5	4
DCT Transmissions	7	7	6	5	4	3	3	3	3	3	2
CVT Transmissions	40	38	36	35	32	34	35	34	32	31	30

**Table 446 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	7	8	13	17	16	16	16	17	16	16	16
Cylinder Deactivation	8	6	3	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	34	33	33	31	29	29	27	27	26	25
Variable Geometry Turbo	2	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	1	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	62	60	55	47	42	37	35	33	32	31	30
Mild Hybrid Powertrains	4.6	4.6	2.6	2.2	1.9	1.9	1.9	1.2	1.2	1.1	1.1
Strong Hybrid Powertrains Total	7.8	8.3	14.3	21.5	22.3	30.1	30.8	31.6	30.8	26.9	26.2
Plug-In Hybrid Powertrains	2.0	1.9	1.9	0.4	0.4	0.6	0.6	1.1	1.1	4.3	4.3
Battery Electric Vehicles (BEVs)	0.7	3.5	7.1	10.5	16.2	17.1	18.5	20.4	22.9	25.5	27.5
BEV 1	0.1	1.5	1.8	2.2	2.6	2.7	2.9	3.0	3.2	3.3	3.4
BEV 2	0.3	1.5	4.7	6.5	10.5	11.0	11.8	12.8	14.3	15.8	17.0
BEV 3	0.3	0.6	0.6	1.9	3.1	3.4	3.8	4.6	5.5	6.4	7.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
6-Speed Automatic	7	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	32	32	30	25	22	19	19	18	16	16	15
9-Speed Automatic	15	11	10	5	0	0	0	0	0	0	0
10-Speed Automatic	18	22	22	24	26	20	20	18	18	17	17
DCT Transmissions	2	2	2	1	1	1	1	1	1	1	1
CVT Transmissions	12	13	13	13	12	11	11	10	10	9	9

**Table 447 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	15	19	24	28	27	32	31	29	28	27
Cylinder Deactivation	2	2	2	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	29	29	25	26	23	22	22	21	20	20	18
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	34	32	31	27	26	25	24	23	22	22
Mild Hybrid Powertrains	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Strong Hybrid Powertrains Total	3.1	1.7	3.1	6.3	8.3	9.0	8.9	9.0	8.8	8.5	9.1
Plug-In Hybrid Powertrains	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	17.0	20.6	27.3	29.4	34.9	36.1	37.4	39.2	41.4	43.5	45.1
BEV 1	0.3	3.4	4.0	4.0	6.4	7.1	7.9	8.8	9.7	10.6	11.3
BEV 2	1.4	1.8	8.0	9.8	12.5	12.9	13.4	14.2	15.1	16.0	16.7
BEV 3	10.5	10.6	10.6	10.8	11.1	11.2	11.3	11.5	11.8	12.1	12.3
BEV 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	6	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	18	17	14	14	13	7	6	6	6	6	5
9-Speed Automatic	3	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	5	5	8	8	8	7	8	8	8	8	7
DCT Transmissions	3	3	3	2	1	1	1	1	1	1	1
CVT Transmissions	45	43	40	39	35	40	38	37	35	34	33



**Table 448 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	23	25	28	28	30	30	29	28	27	27	26
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	34	32	28	26	20	20	19	18	17	16	15
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	40	38	35	32	24	23	20	19	18	17	16
Mild Hybrid Powertrains	3.7	3.7	2.9	3.9	3.2	2.9	4.3	4.2	4.1	4.0	3.9
Strong Hybrid Powertrains Total	7.6	7.4	8.7	10.4	14.3	17.0	18.1	17.9	17.2	16.7	16.3
Plug-In Hybrid Powertrains	1.7	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	7.9	14.3	18.4	19.5	27.4	28.0	29.5	31.9	34.9	37.5	39.5
BEV 1	1.0	6.2	7.2	7.3	11.0	11.4	12.1	13.1	14.2	15.2	16.0
BEV 2	6.1	7.2	10.2	11.1	14.4	14.6	14.9	15.7	16.7	17.5	18.2
BEV 3	0.9	0.9	0.9	1.1	1.9	2.1	2.4	3.1	3.9	4.6	5.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Fuel Cell Vehicles (FCVs)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	3	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	28	28	26	24	19	17	14	13	12	12	11
9-Speed Automatic	5	4	3	1	0	0	0	0	0	0	0
10-Speed Automatic	0	1	3	5	3	3	2	2	2	2	1
DCT Transmissions	11	10	9	9	7	6	5	5	5	4	4
CVT Transmissions	35	33	32	32	29	29	31	30	29	28	27

**Table 449 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	12	17	20	20	20	20	19	18	18	15
Cylinder Deactivation	5	4	2	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	32	31	30	28	23	19	16	16	13	12
Variable Geometry Turbo	1	1	0	0	0	0	0	1	1	1	1
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	53	52	48	42	37	29	25	21	19	16	14
Mild Hybrid Powertrains	3.6	3.7	2.3	2.2	1.9	1.9	1.8	2.0	2.0	2.0	2.0
Strong Hybrid Powertrains Total	6.9	7.0	11.4	17.2	18.8	27.3	31.9	33.5	33.2	32.3	32.8
Plug-In Hybrid Powertrains	1.7	1.4	1.4	0.3	0.3	1.8	2.0	3.0	3.1	5.2	6.2
Battery Electric Vehicles (BEVs)	5.2	8.5	12.5	15.1	21.0	21.9	23.2	25.2	27.8	30.3	32.3
BEV 1	0.3	2.7	3.1	3.3	4.6	4.8	5.1	5.5	6.0	6.4	6.7
BEV 2	1.6	2.6	6.2	7.8	11.5	11.9	12.5	13.5	14.8	16.1	17.1
BEV 3	2.3	2.4	2.3	3.2	4.2	4.4	4.8	5.4	6.2	7.0	7.6
BEV 4	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	26	23	20	15	12	9	8	7	7
9-Speed Automatic	11	8	8	4	0	0	0	0	0	0	0
10-Speed Automatic	12	15	16	18	19	15	13	12	12	10	7
DCT Transmissions	4	4	3	3	2	2	2	1	1	1	1
CVT Transmissions	23	22	21	20	18	17	16	15	15	14	13

**Table 450 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	7	8	13	17	16	16	15	15	14	13	10
Cylinder Deactivation	8	6	3	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	34	33	33	31	24	20	17	16	13	12
Variable Geometry Turbo	2	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	1	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	62	60	55	47	42	32	26	23	21	17	13
Mild Hybrid Powertrains	4.6	4.6	2.6	2.2	1.9	1.9	1.9	1.1	1.0	1.3	1.4
Strong Hybrid Powertrains Total	7.8	8.3	14.3	21.5	22.3	33.3	39.3	41.4	41.4	40.0	40.7
Plug-In Hybrid Powertrains	2.0	1.9	1.9	0.4	0.4	2.6	2.9	4.3	4.6	7.7	9.1
Battery Electric Vehicles (BEVs)	0.7	3.5	7.1	10.5	16.2	17.2	18.5	20.4	23.0	25.5	27.5
BEV 1	0.1	1.5	1.8	2.2	2.6	2.7	2.9	3.0	3.2	3.3	3.4
BEV 2	0.3	1.5	4.7	6.5	10.5	11.1	11.8	12.9	14.3	15.8	17.0
BEV 3	0.3	0.6	0.6	1.9	3.1	3.4	3.8	4.6	5.5	6.4	7.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
6-Speed Automatic	7	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	32	32	30	25	22	16	13	10	8	8	7
9-Speed Automatic	15	11	10	5	0	0	0	0	0	0	0
10-Speed Automatic	18	22	22	24	26	20	17	15	16	12	9
DCT Transmissions	2	2	2	1	1	1	1	1	1	0	0
CVT Transmissions	12	13	13	13	12	10	8	7	7	7	6

**Table 451 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	17	20	23	26	29	28	30	29	28	27	26
Cylinder Deactivation	1	1	1	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	31	27	26	21	20	18	15	14	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	2	2	2	2
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	38	36	33	32	26	23	21	18	17	15	15
Mild Hybrid Powertrains	2.1	2.1	1.7	2.2	1.8	1.8	1.8	4.1	4.1	3.5	3.4
Strong Hybrid Powertrains Total	5.4	4.6	5.9	8.4	11.3	14.3	15.7	16.0	15.4	16.1	16.1
Plug-In Hybrid Powertrains	1.2	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	12.4	17.4	22.8	24.4	31.1	32.0	33.4	35.6	38.1	40.5	42.2
BEV 1	0.6	4.8	5.6	5.7	8.7	9.3	10.0	10.9	12.0	13.0	13.7
BEV 2	3.8	4.5	9.1	10.4	13.5	13.7	14.2	14.9	15.9	16.8	17.4
BEV 3	5.6	5.7	5.7	5.9	6.5	6.6	6.8	7.3	7.8	8.3	8.7
BEV 4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	5	4	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	23	23	20	19	16	12	9	7	7	7	6
9-Speed Automatic	4	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	3	3	5	7	5	5	5	5	5	5	4
DCT Transmissions	7	7	6	5	4	3	3	3	3	3	2
CVT Transmissions	40	38	36	35	32	33	34	33	31	30	29

**Table 452 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	15	19	24	28	27	32	30	29	28	27
Cylinder Deactivation	2	2	2	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	29	29	25	26	23	20	19	14	14	12	11
Variable Geometry Turbo	0	0	0	0	0	0	0	4	4	4	4
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	34	32	31	27	23	22	17	16	14	14
Mild Hybrid Powertrains	0.4	0.4	0.4	0.4	0.3	0.7	0.7	4.9	4.9	4.9	4.8
Strong Hybrid Powertrains Total	3.1	1.7	3.1	6.3	8.3	11.5	11.3	11.7	11.3	12.3	12.9
Plug-In Hybrid Powertrains	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	17.0	20.6	27.3	29.4	34.9	36.1	37.4	39.3	41.5	43.5	45.1
BEV 1	0.3	3.4	4.0	4.0	6.4	7.1	7.9	8.8	9.7	10.6	11.3
BEV 2	1.4	1.8	8.0	9.8	12.5	12.9	13.4	14.2	15.1	16.0	16.7
BEV 3	10.5	10.6	10.6	10.8	11.1	11.2	11.3	11.5	11.8	12.1	12.3
BEV 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	6	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	18	17	14	14	13	7	6	5	5	4	3
9-Speed Automatic	3	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	5	5	8	8	8	7	8	9	9	8	7
DCT Transmissions	3	3	3	2	1	1	1	1	1	1	1
CVT Transmissions	45	43	40	39	35	37	36	35	33	32	31

**Table 453 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	23	25	28	28	30	30	29	27	26	26	26
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	34	32	28	26	20	20	17	15	15	13	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	40	38	35	32	24	23	20	18	17	17	16
Mild Hybrid Powertrains	3.7	3.7	2.9	3.9	3.2	2.9	2.8	3.4	3.4	2.1	2.1
Strong Hybrid Powertrains Total	7.6	7.4	8.7	10.4	14.3	17.0	20.0	20.2	19.4	19.8	19.3
Plug-In Hybrid Powertrains	1.7	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	7.9	14.3	18.4	19.5	27.4	28.0	29.5	32.0	34.9	37.5	39.5
BEV 1	1.0	6.2	7.2	7.3	11.0	11.4	12.1	13.1	14.2	15.2	16.0
BEV 2	6.1	7.2	10.2	11.1	14.4	14.6	14.9	15.7	16.7	17.5	18.2
BEV 3	0.9	0.9	0.9	1.1	1.9	2.1	2.4	3.1	3.9	4.6	5.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Fuel Cell Vehicles (FCVs)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	3	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	28	28	26	24	19	17	12	10	10	9	9
9-Speed Automatic	5	4	3	1	0	0	0	0	0	0	0
10-Speed Automatic	0	1	3	5	3	3	2	2	1	1	1
DCT Transmissions	11	10	9	9	7	6	5	5	5	5	4
CVT Transmissions	35	33	32	32	29	29	31	31	30	27	27

**Table 454 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	12	17	20	20	20	19	18	17	16	13
Cylinder Deactivation	5	4	2	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	32	31	30	28	22	19	16	14	11	10
Variable Geometry Turbo	1	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	53	52	48	42	37	29	23	19	17	14	11
Mild Hybrid Powertrains	3.6	3.7	2.3	2.2	1.9	1.8	1.8	1.3	1.1	0.9	0.6
Strong Hybrid Powertrains Total	6.9	7.0	11.4	17.2	18.8	27.5	32.6	35.5	36.2	35.6	36.9
Plug-In Hybrid Powertrains	1.7	1.4	1.4	0.3	0.3	2.0	2.5	3.9	4.1	6.4	7.5
Battery Electric Vehicles (BEVs)	5.2	8.5	12.5	15.1	21.0	21.9	23.2	25.2	27.8	30.3	32.3
BEV 1	0.3	2.7	3.1	3.3	4.6	4.8	5.1	5.5	6.0	6.4	6.7
BEV 2	1.6	2.6	6.2	7.8	11.5	11.9	12.5	13.5	14.8	16.1	17.1
BEV 3	2.3	2.4	2.3	3.2	4.2	4.4	4.8	5.4	6.2	7.0	7.6
BEV 4	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	26	23	20	14	11	8	6	6	5
9-Speed Automatic	11	8	8	4	0	0	0	0	0	0	0
10-Speed Automatic	12	15	16	18	19	15	13	11	10	8	5
DCT Transmissions	4	4	3	3	2	2	2	1	1	1	1
CVT Transmissions	23	22	21	20	18	17	16	15	14	13	12

**Table 455 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	17	20	23	26	29	28	30	28	26	26	25
Cylinder Deactivation	1	1	1	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	31	27	26	21	19	17	14	13	11	10
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	38	36	33	32	26	22	19	16	15	15	14
Mild Hybrid Powertrains	2.1	2.1	1.7	2.2	1.8	1.6	1.5	1.5	0.9	0.4	0.3
Strong Hybrid Powertrains Total	5.4	4.6	5.9	8.4	11.3	15.5	17.5	20.7	20.6	20.6	20.6
Plug-In Hybrid Powertrains	1.2	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	12.4	17.4	22.8	24.4	31.1	32.0	33.4	35.6	38.1	40.5	42.2
BEV 1	0.6	4.8	5.6	5.7	8.7	9.3	10.0	10.9	12.0	13.0	13.7
BEV 2	3.8	4.5	9.1	10.4	13.5	13.7	14.2	14.9	15.9	16.8	17.4
BEV 3	5.6	5.7	5.7	5.9	6.5	6.6	6.8	7.3	7.8	8.3	8.7
BEV 4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	5	4	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	23	23	20	19	16	11	7	5	5	3	3
9-Speed Automatic	4	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	3	3	5	7	5	5	5	3	3	5	4
DCT Transmissions	7	7	6	5	4	3	3	3	3	3	2
CVT Transmissions	40	38	36	35	32	33	34	32	30	28	27



**Table 456 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	7	8	13	17	16	16	14	13	12	11	7
Cylinder Deactivation	8	6	3	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	34	33	33	31	24	20	17	15	11	9
Variable Geometry Turbo	2	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	1	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	62	60	55	47	42	32	25	20	18	14	9
Mild Hybrid Powertrains	4.6	4.6	2.6	2.2	1.9	1.9	2.0	1.2	1.1	1.1	0.8
Strong Hybrid Powertrains Total	7.8	8.3	14.3	21.5	22.3	33.1	39.5	42.2	43.4	42.6	44.6
Plug-In Hybrid Powertrains	2.0	1.9	1.9	0.4	0.4	2.9	3.6	5.7	6.1	9.4	11.0
Battery Electric Vehicles (BEVs)	0.7	3.5	7.1	10.5	16.2	17.2	18.5	20.4	23.0	25.5	27.5
BEV 1	0.1	1.5	1.8	2.2	2.6	2.7	2.9	3.0	3.2	3.3	3.4
BEV 2	0.3	1.5	4.7	6.5	10.5	11.1	11.8	12.9	14.3	15.8	17.0
BEV 3	0.3	0.6	0.6	1.9	3.1	3.4	3.8	4.6	5.5	6.4	7.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
6-Speed Automatic	7	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	32	32	30	25	22	16	13	10	7	7	6
9-Speed Automatic	15	11	10	5	0	0	0	0	0	0	0
10-Speed Automatic	18	22	22	24	26	20	17	14	13	10	6
DCT Transmissions	2	2	2	1	1	1	1	1	1	0	0
CVT Transmissions	12	13	13	13	12	10	8	7	7	6	5

**Table 457 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	15	19	24	28	27	32	30	29	28	27
Cylinder Deactivation	2	2	2	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	29	29	25	26	23	17	17	12	12	11	10
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	34	32	31	27	21	20	15	14	14	13
Mild Hybrid Powertrains	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Strong Hybrid Powertrains Total	3.1	1.7	3.1	6.3	8.3	13.9	13.7	18.3	17.9	17.7	18.2
Plug-In Hybrid Powertrains	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	17.0	20.6	27.3	29.4	34.9	36.1	37.4	39.3	41.5	43.5	45.1
BEV 1	0.3	3.4	4.0	4.0	6.4	7.1	7.9	8.8	9.7	10.6	11.3
BEV 2	1.4	1.8	8.0	9.8	12.5	12.9	13.4	14.2	15.1	16.0	16.7
BEV 3	10.5	10.6	10.6	10.8	11.1	11.2	11.3	11.5	11.8	12.1	12.3
BEV 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	6	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	18	17	14	14	13	5	4	2	2	2	1
9-Speed Automatic	3	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	5	5	8	8	8	7	8	5	5	5	4
DCT Transmissions	3	3	3	2	1	1	1	1	1	1	1
CVT Transmissions	45	43	40	39	35	37	36	35	33	32	31

**Table 458 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	23	25	28	28	30	30	28	25	24	24	23
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	34	32	28	26	20	20	17	15	13	12	11
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	40	38	35	32	24	23	18	17	16	16	15
Mild Hybrid Powertrains	3.7	3.7	2.9	3.9	3.2	2.9	2.6	2.6	1.5	0.5	0.5
Strong Hybrid Powertrains Total	7.6	7.4	8.7	10.4	14.3	17.0	21.3	23.0	23.1	23.5	23.0
Plug-In Hybrid Powertrains	1.7	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	7.9	14.3	18.4	19.5	27.4	28.0	29.5	32.0	34.9	37.5	39.5
BEV 1	1.0	6.2	7.2	7.3	11.0	11.4	12.1	13.1	14.2	15.2	16.0
BEV 2	6.1	7.2	10.2	11.1	14.4	14.6	14.9	15.7	16.7	17.5	18.2
BEV 3	0.9	0.9	0.9	1.1	1.9	2.1	2.4	3.1	3.9	4.6	5.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Fuel Cell Vehicles (FCVs)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	3	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	28	28	26	24	19	17	10	8	8	5	4
9-Speed Automatic	5	4	3	1	0	0	0	0	0	0	0
10-Speed Automatic	0	1	3	5	3	3	3	2	2	4	5
DCT Transmissions	11	10	9	9	7	6	5	5	5	5	4
CVT Transmissions	35	33	32	32	29	29	31	30	27	25	24

**Table 459 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	12	17	20	20	20	18	17	15	15	11
Cylinder Deactivation	5	4	2	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	32	31	30	28	22	19	15	12	9	7
Variable Geometry Turbo	1	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	53	52	48	42	37	29	22	18	15	11	8
Mild Hybrid Powertrains	3.6	3.7	2.3	2.2	1.9	1.8	2.0	1.4	1.5	1.6	1.3
Strong Hybrid Powertrains Total	6.9	7.0	11.4	17.2	18.8	27.5	34.1	37.2	39.2	39.2	40.7
Plug-In Hybrid Powertrains	1.7	1.4	1.4	0.3	0.3	2.0	2.0	3.6	3.9	6.3	7.9
Battery Electric Vehicles (BEVs)	5.2	8.5	12.5	15.1	21.0	21.9	23.2	25.2	27.8	30.3	32.3
BEV 1	0.3	2.7	3.1	3.3	4.6	4.8	5.1	5.5	6.0	6.4	6.7
BEV 2	1.6	2.6	6.2	7.8	11.5	11.9	12.5	13.5	14.8	16.1	17.1
BEV 3	2.3	2.4	2.3	3.2	4.2	4.4	4.8	5.4	6.2	7.0	7.6
BEV 4	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	26	23	20	14	8	4	1	1	1
9-Speed Automatic	11	8	8	4	0	0	0	0	0	0	0
10-Speed Automatic	12	15	16	18	19	15	14	13	12	8	5
DCT Transmissions	4	4	3	3	2	2	2	1	1	1	1
CVT Transmissions	23	22	21	20	18	17	17	16	15	14	13

**Table 460 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	17	20	23	26	29	28	29	26	24	23	23
Cylinder Deactivation	1	1	1	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	31	27	26	21	19	16	14	12	9	8
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	38	36	33	32	26	22	17	14	13	12	10
Mild Hybrid Powertrains	2.1	2.1	1.7	2.2	1.8	1.6	2.3	2.3	2.7	2.7	3.6
Strong Hybrid Powertrains Total	5.4	4.6	5.9	8.4	11.3	15.5	18.6	22.1	23.2	24.8	25.1
Plug-In Hybrid Powertrains	1.2	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Battery Electric Vehicles (BEVs)	12.4	17.4	22.8	24.4	31.1	32.0	33.4	35.6	38.1	40.5	42.2
BEV 1	0.6	4.8	5.6	5.7	8.7	9.3	10.0	10.9	12.0	13.0	13.7
BEV 2	3.8	4.5	9.1	10.4	13.5	13.7	14.2	14.9	15.9	16.8	17.4
BEV 3	5.6	5.7	5.7	5.9	6.5	6.6	6.8	7.3	7.8	8.3	8.7
BEV 4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	5	4	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	23	23	20	19	16	11	5	3	1	1	0
9-Speed Automatic	4	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	3	3	5	7	5	5	6	4	5	4	4
DCT Transmissions	7	7	6	5	4	3	3	3	3	3	2
CVT Transmissions	40	38	36	35	32	33	33	32	29	27	26

**Table 461 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	7	8	13	17	16	16	14	12	11	10	6
Cylinder Deactivation	8	6	3	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	34	33	33	31	24	19	16	12	8	7
Variable Geometry Turbo	2	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	1	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	62	60	55	47	42	32	24	19	16	11	7
Mild Hybrid Powertrains	4.6	4.6	2.6	2.2	1.9	1.9	1.9	1.1	1.0	1.0	0.2
Strong Hybrid Powertrains Total	7.8	8.3	14.3	21.5	22.3	33.1	41.3	44.1	46.6	45.9	48.2
Plug-In Hybrid Powertrains	2.0	1.9	1.9	0.4	0.4	2.9	2.9	5.3	5.6	9.3	11.6
Battery Electric Vehicles (BEVs)	0.7	3.5	7.1	10.5	16.2	17.2	18.5	20.5	23.0	25.5	27.5
BEV 1	0.1	1.5	1.8	2.2	2.6	2.7	2.9	3.0	3.2	3.3	3.4
BEV 2	0.3	1.5	4.7	6.5	10.5	11.1	11.8	12.9	14.3	15.8	16.9
BEV 3	0.3	0.6	0.6	1.9	3.1	3.4	3.8	4.6	5.5	6.4	7.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
6-Speed Automatic	7	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	32	32	30	25	22	16	9	4	1	1	1
9-Speed Automatic	15	11	10	5	0	0	0	0	0	0	0
10-Speed Automatic	18	22	22	24	26	20	18	17	14	10	6
DCT Transmissions	2	2	2	1	1	1	1	1	1	0	0
CVT Transmissions	12	13	13	13	12	10	10	9	9	8	6

**Table 462 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	15	19	24	28	27	32	30	26	25	25
Cylinder Deactivation	2	2	2	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	29	29	25	26	23	17	17	12	12	9	7
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	34	32	31	27	21	20	15	14	12	10
Mild Hybrid Powertrains	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	2.3	3.0	4.0
Strong Hybrid Powertrains Total	3.1	1.7	3.1	6.3	8.3	13.9	13.7	19.0	20.3	22.2	22.9
Plug-In Hybrid Powertrains	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Battery Electric Vehicles (BEVs)	17.0	20.6	27.3	29.4	34.9	36.1	37.4	39.3	41.5	43.5	45.1
BEV 1	0.3	3.4	4.0	4.0	6.4	7.1	7.9	8.8	9.7	10.6	11.3
BEV 2	1.4	1.8	8.0	9.8	12.5	12.9	13.4	14.2	15.1	16.0	16.7
BEV 3	10.5	10.6	10.6	10.8	11.1	11.2	11.3	11.5	11.8	12.1	12.3
BEV 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	6	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	18	17	14	14	13	5	4	2	1	0	0
9-Speed Automatic	3	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	5	5	8	8	8	7	8	5	5	3	2
DCT Transmissions	3	3	3	2	1	1	1	1	1	1	1
CVT Transmissions	45	43	40	39	35	37	36	34	32	30	29

**Table 463 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	23	25	28	28	30	30	26	23	21	22	21
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	34	32	28	26	20	20	16	15	13	10	9
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	40	38	35	32	24	23	15	14	13	11	10
Mild Hybrid Powertrains	3.7	3.7	2.9	3.9	3.2	2.9	4.3	4.2	3.1	2.5	3.2
Strong Hybrid Powertrains Total	7.6	7.4	8.7	10.4	14.3	17.0	23.5	25.1	26.1	27.4	27.2
Plug-In Hybrid Powertrains	1.7	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	7.9	14.3	18.4	19.5	27.4	28.0	29.5	32.0	34.9	37.5	39.5
BEV 1	1.0	6.2	7.2	7.3	11.0	11.4	12.1	13.1	14.2	15.2	16.0
BEV 2	6.1	7.2	10.2	11.1	14.4	14.6	14.9	15.7	16.7	17.5	18.2
BEV 3	0.9	0.9	0.9	1.1	1.9	2.1	2.4	3.1	3.9	4.6	5.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Fuel Cell Vehicles (FCVs)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	3	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	28	28	26	24	19	17	7	5	1	1	1
9-Speed Automatic	5	4	3	1	0	0	0	0	0	0	0
10-Speed Automatic	0	1	3	5	3	3	4	4	6	5	5
DCT Transmissions	11	10	9	9	7	6	5	5	5	4	4
CVT Transmissions	35	33	32	32	29	29	31	29	27	24	23



**Table 464 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	12	17	20	20	20	18	14	11	9	3
Cylinder Deactivation	5	4	2	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	32	31	30	28	22	17	13	10	5	2
Variable Geometry Turbo	1	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	53	52	48	42	37	29	21	15	12	7	2
Mild Hybrid Powertrains	3.6	3.7	2.3	2.2	1.9	1.8	1.8	1.2	1.0	0.8	0.4
Strong Hybrid Powertrains Total	6.9	7.0	11.4	17.2	18.8	27.7	36.9	42.0	44.2	45.9	51.0
Plug-In Hybrid Powertrains	1.7	1.4	1.4	0.3	0.3	2.0	2.1	4.5	6.7	9.6	11.9
Battery Electric Vehicles (BEVs)	5.2	8.5	12.5	15.1	21.0	21.9	23.2	25.2	27.7	30.3	32.3
BEV 1	0.3	2.7	3.1	3.3	4.6	4.8	5.1	5.5	6.0	6.4	6.7
BEV 2	1.6	2.6	6.2	7.8	11.5	11.9	12.5	13.5	14.8	16.1	17.1
BEV 3	2.3	2.4	2.3	3.2	4.2	4.4	4.8	5.4	6.2	7.0	7.6
BEV 4	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	26	23	20	14	7	3	0	0	0
9-Speed Automatic	11	8	8	4	0	0	0	0	0	0	0
10-Speed Automatic	12	15	16	18	19	15	15	14	12	8	2
DCT Transmissions	4	4	3	3	2	2	1	1	1	0	0
CVT Transmissions	23	22	21	20	18	17	15	11	8	6	3

**Table 465 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	17	20	23	26	29	28	27	22	16	12	6
Cylinder Deactivation	1	1	1	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	31	27	26	21	19	11	8	6	2	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	38	36	33	32	26	22	12	9	9	6	2
Mild Hybrid Powertrains	2.1	2.1	1.7	2.2	1.8	1.6	1.6	1.6	1.1	0.4	0.8
Strong Hybrid Powertrains Total	5.4	4.6	5.9	8.4	11.3	15.5	27.0	33.2	37.8	44.1	49.8
Plug-In Hybrid Powertrains	1.2	0.6	0.5	0.0	0.0	0.0	0.0	0.2	0.9	1.1	1.4
Battery Electric Vehicles (BEVs)	12.4	17.4	22.8	24.4	31.1	32.0	33.4	35.6	38.1	40.5	42.2
BEV 1	0.6	4.8	5.6	5.7	8.7	9.3	10.0	10.9	12.0	13.0	13.7
BEV 2	3.8	4.5	9.1	10.4	13.5	13.7	14.2	15.0	15.9	16.8	17.4
BEV 3	5.6	5.7	5.7	5.9	6.5	6.6	6.8	7.3	7.8	8.3	8.7
BEV 4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	5	4	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	23	23	20	19	16	11	5	3	1	0	0
9-Speed Automatic	4	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	3	3	5	7	5	5	5	3	5	1	0
DCT Transmissions	7	7	6	5	4	3	2	2	1	1	0
CVT Transmissions	40	38	36	35	32	33	27	23	16	12	6

**Table 466 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	7	8	13	17	16	15	13	10	8	7	1
Cylinder Deactivation	8	6	3	1	1	1	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	32	34	33	33	31	24	19	15	11	7	2
Variable Geometry Turbo	2	1	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	1	0	0	0	0	0	0	0	0	0	0
Diesel Engines	1	1	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	62	60	55	47	42	32	24	18	13	7	2
Mild Hybrid Powertrains	4.6	4.6	2.6	2.2	1.9	1.9	1.9	1.1	1.0	1.0	0.2
Strong Hybrid Powertrains Total	7.8	8.3	14.3	21.5	22.3	33.4	41.4	46.0	47.1	46.8	51.6
Plug-In Hybrid Powertrains	2.0	1.9	1.9	0.4	0.4	2.9	3.0	6.4	9.4	13.6	16.9
Battery Electric Vehicles (BEVs)	0.7	3.5	7.1	10.5	16.2	17.2	18.5	20.5	23.0	25.5	27.5
BEV 1	0.1	1.5	1.8	2.2	2.6	2.7	2.9	3.0	3.2	3.3	3.4
BEV 2	0.3	1.5	4.7	6.5	10.5	11.1	11.8	12.9	14.3	15.8	17.0
BEV 3	0.3	0.6	0.6	1.9	3.1	3.4	3.8	4.6	5.5	6.4	7.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
6-Speed Automatic	7	5	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	32	32	30	25	22	16	8	2	0	0	0
9-Speed Automatic	15	11	10	5	0	0	0	0	0	0	0
10-Speed Automatic	18	22	22	24	26	20	20	18	16	11	3
DCT Transmissions	2	2	2	1	1	1	1	1	1	0	0
CVT Transmissions	12	13	13	13	12	10	9	6	4	3	1

**Table 467 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	11	15	19	24	28	27	31	23	14	10	6
Cylinder Deactivation	2	2	2	1	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	29	29	25	26	23	17	8	4	4	1	1
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	34	32	31	27	21	12	7	8	6	5
Mild Hybrid Powertrains	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	1.4
Strong Hybrid Powertrains Total	3.1	1.7	3.1	6.3	8.3	13.9	23.3	33.3	39.4	44.2	47.8
Plug-In Hybrid Powertrains	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.9
Battery Electric Vehicles (BEVs)	17.0	20.6	27.3	29.4	34.9	36.1	37.4	39.3	41.5	43.5	45.1
BEV 1	0.3	3.4	4.0	4.0	6.4	7.1	7.9	8.8	9.7	10.6	11.3
BEV 2	1.4	1.8	8.0	9.8	12.5	12.9	13.4	14.2	15.1	16.0	16.7
BEV 3	10.5	10.6	10.6	10.8	11.1	11.2	11.3	11.5	11.8	12.1	12.3
BEV 4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	6	6	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	18	17	14	14	13	5	4	2	1	0	0
9-Speed Automatic	3	3	3	1	0	0	0	0	0	0	0
10-Speed Automatic	5	5	8	8	8	7	7	4	4	2	0
DCT Transmissions	3	3	3	2	1	1	0	0	0	0	0
CVT Transmissions	45	43	40	39	35	37	28	21	13	9	6

**Table 468 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	23	25	28	28	30	30	24	21	18	14	6
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	34	32	28	26	20	20	14	12	8	3	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	40	38	35	32	24	23	13	12	10	6	0
Mild Hybrid Powertrains	3.7	3.7	2.9	3.9	3.2	2.9	3.0	2.9	1.9	0.6	0.3
Strong Hybrid Powertrains Total	7.6	7.4	8.7	10.4	14.3	17.0	30.7	33.0	36.1	43.9	51.8
Plug-In Hybrid Powertrains	1.7	0.4	0.3	0.0	0.0	0.0	0.0	0.4	0.9	1.2	1.8
Battery Electric Vehicles (BEVs)	7.9	14.3	18.4	19.5	27.4	28.0	29.5	32.0	34.9	37.5	39.5
BEV 1	1.0	6.2	7.2	7.3	11.0	11.4	12.1	13.1	14.2	15.2	16.0
BEV 2	6.1	7.2	10.2	11.1	14.4	14.6	14.9	15.7	16.7	17.5	18.2
BEV 3	0.9	0.9	0.9	1.1	1.9	2.1	2.4	3.1	3.9	4.6	5.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2
Fuel Cell Vehicles (FCVs)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	3	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	28	28	26	24	19	17	7	4	0	0	0
9-Speed Automatic	5	4	3	1	0	0	0	0	0	0	0
10-Speed Automatic	0	1	3	5	3	3	4	3	5	1	0
DCT Transmissions	11	10	9	9	7	6	4	3	3	2	0
CVT Transmissions	35	33	32	32	29	29	26	24	20	14	6

**Table 469 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	91	87	75	62	23	23	15	12	12	11	10
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	58	53	44	33	19	19	13	11	10	9	9
Mild Hybrid Powertrains	29.0	29.9	28.8	26.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	2.1	15.7	53.6	53.8	58.5	57.2	53.4	50.2	47.6
Plug-In Hybrid Powertrains	5.8	5.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.3	17.5	22.5	23.2	23.1	26.2	30.3	35.0	39.1	42.2
BEV 1	0.8	3.2	3.3	3.3	4.1	4.1	4.1	4.0	4.1	4.1	4.1
BEV 2	0.2	1.8	11.9	11.8	11.7	11.5	12.4	13.6	15.0	16.3	17.2
BEV 3	2.3	2.3	2.3	7.4	7.4	7.5	9.7	12.6	15.7	18.5	20.5
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	74	62	45	15	15	10	9	8	8	7
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	8	10	13	6	6	3	2	2	1	1
DCT Transmissions	6	6	3	3	3	3	2	2	2	2	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 470 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	3	3	3	3	3	3	3	3	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	74	70	62	62	58	45	45	38	38	37	37
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	73	68	62	62	57	43	43	37	37	36	35
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	8.6	8.6	10.6	10.5	10.5	32.6	32.3	38.3	38.2	37.3	36.4
Plug-In Hybrid Powertrains	1.2	1.1	1.0	0.0	0.0	0.0	0.3	0.8	0.8	0.7	0.7
Battery Electric Vehicles (BEVs)	2.9	7.5	14.7	15.6	20.2	20.1	20.1	20.1	20.1	22.1	23.9
BEV 1	0.5	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BEV 2	1.4	3.6	10.8	11.5	16.1	16.0	16.0	16.0	16.0	17.5	18.8
BEV 3	1.0	0.9	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.6	2.2
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	1	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	23	16	13	11	11	11	11	11	10
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	54	51	49	56	54	35	35	29	29	28	28
DCT Transmissions	2	2	2	2	2	2	2	1	1	1	1
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 471 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	1	7	8	8	8	8	8	8	8
Cylinder Deactivation	4	4	3	2	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	46	35	33	28	28	28	28	28	28	28
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	5	5	5	1	1	1	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	82	82	66	43	36	27	27	27	27	27	26
Mild Hybrid Powertrains	0.0	0.0	0.0	1.3	2.9	3.7	3.7	3.7	3.7	3.7	3.7
Strong Hybrid Powertrains Total	0.0	0.0	5.3	24.7	28.2	39.1	39.1	39.1	39.1	22.6	22.6
Plug-In Hybrid Powertrains	0.0	0.0	0.0	2.1	2.1	3.0	3.0	3.0	3.0	19.4	19.3
Battery Electric Vehicles (BEVs)	1.6	1.5	17.3	18.7	21.6	21.5	21.5	21.5	21.5	21.5	21.7
BEV 1	0.0	0.0	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
BEV 2	1.6	1.5	14.6	16.0	18.9	18.8	18.8	18.8	18.8	18.8	19.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	18	18	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	20	20	19	14	14	14	14	14	14	14	14
9-Speed Automatic	22	22	18	5	1	1	0	0	0	0	0
10-Speed Automatic	28	28	35	30	29	18	19	19	19	19	19
DCT Transmissions	2	2	2	1	0	0	0	0	0	0	0
CVT Transmissions	9	8	4	4	4	3	3	3	3	4	4



**Table 472 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	8	8	7	6	6	14	13	12	12	11
Cylinder Deactivation	27	13	13	3	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	43	56	56	62	58	54	52	50	47	44	41
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	79	78	78	74	65	61	58	56	53	50	48
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	9.3	6.8	6.8	11.5	10.9	11.9	11.4	10.9	10.3	9.7	10.6
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	4.8	5.1	5.8	15.7	19.3	22.8	26.4	30.5	34.0	36.7
BEV 1	0.0	3.4	3.5	3.6	7.8	9.3	10.8	12.3	14.0	15.6	16.8
BEV 2	0.0	1.1	1.2	1.9	6.4	8.1	9.7	11.4	13.2	14.8	16.1
BEV 3	0.0	0.3	0.3	0.4	1.5	1.9	2.3	2.7	3.2	3.6	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	17	3	3	3	0	0	0	0	0	0	0
10-Speed Automatic	17	31	32	28	28	26	25	24	22	21	19
DCT Transmissions	2	2	2	1	1	1	1	1	1	1	1
CVT Transmissions	55	52	51	50	45	42	40	38	36	34	33

**Table 473 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	59	59	59	54	46	46	45	44	42	40	39
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	19	18	18	15	11	9	8	8	8	7	7
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	68	68	68	60	43	40	39	38	36	34	33
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	7.2	7.3	7.3	7.0	6.7	6.4	6.2
Strong Hybrid Powertrains Total	10.9	9.8	10.1	16.0	21.0	27.6	27.3	26.4	25.2	24.9	24.1
Plug-In Hybrid Powertrains	1.9	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.0	6.8	11.2	17.9	17.8	18.6	21.5	24.8	27.8	30.0
BEV 1	0.2	4.0	3.9	3.7	4.4	4.4	4.7	6.1	7.7	9.1	10.2
BEV 2	2.1	2.1	2.0	6.5	12.3	12.3	12.6	13.7	14.9	15.9	16.7
BEV 3	1.0	1.0	1.0	0.9	1.2	1.1	1.3	1.7	2.2	2.7	3.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	50	42	40	32	25	25	24	23	22	22	21
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	2	4	4	2	2	2	2	2	2
DCT Transmissions	11	11	11	8	7	7	6	6	6	5	5
CVT Transmissions	22	28	28	28	25	22	21	21	20	19	18

**Table 474 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	45	57	58	59	50	50	50	54	52	50	49
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	23	19	19	17	17	17	17	17	16	16
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	32	32	30	30	27	27	27	27	26	25	24
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
Strong Hybrid Powertrains Total	5.0	5.0	5.0	5.0	10.2	10.2	10.2	10.1	9.7	9.4	9.2
Plug-In Hybrid Powertrains	3.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	4.4	6.1	11.4	12.8	18.3	18.3	18.3	19.2	22.1	24.7	26.7
BEV 1	0.0	1.9	2.9	2.8	2.8	2.8	2.8	3.0	3.9	4.7	5.3
BEV 2	3.7	3.5	7.9	9.4	14.9	14.9	14.9	15.4	17.2	18.8	20.0
BEV 3	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.2	1.3
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	13	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	47	39	39	22	22	22	22	21	21	20
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	9	9	9	9	7	7	7	7	7	7	7
CVT Transmissions	32	31	34	34	42	42	42	41	40	38	37

**Table 475 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	39	35	35	27	27	27	26	25	19	18
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	52	31	27	27	10	10	10	9	9	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	38	34	34	27	27	27	26	25	19	18
Mild Hybrid Powertrains	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	12.3	12.3	12.4	37.5	37.5	37.5	36.2	34.0	44.6	42.6
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.9	18.0	25.6	25.6	25.6	25.5	25.5	28.1	32.4	36.2	39.1
BEV 1	0.9	2.0	4.9	4.9	4.9	4.9	4.9	4.8	4.6	4.4	4.3
BEV 2	0.0	14.8	19.4	19.4	19.4	19.4	19.4	19.3	19.2	19.1	19.0
BEV 3	0.0	1.2	1.2	1.2	1.2	1.2	1.2	4.0	8.6	12.7	15.8
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	30	23	23	18	1	1	1	1	1	1
9-Speed Automatic	13	2	2	2	0	0	0	0	0	0	0
10-Speed Automatic	0	37	37	37	19	36	36	35	33	19	18
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 476 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 2	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 477 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 478 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	71	69	69	68	60	57	55	52	49	47	45
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	29	6	5	5	4	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	22.5	22.6	22.8	20.1	23.1	22.1	21.0	19.8	18.7	17.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.3	2.4	4.3	4.2	16.0	19.7	23.3	27.0	31.1	34.7	37.5
BEV 1	0.3	0.8	2.4	2.3	4.8	5.6	6.3	7.1	8.0	8.8	9.4
BEV 2	0.0	1.4	1.6	1.6	9.6	12.1	14.6	17.0	19.8	22.3	24.1
BEV 3	0.0	0.2	0.3	0.3	1.6	2.0	2.4	2.8	3.3	3.7	4.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	97	11	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	61	70	71	62	51	49	46	44	41	40
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	3	2	2	2	2	2	2	2	1	1	1
CVT Transmissions	0	0	0	0	0	5	4	4	4	4	4

**Table 479 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	90	81	77	77	56	42	25	22	21	19	16
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	7	7	6	6	5	4	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	63	54	53	53	44	39	25	22	21	19	16
Mild Hybrid Powertrains	26.5	26.2	23.6	22.9	12.5	2.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	4.4	5.4	12.1	28.2	48.5	47.7	44.6	41.9	41.7
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.1	12.6	12.1	11.7	26.4	26.3	26.2	30.1	34.7	38.8	41.8
BEV 1	0.0	9.6	9.3	8.9	8.1	8.1	8.0	7.6	7.1	6.7	6.4
BEV 2	1.3	1.2	1.2	1.2	10.8	10.8	10.8	11.2	11.6	12.0	12.2
BEV 3	1.8	1.7	1.7	1.6	7.0	7.0	7.0	10.7	15.0	18.8	21.7
BEV 4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.7	1.0	1.3	1.5
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	81	27	14	3	0	0	0	0	0	0	0
10-Speed Automatic	0	45	54	65	52	40	20	17	16	15	14
DCT Transmissions	16	16	16	15	9	5	5	5	5	4	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 480 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	12	11	11	11	11	11	11	58	57
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	21	21	21	21	12	12	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	5.9	5.7	9.6	9.6	9.6	9.6	9.6	9.6	9.5
Plug-In Hybrid Powertrains	1.4	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	1.2	13.7	15.0	20.5	20.4	20.4	20.4	20.4	20.4	21.6
BEV 1	0.0	0.5	4.4	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.8
BEV 2	0.0	0.6	9.3	10.7	16.2	16.2	16.2	16.2	16.2	16.2	16.8
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	1	1	0	0	0	0	0	0	0	0	0
CVT Transmissions	98	97	79	79	70	70	70	70	70	70	69

**Table 481 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	10	19	31	30	40	42	41	40	39
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	1	1	1	1	1	1	1	1	11	10	10
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	13	13	14	14	14	15	13	13	13	12	12
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	1.1	3.0	3.0	4.6	10.2	9.9	9.5	9.2	9.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	1.2	8.2	9.3	12.5	15.1	15.0	15.4	17.8	20.5	22.9	24.7
BEV 1	1.0	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.1	5.0
BEV 2	0.3	2.6	3.7	7.0	9.5	9.5	9.7	11.8	14.1	16.2	17.7
BEV 3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.7	1.2	1.7	2.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	4	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	23	25	26	24	0	0	0	0	0	0	0
10-Speed Automatic	0	1	1	1	26	26	25	24	23	22	22
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	71	65	63	59	56	55	50	48	47	46	45

**Table 482 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	11	12	12	12	18	17	17	16
Cylinder Deactivation	20	20	6	5	5	4	4	1	1	1	1
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	9	11	10	20	20	19	18	17	17
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	2	2	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	44	44	33	33	30	30	28	27	26	25
Mild Hybrid Powertrains	16.4	16.4	6.5	4.4	4.5	4.7	4.7	1.1	1.0	1.0	1.0
Strong Hybrid Powertrains Total	0.0	0.0	20.2	31.5	31.7	38.6	38.6	40.8	39.4	38.1	37.1
Plug-In Hybrid Powertrains	4.7	4.7	4.7	0.0	0.0	0.0	0.0	2.5	2.4	2.3	2.3
Battery Electric Vehicles (BEVs)	0.0	4.8	7.6	17.7	18.0	18.0	18.0	19.2	22.1	24.7	26.7
BEV 1	0.0	2.4	2.4	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.5
BEV 2	0.0	2.1	4.8	9.8	10.0	10.0	10.0	10.9	12.9	14.7	16.1
BEV 3	0.0	0.3	0.3	5.1	5.1	5.1	5.1	5.6	6.5	7.4	8.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	2	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	65	61	38	30	30	23	22	17	14	13	13
9-Speed Automatic	28	27	27	8	1	1	0	0	0	0	0
10-Speed Automatic	0	0	0	12	19	19	21	20	22	22	21
DCT Transmissions	1	1	1	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 483 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	13	40	60	60	57	55	52	48	45	43
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	24	24	23	20	19	18	17	16	15	15
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	76	74	75	74	64	61	58	55	52	48	46
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	1.3	1.1	1.0	1.0	0.9	0.9	0.8	0.8
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	5.2	5.1	5.3	17.6	21.6	25.7	29.7	34.2	38.2	41.2
BEV 1	0.0	3.1	3.0	2.9	3.3	3.4	3.5	3.7	3.9	4.1	4.2
BEV 2	0.0	1.1	1.1	1.4	7.9	10.0	12.0	14.1	16.5	18.5	20.1
BEV 3	0.0	1.0	1.0	1.0	6.5	8.3	10.1	11.9	13.9	15.6	17.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	4	4	3	3	3	3	2	2	2	2	2
CVT Transmissions	95	91	91	90	79	75	71	67	63	59	56

**Table 484 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	18.5	18.5	18.4	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
BEV 3	56.9	57.1	57.2	57.4	57.5	57.5	57.5	57.5	57.5	57.5	57.5
BEV 4	24.6	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.2
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 485 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	25	24	31	31	33	32	31	29	28	27	26
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	1
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	7	17	18	24	27	26	25	24	23	22
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	25	26	26	23	23	22	21	20	19	18
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	24.8	25.1	25.3	25.8	21.7	21.3	20.4	19.6	18.7	17.8	17.1
Plug-In Hybrid Powertrains	2.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	2.4	2.3	4.0	15.8	17.7	21.1	24.4	28.1	31.4	33.9
BEV 1	0.0	1.4	1.4	2.6	7.1	7.6	8.6	9.5	10.6	11.6	12.3
BEV 2	0.0	0.6	0.6	0.9	5.3	6.2	7.6	9.1	10.7	12.1	13.2
BEV 3	0.0	0.4	0.4	0.6	3.4	3.9	4.9	5.8	6.8	7.7	8.4
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	6	6	0	0	0	0	0	0	0	0	0
6-Speed Automatic	11	11	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	33	50	49	44	36	33	31	30	28	27
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	6	6	6	6	6	5	5	5	5	4	4
DCT Transmissions	1	1	1	1	1	1	1	1	1	1	0
CVT Transmissions	15	14	14	13	12	18	20	19	18	17	17

**Table 486 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	64	65	65	65	63	64	64	64	60	57	54
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	5	5	3	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	27.2	26.8	26.4	26.1	23.8	23.8	23.7	23.7	22.4	21.2	20.2
Strong Hybrid Powertrains Total	0.0	0.0	1.7	4.7	6.8	6.8	6.8	6.8	6.4	6.1	5.8
Plug-In Hybrid Powertrains	17.6	14.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	13.4	15.6	15.1	29.9	29.7	29.6	29.6	29.5	33.3	37.3	40.2
BEV 1	3.5	6.3	6.2	6.1	6.1	6.1	6.0	6.0	6.0	6.1	6.1
BEV 2	9.9	9.3	8.9	8.5	8.3	8.2	8.1	8.1	8.5	9.1	9.4
BEV 3	0.0	0.0	0.0	15.2	15.3	15.4	15.4	15.4	18.7	22.1	24.7
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	69	69	68	65	63	64	64	64	60	57	54
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 487 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, No Action Alternative (Baseline)**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	11	11	11	11	11	11	10	10	9
Cylinder Deactivation	1	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	61	57	49	39	32	31	28	27	26	23	22
Variable Geometry Turbo	19	20	3	1	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	81	78	57	46	43	41	33	31	30	27	26
Mild Hybrid Powertrains	8.3	8.2	4.2	4.3	0.4	0.2	6.5	6.2	5.9	5.6	5.5
Strong Hybrid Powertrains Total	0.0	0.0	21.1	31.7	35.2	37.4	38.7	37.0	35.1	35.2	33.8
Plug-In Hybrid Powertrains	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	7.1	10.5	14.5	16.8	20.8	20.7	21.9	25.3	29.2	32.6	35.2
BEV 1	2.8	6.2	6.3	6.3	6.3	6.3	6.3	6.1	6.0	5.8	5.7
BEV 2	4.1	4.0	8.1	8.9	12.9	12.8	13.4	15.2	17.3	19.2	20.6
BEV 3	0.2	0.2	0.2	1.5	1.6	1.6	2.2	3.9	5.9	7.6	8.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	60	59	38	35	33	27	27	25	24	23	22
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	1	2	2	1	6	6	6	6	4	4
DCT Transmissions	30	26	22	13	10	8	7	6	6	6	5
CVT Transmissions	0	0	1	1	0	0	0	0	0	0	0



**Table 488 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	91	87	75	62	23	23	15	12	12	11	4
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	58	53	44	33	19	19	13	11	10	9	2
Mild Hybrid Powertrains	29.0	29.9	28.8	26.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	2.1	15.7	53.6	53.9	58.5	57.2	53.4	50.2	54.0
Plug-In Hybrid Powertrains	5.8	5.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.3	17.5	22.5	23.2	23.1	26.2	30.3	35.0	39.1	42.2
BEV 1	0.8	3.2	3.3	3.3	4.1	4.1	4.0	4.0	4.1	4.1	4.1
BEV 2	0.2	1.8	11.9	11.8	11.7	11.5	12.4	13.6	15.0	16.3	17.2
BEV 3	2.3	2.3	2.3	7.4	7.4	7.5	9.7	12.6	15.7	18.5	20.5
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	74	62	45	15	15	10	1	1	1	1
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	8	10	13	6	6	3	9	9	8	1
DCT Transmissions	6	6	3	3	3	3	2	2	2	2	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 489 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	3	3	3	3	3	3	3	3	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	74	70	62	62	58	33	16	4	4	4	4
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	73	68	62	62	57	35	18	5	5	5	5
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.5
Strong Hybrid Powertrains Total	8.6	8.6	10.6	10.5	10.5	44.1	60.9	72.3	72.3	70.4	68.8
Plug-In Hybrid Powertrains	1.2	1.1	1.0	0.0	0.0	0.0	0.3	1.2	1.2	1.1	1.1
Battery Electric Vehicles (BEVs)	2.9	7.5	14.7	15.6	20.2	20.1	20.1	20.1	20.1	22.1	23.9
BEV 1	0.5	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BEV 2	1.4	3.6	10.8	11.5	16.1	16.0	16.0	16.0	16.0	17.5	18.8
BEV 3	1.0	0.9	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.6	2.2
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	1	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	23	16	13	7	7	3	3	3	2
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	54	51	49	56	54	27	10	3	3	3	3
DCT Transmissions	2	2	2	2	2	2	2	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 490 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	1	7	8	8	8	8	8	6	1
Cylinder Deactivation	4	4	3	2	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	46	35	33	28	28	28	22	21	6	6
Variable Geometry Turbo	0	0	0	0	0	0	0	5	5	5	5
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	5	5	5	1	1	1	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	82	82	66	43	36	27	26	22	20	6	0
Mild Hybrid Powertrains	0.0	0.0	0.0	1.3	2.9	3.7	3.7	9.3	9.4	8.2	8.2
Strong Hybrid Powertrains Total	0.0	0.0	5.3	24.7	28.2	28.3	28.3	28.6	29.6	29.4	35.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	2.1	2.1	13.7	13.7	13.8	13.7	30.1	30.0
Battery Electric Vehicles (BEVs)	1.6	1.5	17.3	18.7	21.6	21.6	21.6	21.6	21.6	21.6	21.7
BEV 1	0.0	0.0	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
BEV 2	1.6	1.5	14.6	16.0	18.9	18.9	18.9	18.9	18.9	18.9	19.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	18	18	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	20	20	19	14	14	14	5	5	0	0	0
9-Speed Automatic	22	22	18	5	1	1	0	0	0	0	0
10-Speed Automatic	28	28	35	30	29	18	28	27	31	17	11
DCT Transmissions	2	2	2	1	0	0	0	0	0	0	0
CVT Transmissions	9	8	4	4	4	3	3	3	3	2	2

**Table 491 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	8	8	7	6	6	14	13	12	12	11
Cylinder Deactivation	27	13	13	3	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	43	56	56	62	58	39	37	35	33	32	29
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	79	78	78	74	65	45	43	41	39	37	36
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	9.3	6.8	6.8	11.5	10.9	27.6	26.4	25.2	23.8	22.5	22.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	4.8	5.1	5.8	15.7	19.3	22.8	26.4	30.5	34.0	36.7
BEV 1	0.0	3.4	3.5	3.6	7.8	9.3	10.8	12.3	14.0	15.6	16.8
BEV 2	0.0	1.1	1.2	1.9	6.4	8.1	9.7	11.4	13.2	14.8	16.1
BEV 3	0.0	0.3	0.3	0.4	1.5	1.9	2.3	2.8	3.2	3.6	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	17	3	3	3	0	0	0	0	0	0	0
10-Speed Automatic	17	31	32	28	28	26	25	24	22	21	19
DCT Transmissions	2	2	2	1	1	1	1	1	1	1	1
CVT Transmissions	55	52	51	50	45	26	25	24	23	22	21

**Table 492 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	59	59	59	54	46	46	43	41	40	38	34
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	19	18	18	15	11	9	6	6	6	6	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	68	68	68	60	43	40	34	33	31	30	29
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	7.2	7.3	7.9	7.6	7.3	6.9	4.0
Strong Hybrid Powertrains Total	10.9	9.8	10.1	16.0	21.0	27.6	29.6	28.6	27.3	26.2	28.1
Plug-In Hybrid Powertrains	1.9	1.7	1.8	0.0	0.0	0.0	2.5	2.4	2.3	2.2	2.1
Battery Electric Vehicles (BEVs)	3.3	7.0	6.8	11.2	17.9	17.8	18.6	21.5	24.8	27.8	30.0
BEV 1	0.2	4.0	3.9	3.7	4.4	4.4	4.7	6.1	7.7	9.1	10.2
BEV 2	2.1	2.1	2.0	6.5	12.3	12.3	12.6	13.7	14.9	15.9	16.7
BEV 3	1.0	1.0	1.0	0.9	1.2	1.1	1.3	1.7	2.2	2.7	3.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	50	42	40	32	25	25	22	21	20	19	19
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	2	4	4	2	2	1	1	1	1
DCT Transmissions	11	11	11	8	7	7	4	4	4	4	4
CVT Transmissions	22	28	28	28	25	22	21	21	20	19	16

**Table 493 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	45	57	58	59	50	50	50	40	39	38	37
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	23	19	19	17	17	17	17	16	14	13
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	32	32	30	30	27	27	27	27	26	23	16
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	7.6
Strong Hybrid Powertrains Total	5.0	5.0	5.0	5.0	10.2	10.2	10.2	17.0	16.4	17.9	17.4
Plug-In Hybrid Powertrains	3.0	1.6	1.6	0.0	0.0	0.0	0.0	6.5	6.3	6.0	5.8
Battery Electric Vehicles (BEVs)	4.4	6.1	11.4	12.8	18.3	18.3	18.3	19.2	22.1	24.7	26.7
BEV 1	0.0	1.9	2.9	2.8	2.8	2.8	2.8	3.0	3.9	4.7	5.3
BEV 2	3.7	3.5	7.9	9.4	14.9	14.9	14.9	15.4	17.2	18.8	20.0
BEV 3	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.2	1.3
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	13	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	47	39	39	22	22	22	10	9	9	9
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	9	9	9	9	7	7	7	7	7	5	5
CVT Transmissions	32	31	34	34	42	42	42	40	39	38	37

**Table 494 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	39	35	35	27	27	27	26	21	13	13
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	52	31	27	27	10	10	10	9	9	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	38	34	34	27	27	27	26	21	13	13
Mild Hybrid Powertrains	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	12.3	12.3	12.4	37.5	37.5	37.5	36.2	34.0	46.7	44.6
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.8	3.6
Battery Electric Vehicles (BEVs)	0.9	18.0	25.6	25.6	25.6	25.6	25.6	28.1	32.4	36.2	39.0
BEV 1	0.9	2.0	4.9	4.9	4.9	4.9	4.9	4.8	4.6	4.4	4.3
BEV 2	0.0	14.8	19.4	19.4	19.4	19.4	19.4	19.3	19.2	19.1	19.0
BEV 3	0.0	1.2	1.2	1.2	1.2	1.3	1.3	4.0	8.6	12.7	15.8
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	30	23	23	18	1	1	1	1	1	1
9-Speed Automatic	13	2	2	2	0	0	0	0	0	0	0
10-Speed Automatic	0	37	37	37	19	36	36	35	29	13	12
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 495 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 2	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 496 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 497 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	71	69	69	68	60	57	55	52	49	47	45
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	29	6	5	5	4	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	22.5	22.6	22.8	20.1	23.1	22.1	21.0	19.8	18.7	17.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.3	2.4	4.3	4.2	16.0	19.7	23.3	27.0	31.1	34.7	37.5
BEV 1	0.3	0.8	2.4	2.3	4.8	5.6	6.3	7.1	8.0	8.8	9.4
BEV 2	0.0	1.4	1.6	1.6	9.6	12.1	14.6	17.0	19.8	22.3	24.1
BEV 3	0.0	0.2	0.3	0.3	1.6	2.0	2.4	2.8	3.3	3.7	4.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	97	11	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	61	70	71	62	51	49	46	44	41	40
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	3	2	2	2	2	2	2	2	1	1	1
CVT Transmissions	0	0	0	0	0	5	4	4	4	4	4

**Table 498 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	90	81	77	77	56	42	25	22	5	5	3
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	7	7	6	6	5	4	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	63	54	53	53	44	39	25	22	5	5	3
Mild Hybrid Powertrains	26.5	26.2	23.6	22.9	12.5	2.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	4.4	5.4	12.1	28.2	48.5	47.7	60.3	56.6	55.6
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.1	12.6	12.1	11.7	26.4	26.2	26.2	30.1	34.7	38.8	41.8
BEV 1	0.0	9.6	9.3	8.9	8.1	8.0	8.0	7.5	7.1	6.7	6.4
BEV 2	1.3	1.2	1.2	1.2	10.8	10.8	10.8	11.2	11.6	12.0	12.2
BEV 3	1.8	1.7	1.7	1.6	7.0	7.0	7.0	10.7	15.0	18.8	21.7
BEV 4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.7	1.0	1.3	1.5
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	81	27	14	3	0	0	0	0	0	0	0
10-Speed Automatic	0	45	54	65	52	40	20	17	0	0	0
DCT Transmissions	16	16	16	15	9	5	5	5	5	4	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 499 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	12	11	11	11	11	11	11	50	49
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	21	21	21	21	12	12	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	18.7
Strong Hybrid Powertrains Total	0.0	0.0	5.9	5.7	9.6	9.6	9.6	9.6	9.6	17.5	17.3
Plug-In Hybrid Powertrains	1.4	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	1.2	13.7	15.0	20.5	20.4	20.4	20.4	20.4	20.4	21.6
BEV 1	0.0	0.5	4.4	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.8
BEV 2	0.0	0.6	9.3	10.7	16.2	16.2	16.2	16.2	16.2	16.2	16.8
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	1	1	0	0	0	0	0	0	0	0	0
CVT Transmissions	98	97	79	79	70	70	70	70	70	62	61

**Table 500 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	10	19	31	30	30	32	31	30	30
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	1	1	1	1	1	1	1	1	11	10	10
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	13	13	14	14	14	15	3	3	4	4	4
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	1.1	3.0	3.0	4.6	31.9	31.1	29.9	28.8	28.1
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	1.2	8.2	9.3	12.5	15.1	15.0	15.4	17.8	20.5	22.9	24.7
BEV 1	1.0	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.1	5.0
BEV 2	0.3	2.6	3.7	7.0	9.5	9.5	9.7	11.8	14.1	16.2	17.7
BEV 3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.7	1.2	1.7	2.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	4	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	23	25	26	24	0	0	0	0	0	0	0
10-Speed Automatic	0	1	1	1	26	26	15	14	14	13	13
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	71	65	63	59	56	54	38	37	36	35	34

**Table 501 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	11	12	12	12	15	14	14	5
Cylinder Deactivation	20	20	6	5	5	4	4	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	9	11	10	10	10	9	8	8	6
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	2	2	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	44	44	33	33	21	20	15	14	14	5
Mild Hybrid Powertrains	16.4	16.4	6.5	4.4	4.5	4.7	4.7	0.2	0.2	0.2	0.2
Strong Hybrid Powertrains Total	0.0	0.0	20.2	31.5	31.7	48.1	48.8	52.2	50.3	48.6	49.1
Plug-In Hybrid Powertrains	4.7	4.7	4.7	0.0	0.0	0.0	0.0	5.0	4.8	4.6	13.1
Battery Electric Vehicles (BEVs)	0.0	4.8	7.6	17.7	18.0	18.0	18.0	19.2	22.1	24.7	26.7
BEV 1	0.0	2.4	2.4	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.5
BEV 2	0.0	2.1	4.8	9.8	10.0	10.0	10.0	10.9	12.9	14.7	16.1
BEV 3	0.0	0.3	0.3	5.1	5.1	5.1	5.1	5.6	6.5	7.4	8.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	2	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	65	61	38	30	30	14	12	5	0	0	0
9-Speed Automatic	28	27	27	8	1	1	0	0	0	0	0
10-Speed Automatic	0	0	0	12	19	19	21	18	23	22	11
DCT Transmissions	1	1	1	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 502 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	13	40	60	60	57	55	52	48	45	43
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	24	24	23	20	19	18	17	16	15	15
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	76	74	75	74	64	61	58	55	52	48	46
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	1.3	1.1	1.0	1.0	0.9	0.9	0.8	0.8
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	5.2	5.1	5.3	17.6	21.6	25.7	29.7	34.2	38.2	41.2
BEV 1	0.0	3.1	3.0	2.9	3.3	3.4	3.5	3.6	3.8	4.0	4.2
BEV 2	0.0	1.1	1.1	1.4	7.9	10.0	12.0	14.1	16.5	18.5	20.1
BEV 3	0.0	1.0	1.0	1.0	6.5	8.3	10.1	11.9	13.9	15.6	17.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	4	4	3	3	3	3	2	2	2	2	2
CVT Transmissions	95	91	91	90	79	75	71	67	63	59	56

**Table 503 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	18.5	18.5	18.4	18.3	18.3	18.3	18.3	18.2	18.3	18.3	18.3
BEV 3	56.9	57.1	57.2	57.4	57.5	57.5	57.5	57.6	57.5	57.5	57.5
BEV 4	24.6	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.2
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 504 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	25	24	31	31	33	32	31	29	28	27	26
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	1
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	7	17	18	24	27	26	25	24	23	22
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	25	26	26	23	23	22	21	20	19	18
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	24.8	25.1	25.3	25.8	21.7	21.3	20.5	19.6	18.7	17.8	17.1
Plug-In Hybrid Powertrains	2.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	2.4	2.3	4.0	15.8	17.7	21.1	24.4	28.1	31.4	33.9
BEV 1	0.0	1.4	1.4	2.6	7.1	7.6	8.5	9.5	10.6	11.6	12.3
BEV 2	0.0	0.6	0.6	0.9	5.3	6.2	7.6	9.1	10.7	12.1	13.2
BEV 3	0.0	0.4	0.4	0.6	3.4	3.9	4.9	5.8	6.8	7.7	8.4
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	6	6	0	0	0	0	0	0	0	0	0
6-Speed Automatic	11	11	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	33	50	49	44	36	33	31	30	28	27
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	6	6	6	6	6	5	5	5	5	4	4
DCT Transmissions	1	1	1	1	1	1	1	1	1	1	0
CVT Transmissions	15	14	14	13	12	18	20	19	18	17	17

**Table 505 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	64	65	65	65	63	64	64	64	47	44	42
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	5	5	3	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	27.2	26.8	26.4	26.1	23.8	23.7	23.7	23.7	22.4	21.2	20.2
Strong Hybrid Powertrains Total	0.0	0.0	1.7	4.7	6.8	6.8	6.8	6.8	20.0	18.8	17.9
Plug-In Hybrid Powertrains	17.6	14.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	13.4	15.6	15.1	29.9	29.7	29.6	29.5	29.5	33.3	37.3	40.2
BEV 1	3.5	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	6.1	6.1
BEV 2	9.9	9.3	8.9	8.5	8.3	8.2	8.1	8.1	8.5	9.1	9.4
BEV 3	0.0	0.0	0.0	15.2	15.3	15.4	15.4	15.4	18.8	22.1	24.7
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	69	69	68	65	63	41	41	27	10	10	9
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	23	23	37	36	34	33
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 506 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC1LT3**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	11	11	11	11	11	11	3	3	3
Cylinder Deactivation	1	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	61	57	49	39	32	31	22	21	17	14	13
Variable Geometry Turbo	19	20	3	1	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	81	78	57	46	43	41	33	31	20	17	16
Mild Hybrid Powertrains	8.3	8.2	4.2	4.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1
Strong Hybrid Powertrains Total	0.0	0.0	21.1	31.7	35.2	37.5	45.4	43.4	45.6	45.5	43.8
Plug-In Hybrid Powertrains	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	5.2	5.0	4.8
Battery Electric Vehicles (BEVs)	7.1	10.5	14.5	16.8	20.8	20.7	21.9	25.3	29.2	32.6	35.2
BEV 1	2.8	6.2	6.3	6.3	6.3	6.3	6.3	6.1	6.0	5.8	5.7
BEV 2	4.1	4.0	8.1	8.9	12.9	12.8	13.4	15.2	17.3	19.2	20.6
BEV 3	0.2	0.2	0.2	1.5	1.6	1.6	2.2	4.0	5.9	7.6	8.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	60	59	38	35	33	19	8	3	3	3	3
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	1	2	2	1	14	18	22	11	8	8
DCT Transmissions	30	26	22	13	10	8	6	6	6	6	5
CVT Transmissions	0	0	1	1	0	0	0	0	0	0	0

**Table 507 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	91	87	75	62	23	23	15	12	12	11	4
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	58	53	44	33	19	19	13	11	10	9	2
Mild Hybrid Powertrains	29.0	29.9	28.8	26.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	2.1	15.7	53.6	53.9	58.5	57.2	53.4	50.2	54.0
Plug-In Hybrid Powertrains	5.8	5.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.3	17.5	22.5	23.2	23.1	26.2	30.3	35.0	39.1	42.2
BEV 1	0.8	3.2	3.3	3.3	4.1	4.1	4.0	4.0	4.0	4.1	4.1
BEV 2	0.2	1.8	11.9	11.8	11.7	11.5	12.4	13.6	15.0	16.3	17.3
BEV 3	2.3	2.3	2.3	7.4	7.4	7.5	9.7	12.6	15.8	18.5	20.5
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	74	62	45	15	15	10	1	1	1	1
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	8	10	13	6	6	3	9	9	8	1
DCT Transmissions	6	6	3	3	3	3	2	2	2	2	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 508 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	3	3	3	3	3	3	3	3	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	74	70	62	62	58	30	13	1	1	1	1
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	73	68	62	62	57	32	15	3	3	3	3
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	8.6	8.6	10.6	10.5	10.5	45.9	62.7	74.1	74.1	72.2	70.6
Plug-In Hybrid Powertrains	1.2	1.1	1.0	0.0	0.0	1.2	1.5	2.4	2.4	2.3	2.3
Battery Electric Vehicles (BEVs)	2.9	7.5	14.7	15.6	20.2	20.1	20.1	20.1	20.1	22.1	23.9
BEV 1	0.5	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BEV 2	1.4	3.6	10.8	11.5	16.1	16.0	16.0	16.0	16.0	17.5	18.7
BEV 3	1.0	0.9	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.6	2.2
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	1	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	23	16	13	4	4	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	54	51	49	56	54	27	10	3	3	2	3
DCT Transmissions	2	2	2	2	2	2	2	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 509 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	1	7	8	8	8	7	7	6	0
Cylinder Deactivation	4	4	3	2	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	46	35	33	28	28	28	22	20	6	6
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	5	5	5	1	1	1	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	82	82	66	43	36	27	26	22	20	7	1
Mild Hybrid Powertrains	0.0	0.0	0.0	1.3	2.9	3.7	3.7	3.7	2.4	1.1	1.1
Strong Hybrid Powertrains Total	0.0	0.0	5.3	24.7	28.2	28.3	28.3	34.2	36.1	34.6	40.2
Plug-In Hybrid Powertrains	0.0	0.0	0.0	2.1	2.1	13.7	13.7	13.8	14.2	30.7	30.6
Battery Electric Vehicles (BEVs)	1.6	1.5	17.3	18.7	21.6	21.6	21.6	21.6	21.6	21.6	21.7
BEV 1	0.0	0.0	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
BEV 2	1.6	1.5	14.6	16.0	18.9	18.9	18.9	18.9	18.9	18.9	19.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	18	18	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	20	20	19	14	14	14	5	5	0	0	0
9-Speed Automatic	22	22	18	5	1	1	0	0	0	0	0
10-Speed Automatic	28	28	35	30	29	18	28	22	26	13	7
DCT Transmissions	2	2	2	1	0	0	0	0	0	0	0
CVT Transmissions	9	8	4	4	4	3	3	3	1	0	0

**Table 510 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	8	8	7	6	6	14	13	12	12	11
Cylinder Deactivation	27	13	13	3	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	43	56	56	62	58	39	37	32	27	26	20
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	79	78	78	74	65	45	42	37	32	30	26
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.7	0.6	0.6
Strong Hybrid Powertrains Total	9.3	6.8	6.8	11.5	10.9	27.6	26.7	28.5	30.3	28.6	31.7
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	4.8	5.1	5.8	15.7	19.3	22.8	26.4	30.5	34.0	36.7
BEV 1	0.0	3.4	3.5	3.6	7.8	9.3	10.8	12.3	14.0	15.6	16.8
BEV 2	0.0	1.1	1.2	1.9	6.4	8.1	9.7	11.4	13.2	14.8	16.1
BEV 3	0.0	0.3	0.3	0.4	1.5	1.9	2.3	2.8	3.2	3.6	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	17	3	3	3	0	0	0	0	0	0	0
10-Speed Automatic	17	31	32	28	28	26	25	21	16	15	10
DCT Transmissions	2	2	2	1	1	1	1	1	1	1	1
CVT Transmissions	55	52	51	50	45	26	25	24	23	22	21

**Table 511 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	59	59	59	54	46	46	30	29	28	27	20
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	19	18	18	15	11	9	5	5	5	5	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	68	68	68	60	43	40	21	20	20	19	18
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	7.2	7.3	7.3	7.1	6.7	6.4	0.0
Strong Hybrid Powertrains Total	10.9	9.8	10.1	16.0	21.0	27.6	37.3	36.0	34.4	33.0	38.1
Plug-In Hybrid Powertrains	1.9	1.7	1.8	0.0	0.0	0.0	8.2	7.9	7.6	7.2	6.9
Battery Electric Vehicles (BEVs)	3.3	7.0	6.8	11.2	17.9	17.8	18.6	21.5	24.8	27.8	30.0
BEV 1	0.2	4.0	3.9	3.7	4.4	4.4	4.7	6.1	7.7	9.1	10.2
BEV 2	2.1	2.1	2.0	6.5	12.3	12.3	12.6	13.7	14.9	15.9	16.7
BEV 3	1.0	1.0	1.0	0.9	1.2	1.1	1.3	1.7	2.2	2.7	3.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	50	42	40	32	25	25	9	9	8	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	2	4	4	2	1	1	1	9	9
DCT Transmissions	11	11	11	8	7	7	4	4	4	4	4
CVT Transmissions	22	28	28	28	25	22	21	21	20	19	12



**Table 512 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	45	57	58	59	50	50	50	37	35	30	25
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	23	19	19	17	17	17	17	16	9	9
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	32	32	30	30	27	27	27	27	26	18	8
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.9	5.7
Strong Hybrid Powertrains Total	5.0	5.0	5.0	5.0	10.2	10.2	10.2	19.4	18.7	24.6	28.6
Plug-In Hybrid Powertrains	3.0	1.6	1.6	0.0	0.0	0.0	0.0	7.7	7.4	11.5	11.2
Battery Electric Vehicles (BEVs)	4.4	6.1	11.4	12.8	18.3	18.3	18.3	19.2	22.1	24.7	26.7
BEV 1	0.0	1.9	2.9	2.8	2.8	2.8	2.8	3.0	3.9	4.7	5.3
BEV 2	3.7	3.5	7.9	9.4	14.9	14.9	14.9	15.5	17.2	18.8	20.0
BEV 3	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.2	1.3
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	13	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	47	39	39	22	22	22	9	9	9	9
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	9	9	9	9	7	7	7	7	7	0	0
CVT Transmissions	32	31	34	34	42	42	42	37	35	30	25

**Table 513 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	39	35	35	27	27	27	26	21	13	13
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	52	31	27	27	10	10	10	9	9	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	38	34	34	27	27	27	26	21	13	13
Mild Hybrid Powertrains	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	12.3	12.3	12.4	37.5	37.5	37.5	36.2	34.0	46.7	44.1
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.8	4.1
Battery Electric Vehicles (BEVs)	0.9	18.0	25.6	25.6	25.6	25.6	25.6	28.1	32.4	36.2	39.0
BEV 1	0.9	2.0	4.9	4.9	4.9	4.9	4.9	4.8	4.6	4.4	4.3
BEV 2	0.0	14.8	19.4	19.4	19.4	19.4	19.4	19.4	19.2	19.1	19.0
BEV 3	0.0	1.2	1.2	1.2	1.2	1.3	1.3	4.0	8.6	12.7	15.8
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	30	23	23	18	1	1	1	1	1	1
9-Speed Automatic	13	2	2	2	0	0	0	0	0	0	0
10-Speed Automatic	0	37	37	37	19	36	36	35	29	13	12
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 514 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 2	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 515 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 516 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	71	69	69	68	60	57	55	52	49	47	45
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	29	6	5	5	4	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	22.5	22.6	22.8	20.1	23.1	22.1	21.0	19.8	18.7	17.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.3	2.4	4.3	4.2	16.0	19.7	23.3	27.0	31.1	34.7	37.5
BEV 1	0.3	0.8	2.4	2.3	4.8	5.6	6.3	7.1	8.0	8.8	9.4
BEV 2	0.0	1.4	1.6	1.6	9.6	12.1	14.6	17.0	19.8	22.3	24.1
BEV 3	0.0	0.2	0.3	0.3	1.6	2.0	2.4	2.8	3.3	3.7	4.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	97	11	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	61	70	71	62	51	49	46	44	41	40
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	3	2	2	2	2	2	2	2	1	1	1
CVT Transmissions	0	0	0	0	0	5	4	4	4	4	4

**Table 517 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	90	81	77	77	56	42	25	22	5	5	3
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	7	7	6	6	5	4	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	63	54	53	53	44	39	25	22	5	5	3
Mild Hybrid Powertrains	26.5	26.2	23.6	22.9	12.5	2.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	4.4	5.4	12.1	28.1	48.5	47.7	60.3	56.6	55.6
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.1	12.6	12.1	11.7	26.4	26.2	26.2	30.1	34.7	38.8	41.8
BEV 1	0.0	9.6	9.3	8.9	8.1	8.0	8.0	7.5	7.1	6.7	6.4
BEV 2	1.3	1.2	1.2	1.2	10.8	10.8	10.8	11.2	11.6	12.0	12.2
BEV 3	1.8	1.7	1.7	1.6	7.0	7.0	7.0	10.7	15.1	18.8	21.7
BEV 4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.7	1.0	1.3	1.5
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	81	27	14	3	0	0	0	0	0	0	0
10-Speed Automatic	0	45	54	65	52	40	20	17	0	0	0
DCT Transmissions	16	16	16	15	9	5	5	5	5	4	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 518 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	12	11	11	11	11	11	11	31	30
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	21	21	21	21	12	12	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.5
Strong Hybrid Powertrains Total	0.0	0.0	5.9	5.7	9.6	9.6	9.6	9.6	9.6	36.6	35.9
Plug-In Hybrid Powertrains	1.4	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	1.2	13.7	15.0	20.5	20.4	20.4	20.4	20.4	20.4	21.6
BEV 1	0.0	0.5	4.4	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.8
BEV 2	0.0	0.6	9.3	10.7	16.2	16.2	16.2	16.2	16.2	16.2	16.8
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	1	1	0	0	0	0	0	0	0	0	0
CVT Transmissions	98	97	79	79	70	70	70	70	70	43	42

**Table 519 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	10	19	31	30	30	29	28	28	27
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	1	1	1	1	1	1	1	1	3	3	3
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	13	13	14	14	14	15	3	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	1.1	3.0	3.0	4.6	31.9	34.3	40.3	38.8	37.7
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	1.2	8.2	9.3	12.5	15.1	15.0	15.4	17.8	20.5	22.9	24.7
BEV 1	1.0	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.1	5.0
BEV 2	0.3	2.6	3.7	7.0	9.5	9.5	9.7	11.8	14.1	16.2	17.7
BEV 3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.7	1.2	1.7	2.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	4	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	23	25	26	24	0	0	0	0	0	0	0
10-Speed Automatic	0	1	1	1	26	26	15	11	3	3	3
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	71	65	63	59	56	54	38	37	36	35	34



**Table 520 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	11	12	12	12	11	11	10	2
Cylinder Deactivation	20	20	6	5	5	4	4	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	9	11	10	10	10	9	8	8	6
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	2	2	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	44	44	33	33	21	20	11	11	11	2
Mild Hybrid Powertrains	16.4	16.4	6.5	4.4	4.5	4.7	4.7	0.2	0.2	0.2	0.2
Strong Hybrid Powertrains Total	0.0	0.0	20.2	31.5	31.7	48.1	48.8	52.2	50.3	48.7	49.1
Plug-In Hybrid Powertrains	4.7	4.7	4.7	0.0	0.0	0.0	0.0	8.8	8.5	8.2	16.6
Battery Electric Vehicles (BEVs)	0.0	4.8	7.6	17.7	18.0	18.0	18.0	19.2	22.1	24.7	26.7
BEV 1	0.0	2.4	2.4	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.5
BEV 2	0.0	2.1	4.8	9.8	10.0	10.0	10.0	10.9	12.9	14.7	16.1
BEV 3	0.0	0.3	0.3	5.1	5.1	5.1	5.1	5.6	6.5	7.4	8.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	2	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	65	61	38	30	30	14	12	5	0	0	0
9-Speed Automatic	28	27	27	8	1	1	0	0	0	0	0
10-Speed Automatic	0	0	0	12	19	19	21	14	19	18	7
DCT Transmissions	1	1	1	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 521 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	13	40	60	60	57	55	52	48	45	43
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	24	24	23	20	19	18	17	16	15	15
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	76	74	75	74	64	61	58	55	52	48	46
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	1.3	1.1	1.0	1.0	0.9	0.8	0.8	0.8
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	5.2	5.1	5.3	17.6	21.6	25.7	29.7	34.2	38.2	41.2
BEV 1	0.0	3.1	3.0	2.9	3.3	3.4	3.5	3.6	3.8	4.0	4.2
BEV 2	0.0	1.1	1.1	1.4	7.9	10.0	12.0	14.1	16.5	18.5	20.1
BEV 3	0.0	1.0	1.0	1.0	6.5	8.3	10.1	11.9	13.9	15.6	17.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	4	4	3	3	3	3	2	2	2	2	2
CVT Transmissions	95	91	91	90	79	75	71	67	63	59	56

**Table 522 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	18.5	18.5	18.4	18.3	18.3	18.3	18.3	18.2	18.3	18.3	18.3
BEV 3	56.9	57.1	57.2	57.4	57.5	57.5	57.5	57.6	57.5	57.5	57.5
BEV 4	24.6	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.2
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 523 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	25	24	31	31	33	32	31	29	28	27	25
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	1
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	7	17	18	24	27	26	25	24	23	22
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	25	26	26	23	23	22	21	20	19	19
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	24.8	25.1	25.3	25.8	21.7	21.3	20.5	19.6	18.7	17.9	17.2
Plug-In Hybrid Powertrains	2.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Battery Electric Vehicles (BEVs)	0.0	2.4	2.3	4.0	15.8	17.7	21.1	24.4	28.1	31.4	33.9
BEV 1	0.0	1.4	1.4	2.6	7.1	7.6	8.5	9.5	10.6	11.6	12.3
BEV 2	0.0	0.6	0.6	0.9	5.3	6.2	7.6	9.1	10.7	12.1	13.2
BEV 3	0.0	0.4	0.4	0.6	3.4	3.9	4.9	5.8	6.8	7.7	8.4
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	6	6	0	0	0	0	0	0	0	0	0
6-Speed Automatic	11	11	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	33	50	49	44	36	33	31	30	28	26
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	6	6	6	6	6	5	5	5	5	4	4
DCT Transmissions	1	1	1	1	1	1	1	1	1	1	0
CVT Transmissions	15	14	14	13	12	18	20	19	18	17	17

**Table 524 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	64	65	65	65	63	64	64	64	39	37	30
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	5	5	3	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	27.2	26.8	26.4	26.1	23.8	23.7	23.7	23.7	22.4	21.2	15.6
Strong Hybrid Powertrains Total	0.0	0.0	1.7	4.7	6.8	6.8	6.8	6.8	27.9	26.2	29.6
Plug-In Hybrid Powertrains	17.6	14.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	13.4	15.6	15.1	29.9	29.7	29.6	29.5	29.5	33.3	37.3	40.2
BEV 1	3.5	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	6.1	6.1
BEV 2	9.9	9.3	8.9	8.5	8.3	8.2	8.1	8.0	8.5	9.1	9.5
BEV 3	0.0	0.0	0.0	15.2	15.3	15.4	15.4	15.4	18.8	22.1	24.7
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	69	69	68	65	63	41	41	27	5	5	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	23	23	37	34	32	30
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 525 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC2LT4**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	11	11	11	11	11	11	3	3	1
Cylinder Deactivation	1	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	61	57	49	39	32	31	22	21	17	10	8
Variable Geometry Turbo	19	20	3	1	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	81	78	57	46	43	41	33	31	20	13	9
Mild Hybrid Powertrains	8.3	8.2	4.2	4.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1
Strong Hybrid Powertrains Total	0.0	0.0	21.1	31.7	35.2	37.5	45.4	43.4	45.6	49.6	51.2
Plug-In Hybrid Powertrains	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	5.3	5.0	4.8
Battery Electric Vehicles (BEVs)	7.1	10.5	14.5	16.8	20.8	20.7	21.9	25.3	29.2	32.6	35.2
BEV 1	2.8	6.2	6.3	6.3	6.3	6.3	6.3	6.1	6.0	5.8	5.7
BEV 2	4.1	4.0	8.1	8.9	12.9	12.8	13.4	15.2	17.3	19.2	20.6
BEV 3	0.2	0.2	0.2	1.5	1.6	1.6	2.2	4.0	5.9	7.6	8.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	60	59	38	35	33	19	5	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	1	2	2	1	14	21	25	14	7	3
DCT Transmissions	30	26	22	13	10	8	6	6	6	6	5
CVT Transmissions	0	0	1	1	0	0	0	0	0	0	0

**Table 526 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	91	87	75	62	23	23	15	12	12	11	4
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	58	53	44	33	19	19	13	10	10	9	2
Mild Hybrid Powertrains	29.0	29.9	28.8	26.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	2.1	15.7	53.6	53.9	58.6	57.3	53.5	50.2	54.0
Plug-In Hybrid Powertrains	5.8	5.9	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.3	17.5	22.5	23.2	23.1	26.2	30.3	35.0	39.1	42.2
BEV 1	0.8	3.2	3.3	3.3	4.1	4.1	4.1	4.0	4.1	4.1	4.1
BEV 2	0.2	1.8	11.9	11.8	11.7	11.5	12.4	13.6	15.0	16.3	17.3
BEV 3	2.3	2.3	2.3	7.4	7.4	7.5	9.7	12.6	15.7	18.5	20.5
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	74	62	45	15	15	10	1	1	1	1
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	8	10	13	6	6	3	9	9	8	1
DCT Transmissions	6	6	3	3	3	3	2	2	2	2	2
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 527 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	3	3	3	3	3	3	3	3	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	74	70	62	62	58	30	13	1	1	1	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	73	68	62	62	57	32	15	3	3	3	2
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	8.6	8.6	10.6	10.5	10.5	45.9	62.7	74.1	74.1	72.2	71.0
Plug-In Hybrid Powertrains	1.2	1.1	1.0	0.0	0.0	1.2	1.5	2.4	2.4	2.3	2.3
Battery Electric Vehicles (BEVs)	2.9	7.5	14.7	15.6	20.2	20.1	20.1	20.1	20.1	22.1	23.9
BEV 1	0.5	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BEV 2	1.4	3.6	10.8	11.5	16.1	16.0	16.0	16.0	16.0	17.5	18.7
BEV 3	1.0	0.9	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.6	2.2
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	1	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	23	16	13	4	4	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	54	51	49	56	54	27	10	3	3	2	2
DCT Transmissions	2	2	2	2	2	2	2	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 528 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	1	7	8	8	8	7	7	6	0
Cylinder Deactivation	4	4	3	2	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	46	35	33	28	28	28	22	20	5	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	5	5	5	1	1	1	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	82	82	66	43	36	27	27	22	20	6	0
Mild Hybrid Powertrains	0.0	0.0	0.0	1.3	2.9	3.7	3.7	3.7	2.4	1.1	1.1
Strong Hybrid Powertrains Total	0.0	0.0	5.3	24.7	28.2	28.3	28.3	34.2	36.1	35.9	39.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	2.1	2.1	13.7	13.7	13.8	14.2	30.8	32.4
Battery Electric Vehicles (BEVs)	1.6	1.5	17.3	18.7	21.6	21.6	21.6	21.6	21.6	21.6	21.7
BEV 1	0.0	0.0	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
BEV 2	1.6	1.5	14.6	16.0	18.9	18.9	18.9	18.9	18.9	18.9	19.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	18	18	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	20	20	19	14	14	14	5	5	0	0	0
9-Speed Automatic	22	22	18	5	1	1	0	0	0	0	0
10-Speed Automatic	28	28	35	30	29	18	28	22	26	12	6
DCT Transmissions	2	2	2	1	0	0	0	0	0	0	0
CVT Transmissions	9	8	4	4	4	3	3	3	1	0	0

**Table 529 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	8	8	7	6	6	14	13	12	12	11
Cylinder Deactivation	27	13	13	3	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	43	56	56	62	58	39	33	28	18	17	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	79	78	78	74	65	45	39	34	24	22	19
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	9.3	6.8	6.8	11.5	10.9	27.6	30.8	32.4	39.4	37.2	39.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	4.8	5.1	5.8	15.7	19.3	22.8	26.4	30.5	34.0	36.7
BEV 1	0.0	3.4	3.5	3.6	7.8	9.3	10.8	12.3	14.0	15.6	16.8
BEV 2	0.0	1.1	1.2	1.9	6.4	8.1	9.7	11.4	13.2	14.9	16.0
BEV 3	0.0	0.3	0.3	0.4	1.5	1.9	2.3	2.8	3.2	3.6	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	17	3	3	3	0	0	0	0	0	0	0
10-Speed Automatic	17	31	32	28	28	26	21	17	7	6	2
DCT Transmissions	2	2	2	1	1	1	1	1	1	1	1
CVT Transmissions	55	52	51	50	45	26	25	24	23	22	21

**Table 530 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	59	59	59	54	46	46	25	24	23	22	15
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	19	18	18	15	11	9	5	4	4	4	4
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	68	68	68	60	43	40	14	14	13	13	10
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	7.2	7.3	7.3	7.1	6.7	6.4	2.2
Strong Hybrid Powertrains Total	10.9	9.8	10.1	16.0	21.0	27.6	52.1	50.3	48.1	46.1	51.3
Plug-In Hybrid Powertrains	1.9	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.3	7.0	6.8	11.2	17.9	17.8	18.6	21.5	24.8	27.8	30.0
BEV 1	0.2	4.0	3.9	3.7	4.4	4.4	4.7	6.1	7.7	9.1	10.2
BEV 2	2.1	2.1	2.0	6.5	12.3	12.3	12.6	13.7	14.9	15.9	16.7
BEV 3	1.0	1.0	1.0	0.9	1.2	1.1	1.3	1.7	2.2	2.7	3.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	50	42	40	32	25	25	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	2	4	4	2	3	3	3	3	3
DCT Transmissions	11	11	11	8	7	7	4	4	4	4	4
CVT Transmissions	22	28	28	28	25	22	21	21	20	19	12

**Table 531 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	45	57	58	59	50	50	50	34	30	25	13
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	23	19	19	17	17	17	17	16	9	8
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	32	32	30	30	27	27	27	27	26	18	7
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.9	0.0
Strong Hybrid Powertrains Total	5.0	5.0	5.0	5.0	10.2	10.2	10.2	22.3	24.2	30.4	40.9
Plug-In Hybrid Powertrains	3.0	1.6	1.6	0.0	0.0	0.0	0.0	7.7	7.4	11.5	11.1
Battery Electric Vehicles (BEVs)	4.4	6.1	11.4	12.8	18.3	18.3	18.3	19.2	22.1	24.7	26.7
BEV 1	0.0	1.9	2.9	2.8	2.8	2.8	2.8	3.0	3.9	4.7	5.4
BEV 2	3.7	3.5	7.9	9.4	14.9	14.9	14.9	15.5	17.2	18.8	20.0
BEV 3	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.2	1.3
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	13	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	47	39	39	22	22	22	9	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	9	8	8
DCT Transmissions	9	9	9	9	7	7	7	7	7	0	0
CVT Transmissions	32	31	34	34	42	42	42	34	30	25	13

**Table 532 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	39	35	35	27	27	27	26	21	13	13
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	52	31	27	27	10	10	10	9	9	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	38	34	34	27	27	27	26	21	13	13
Mild Hybrid Powertrains	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	12.3	12.3	12.4	37.5	37.5	37.5	36.2	34.0	46.7	44.1
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.8	4.1
Battery Electric Vehicles (BEVs)	0.9	18.0	25.6	25.6	25.6	25.6	25.6	28.1	32.4	36.2	39.0
BEV 1	0.9	2.0	4.9	4.9	4.9	4.9	4.9	4.8	4.6	4.4	4.3
BEV 2	0.0	14.8	19.4	19.4	19.4	19.4	19.4	19.3	19.2	19.1	19.0
BEV 3	0.0	1.2	1.2	1.2	1.2	1.3	1.3	4.0	8.6	12.7	15.8
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	30	23	23	18	1	1	1	0	0	0
9-Speed Automatic	13	2	2	2	0	0	0	0	0	0	0
10-Speed Automatic	0	37	37	37	19	36	36	35	30	13	13
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 533 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 2	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 534 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 535 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	71	69	69	68	60	57	55	41	39	37	35
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	29	6	5	5	4	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	22.5	22.6	22.8	20.1	23.1	22.1	21.0	19.8	18.8	17.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	10.3	9.7	9.3
Battery Electric Vehicles (BEVs)	0.3	2.4	4.3	4.2	16.0	19.7	23.3	27.0	31.1	34.7	37.5
BEV 1	0.3	0.8	2.4	2.3	4.8	5.6	6.3	7.1	8.0	8.8	9.4
BEV 2	0.0	1.4	1.6	1.6	9.6	12.1	14.6	17.0	19.8	22.3	24.1
BEV 3	0.0	0.2	0.3	0.3	1.6	2.0	2.4	2.8	3.3	3.7	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	97	11	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	61	70	71	62	51	48	35	33	31	12
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	1	1	1	1	1
DCT Transmissions	3	2	2	2	2	2	2	2	1	1	1
CVT Transmissions	0	0	0	0	0	5	4	4	4	4	21



**Table 536 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	90	81	77	77	56	42	25	22	2	2	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	7	7	6	6	5	4	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	63	54	53	53	44	39	25	22	2	2	0
Mild Hybrid Powertrains	26.5	26.2	23.6	22.9	12.5	2.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	4.4	5.4	12.1	28.1	48.5	47.7	62.8	59.3	58.2
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.1	12.6	12.1	11.7	26.4	26.2	26.2	30.1	34.7	38.8	41.8
BEV 1	0.0	9.6	9.3	8.9	8.1	8.0	8.0	7.5	7.1	6.7	6.4
BEV 2	1.3	1.2	1.2	1.2	10.8	10.8	10.8	11.2	11.6	12.0	12.2
BEV 3	1.8	1.7	1.7	1.6	7.0	7.0	7.0	10.8	15.0	18.8	21.6
BEV 4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.7	1.0	1.3	1.5
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	81	27	14	3	0	0	0	0	0	0	0
10-Speed Automatic	0	45	54	65	52	40	20	17	0	0	0
DCT Transmissions	16	16	16	15	9	5	5	5	2	2	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 537 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	12	11	11	11	11	11	11	27	27
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	21	21	21	21	12	12	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	16.2
Strong Hybrid Powertrains Total	0.0	0.0	5.9	5.7	9.6	9.6	9.6	9.6	9.6	17.3	17.0
Plug-In Hybrid Powertrains	1.4	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	22.9	22.4
Battery Electric Vehicles (BEVs)	0.0	1.2	13.7	15.0	20.5	20.4	20.4	20.3	20.4	20.4	21.6
BEV 1	0.0	0.5	4.4	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.8
BEV 2	0.0	0.6	9.3	10.7	16.2	16.2	16.2	16.2	16.2	16.2	16.8
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	1	1	0	0	0	0	0	0	0	0	0
CVT Transmissions	98	97	79	79	70	70	70	70	70	39	39

**Table 538 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	10	19	31	30	30	29	24	24	23
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	1	1	1	1	1	1	1	1	1	1	1
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	13	13	14	14	14	15	3	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	6.5	6.4
Strong Hybrid Powertrains Total	0.0	0.0	1.1	3.0	3.0	4.6	31.9	34.3	46.7	45.0	43.8
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	1.2	8.2	9.3	12.5	15.1	15.0	15.4	17.8	20.5	22.9	24.7
BEV 1	1.0	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.1	5.0
BEV 2	0.3	2.6	3.7	7.0	9.5	9.5	9.7	11.8	14.1	16.2	17.7
BEV 3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.7	1.2	1.7	2.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	4	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	23	25	26	24	0	0	0	0	0	0	0
10-Speed Automatic	0	1	1	1	26	26	15	11	1	1	1
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	71	65	63	59	56	54	38	37	32	31	31

**Table 539 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	11	12	12	12	11	11	10	2
Cylinder Deactivation	20	20	6	5	5	4	4	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	9	11	10	10	10	9	8	7	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	2	2	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	44	44	33	33	21	20	11	11	10	0
Mild Hybrid Powertrains	16.4	16.4	6.5	4.4	4.5	4.7	4.7	0.2	0.2	0.2	1.7
Strong Hybrid Powertrains Total	0.0	0.0	20.2	31.5	31.7	48.1	48.8	52.2	50.3	50.0	50.4
Plug-In Hybrid Powertrains	4.7	4.7	4.7	0.0	0.0	0.0	0.0	8.8	8.5	8.2	16.5
Battery Electric Vehicles (BEVs)	0.0	4.8	7.6	17.7	18.0	18.0	18.0	19.2	22.1	24.7	26.7
BEV 1	0.0	2.4	2.4	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.5
BEV 2	0.0	2.1	4.8	9.8	10.0	10.0	10.0	10.9	12.9	14.7	16.1
BEV 3	0.0	0.3	0.3	5.1	5.1	5.1	5.1	5.6	6.5	7.4	8.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	2	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	65	61	38	30	30	14	12	5	0	0	0
9-Speed Automatic	28	27	27	8	1	1	0	0	0	0	0
10-Speed Automatic	0	0	0	12	19	19	21	14	19	17	6
DCT Transmissions	1	1	1	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 540 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	13	40	60	60	57	54	51	48	45	43
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	24	24	23	20	19	18	17	16	15	15
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	76	74	75	74	64	61	58	55	52	48	46
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	1.3	1.1	1.0	1.3	1.2	1.1	1.1	1.0
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	5.2	5.1	5.3	17.6	21.6	25.7	29.7	34.2	38.2	41.2
BEV 1	0.0	3.1	3.0	2.9	3.3	3.4	3.5	3.6	3.8	4.0	4.2
BEV 2	0.0	1.1	1.1	1.4	7.9	10.0	12.0	14.1	16.5	18.5	20.1
BEV 3	0.0	1.0	1.0	1.0	6.5	8.3	10.1	11.9	13.9	15.6	16.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	4	4	3	3	3	3	2	2	2	2	2
CVT Transmissions	95	91	91	90	79	75	71	67	63	59	56

**Table 541 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	18.5	18.5	18.4	18.3	18.3	18.3	18.3	18.2	18.3	18.3	18.3
BEV 3	56.9	57.1	57.2	57.4	57.5	57.5	57.5	57.6	57.5	57.5	57.5
BEV 4	24.6	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 542 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	25	24	31	31	33	32	29	27	26	25	22
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	7	17	18	24	27	26	25	22	18	17
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	25	26	26	23	23	20	18	17	14	14
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	24.8	25.1	25.3	25.8	21.7	21.3	22.1	22.1	22.6	24.1	24.1
Plug-In Hybrid Powertrains	2.4	1.4	1.4	0.0	0.0	0.0	0.0	0.2	0.4	0.3	2.8
Battery Electric Vehicles (BEVs)	0.0	2.4	2.3	4.0	15.8	17.7	21.1	24.4	28.1	31.4	33.9
BEV 1	0.0	1.4	1.4	2.6	7.1	7.6	8.5	9.5	10.6	11.6	12.4
BEV 2	0.0	0.6	0.6	0.9	5.3	6.2	7.6	9.1	10.7	12.1	13.1
BEV 3	0.0	0.4	0.4	0.6	3.4	3.9	4.9	5.8	6.8	7.7	8.4
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	6	6	0	0	0	0	0	0	0	0	0
6-Speed Automatic	11	11	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	33	50	49	44	36	17	7	4	3	3
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	6	6	6	6	6	5	12	19	19	16	13
DCT Transmissions	1	1	1	1	1	1	1	1	1	1	0
CVT Transmissions	15	14	14	13	12	18	27	26	26	25	23

**Table 543 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	64	65	65	65	63	64	64	64	39	37	23
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	5	5	3	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	27.2	26.8	26.4	26.1	23.8	23.7	23.7	23.7	22.4	21.2	8.2
Strong Hybrid Powertrains Total	0.0	0.0	1.7	4.7	6.8	6.8	6.8	6.8	27.9	26.2	37.0
Plug-In Hybrid Powertrains	17.6	14.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	13.4	15.6	15.1	29.9	29.7	29.6	29.5	29.5	33.3	37.3	40.2
BEV 1	3.5	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	6.1	6.1
BEV 2	9.9	9.3	8.9	8.5	8.3	8.2	8.1	8.0	8.5	9.1	9.5
BEV 3	0.0	0.0	0.0	15.2	15.3	15.4	15.4	15.4	18.8	22.1	24.6
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	69	69	68	65	63	41	41	27	5	5	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	23	23	37	34	32	23
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 544 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC3LT5**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	11	11	11	11	11	11	3	3	1
Cylinder Deactivation	1	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	61	57	49	39	32	31	22	21	17	7	5
Variable Geometry Turbo	19	20	3	1	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	81	78	57	46	43	41	26	25	14	4	1
Mild Hybrid Powertrains	8.3	8.2	4.2	4.3	0.4	0.2	6.5	6.1	5.9	5.5	5.3
Strong Hybrid Powertrains Total	0.0	0.0	21.1	31.7	35.2	37.5	45.4	43.4	45.6	52.7	54.2
Plug-In Hybrid Powertrains	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	5.3	5.0	4.8
Battery Electric Vehicles (BEVs)	7.1	10.5	14.5	16.8	20.8	20.7	21.9	25.3	29.2	32.6	35.2
BEV 1	2.8	6.2	6.3	6.3	6.3	6.3	6.3	6.1	6.0	5.8	5.7
BEV 2	4.1	4.0	8.1	8.9	12.9	12.8	13.4	15.2	17.3	19.2	20.6
BEV 3	0.2	0.2	0.2	1.5	1.6	1.6	2.2	4.0	5.9	7.6	8.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	60	59	38	35	33	19	5	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	1	2	2	1	14	21	25	14	4	1
DCT Transmissions	30	26	22	13	10	8	6	6	6	5	5
CVT Transmissions	0	0	1	1	0	0	0	0	0	0	0

**Table 545 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	91	87	75	62	23	23	14	11	8	8	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	58	53	44	33	19	19	11	9	8	8	0
Mild Hybrid Powertrains	29.0	29.9	28.8	26.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	2.1	15.7	53.6	53.9	60.2	58.8	56.6	53.1	56.5
Plug-In Hybrid Powertrains	5.8	5.9	5.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.3
Battery Electric Vehicles (BEVs)	3.3	7.3	17.5	22.5	23.2	23.1	26.2	30.3	35.0	39.1	42.2
BEV 1	0.8	3.2	3.3	3.3	4.1	4.1	4.0	4.0	4.0	4.1	4.1
BEV 2	0.2	1.8	11.9	11.8	11.7	11.5	12.4	13.6	15.0	16.3	17.3
BEV 3	2.3	2.3	2.3	7.4	7.4	7.5	9.7	12.7	15.8	18.5	20.5
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	74	62	45	15	15	10	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	8	10	13	6	6	1	9	8	8	0
DCT Transmissions	6	6	3	3	3	3	2	2	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 546 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	3	3	3	3	3	3	3	3	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	74	70	62	62	58	30	13	1	1	1	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	73	68	62	62	57	32	15	3	3	3	2
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	8.6	8.6	10.6	10.5	10.5	45.9	62.7	73.4	73.4	71.5	70.2
Plug-In Hybrid Powertrains	1.2	1.1	1.0	0.0	0.0	1.2	1.5	3.2	3.2	3.0	3.0
Battery Electric Vehicles (BEVs)	2.9	7.5	14.7	15.6	20.2	20.1	20.1	20.1	20.1	22.1	23.9
BEV 1	0.5	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BEV 2	1.4	3.6	10.8	11.5	16.1	16.0	16.0	16.0	16.0	17.5	18.7
BEV 3	1.0	0.9	0.8	1.1	1.1	1.0	1.0	1.0	1.0	1.6	2.2
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	1	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	1	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	29	29	23	16	13	4	4	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	54	51	49	56	54	27	10	3	3	2	2
DCT Transmissions	2	2	2	2	2	2	2	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 547 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (GM) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	1	7	8	8	8	7	7	6	0
Cylinder Deactivation	4	4	3	2	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	46	35	33	28	28	28	22	20	5	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	5	5	5	1	1	1	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	82	82	66	43	36	27	26	22	21	6	0
Mild Hybrid Powertrains	0.0	0.0	0.0	1.3	2.9	3.7	3.7	3.7	2.4	1.1	1.1
Strong Hybrid Powertrains Total	0.0	0.0	5.3	24.7	28.2	28.3	28.3	34.1	36.0	35.8	39.8
Plug-In Hybrid Powertrains	0.0	0.0	0.0	2.1	2.1	13.7	13.8	13.8	14.3	30.9	32.5
Battery Electric Vehicles (BEVs)	1.6	1.5	17.3	18.7	21.6	21.6	21.6	21.6	21.6	21.6	21.7
BEV 1	0.0	0.0	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
BEV 2	1.6	1.5	14.6	16.0	18.9	18.9	18.9	18.9	18.9	18.9	19.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	18	18	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	20	20	19	14	14	14	5	5	0	0	0
9-Speed Automatic	22	22	18	5	1	1	0	0	0	0	0
10-Speed Automatic	28	28	35	30	29	18	28	22	26	12	6
DCT Transmissions	2	2	2	1	0	0	0	0	0	0	0
CVT Transmissions	9	8	4	4	4	3	3	3	1	0	0

**Table 548 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	8	8	7	6	6	12	6	6	5	5
Cylinder Deactivation	27	13	13	3	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	43	56	56	62	58	39	19	15	5	5	2
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	79	78	78	74	65	45	25	21	11	10	7
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	9.3	6.8	6.8	11.5	10.9	27.6	46.3	52.5	58.5	55.5	55.9
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Battery Electric Vehicles (BEVs)	0.0	4.8	5.1	5.8	15.7	19.3	22.8	26.4	30.5	34.0	36.7
BEV 1	0.0	3.4	3.5	3.6	7.8	9.3	10.8	12.3	14.0	15.6	16.8
BEV 2	0.0	1.1	1.2	1.9	6.4	8.1	9.8	11.4	13.3	14.9	16.0
BEV 3	0.0	0.3	0.3	0.4	1.5	1.9	2.3	2.8	3.2	3.6	3.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	17	3	3	3	0	0	0	0	0	0	0
10-Speed Automatic	17	31	32	28	28	26	19	15	5	5	2
DCT Transmissions	2	2	2	1	1	1	0	0	0	0	0
CVT Transmissions	55	52	51	50	45	26	12	6	6	5	5

**Table 549 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	59	59	59	54	46	46	25	24	23	19	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	19	18	18	15	11	9	5	4	4	3	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	68	68	68	60	43	40	14	14	13	9	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	7.2	7.3	7.3	7.1	6.8	6.4	0.0
Strong Hybrid Powertrains Total	10.9	9.8	10.1	16.0	21.0	27.6	50.7	49.0	46.9	48.7	68.2
Plug-In Hybrid Powertrains	1.9	1.7	1.8	0.0	0.0	0.0	1.4	1.3	1.3	1.2	1.7
Battery Electric Vehicles (BEVs)	3.3	7.0	6.8	11.2	17.9	17.8	18.6	21.5	24.8	27.8	30.0
BEV 1	0.2	4.0	3.9	3.7	4.4	4.4	4.7	6.1	7.7	9.1	10.2
BEV 2	2.1	2.1	2.0	6.5	12.3	12.3	12.6	13.7	14.9	16.0	16.7
BEV 3	1.0	1.0	1.0	0.9	1.2	1.1	1.3	1.7	2.2	2.7	3.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	50	42	40	32	25	25	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	2	4	4	2	3	3	3	0	0
DCT Transmissions	11	11	11	8	7	7	4	4	4	3	0
CVT Transmissions	22	28	28	28	25	22	21	21	20	19	0

**Table 550 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	45	57	58	59	50	50	50	27	24	17	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	23	19	19	17	17	17	17	16	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	32	32	30	30	27	27	27	27	26	17	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.9	0.0
Strong Hybrid Powertrains Total	5.0	5.0	5.0	5.0	10.2	10.2	10.2	28.6	29.9	45.5	61.1
Plug-In Hybrid Powertrains	3.0	1.6	1.6	0.0	0.0	0.0	0.0	8.0	7.9	12.0	12.3
Battery Electric Vehicles (BEVs)	4.4	6.1	11.4	12.8	18.3	18.3	18.3	19.2	22.1	24.7	26.7
BEV 1	0.0	1.9	2.9	2.8	2.8	2.8	2.8	3.0	3.9	4.7	5.4
BEV 2	3.7	3.5	7.9	9.4	14.9	14.9	14.9	15.5	17.3	18.8	20.0
BEV 3	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.2	1.3
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	13	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	47	39	39	22	22	22	9	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	9	0	0
DCT Transmissions	9	9	9	9	7	7	8	7	7	0	0
CVT Transmissions	32	31	34	34	42	42	42	27	24	17	0

**Table 551 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	47	39	35	35	27	27	27	26	21	13	13
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	52	31	27	27	10	10	10	9	9	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	38	34	34	27	27	27	26	21	13	13
Mild Hybrid Powertrains	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	12.3	12.3	12.4	37.5	37.5	37.5	36.2	34.0	46.7	44.1
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.8	4.1
Battery Electric Vehicles (BEVs)	0.9	18.0	25.6	25.6	25.6	25.6	25.6	28.1	32.4	36.2	39.1
BEV 1	0.9	2.0	4.9	4.9	4.9	4.9	4.9	4.8	4.6	4.4	4.3
BEV 2	0.0	14.8	19.4	19.4	19.4	19.4	19.4	19.4	19.2	19.1	19.0
BEV 3	0.0	1.2	1.2	1.2	1.2	1.3	1.3	4.0	8.6	12.7	15.8
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	85	30	23	23	18	1	1	1	0	0	0
9-Speed Automatic	13	2	2	2	0	0	0	0	0	0	0
10-Speed Automatic	0	37	37	37	19	36	36	35	30	13	13
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0



**Table 552 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 2	0.0	0.0	0.0	0.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 553 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 554 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	71	69	69	68	60	42	40	2	2	2	2
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	29	6	5	5	4	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	22.5	22.6	22.8	20.1	38.4	36.7	36.4	34.4	32.5	31.1
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.5	32.6	30.9	29.6
Battery Electric Vehicles (BEVs)	0.3	2.4	4.3	4.2	16.0	19.7	23.3	27.0	31.1	34.7	37.5
BEV 1	0.3	0.8	2.4	2.3	4.8	5.6	6.3	7.1	8.0	8.8	9.4
BEV 2	0.0	1.4	1.6	1.6	9.6	12.1	14.6	17.0	19.8	22.3	24.1
BEV 3	0.0	0.2	0.3	0.3	1.6	2.0	2.4	2.8	3.3	3.7	4.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	97	11	1	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	61	70	71	62	36	33	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	1	1	1	1	1
DCT Transmissions	3	2	2	2	2	2	2	1	1	1	1
CVT Transmissions	0	0	0	0	0	5	4	0	0	0	0

**Table 555 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	90	81	77	77	56	42	25	22	2	2	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	7	7	6	6	5	4	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	63	54	53	53	44	39	25	22	2	2	0
Mild Hybrid Powertrains	26.5	26.2	23.6	22.9	12.5	2.7	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	4.4	5.4	12.1	28.1	48.5	47.7	62.8	59.3	58.2
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	3.1	12.6	12.1	11.7	26.4	26.2	26.2	30.1	34.7	38.8	41.8
BEV 1	0.0	9.6	9.3	8.9	8.1	8.0	8.0	7.5	7.0	6.7	6.4
BEV 2	1.3	1.2	1.2	1.2	10.8	10.8	10.8	11.2	11.6	11.9	12.2
BEV 3	1.8	1.7	1.7	1.6	7.0	7.0	7.0	10.8	15.1	18.9	21.7
BEV 4	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.7	1.0	1.3	1.5
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	81	27	14	3	0	0	0	0	0	0	0
10-Speed Automatic	0	45	54	65	52	40	20	17	0	0	0
DCT Transmissions	16	16	16	15	9	5	5	5	2	2	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 556 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	12	11	11	11	11	11	11	11	11
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	21	21	21	21	12	12	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	5.9	5.7	9.6	9.6	9.6	9.6	9.6	37.3	36.4
Plug-In Hybrid Powertrains	1.4	1.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	19.1	19.2
Battery Electric Vehicles (BEVs)	0.0	1.2	13.7	15.0	20.5	20.4	20.4	20.3	20.4	20.4	21.6
BEV 1	0.0	0.5	4.4	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.8
BEV 2	0.0	0.6	9.3	10.7	16.2	16.2	16.2	16.2	16.2	16.2	16.8
BEV 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	1	1	0	0	0	0	0	0	0	0	0
CVT Transmissions	98	97	79	79	70	70	70	70	70	23	23

**Table 557 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	10	19	31	30	30	29	19	11	3
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	1	1	1	1	1	1	1	1	1	1	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	13	13	14	14	14	15	3	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Strong Hybrid Powertrains Total	0.0	0.0	1.1	3.0	3.0	4.6	40.2	42.3	59.3	65.3	72.3
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Battery Electric Vehicles (BEVs)	1.2	8.2	9.3	12.5	15.1	15.0	15.4	17.8	20.5	22.9	24.7
BEV 1	1.0	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.1	5.0
BEV 2	0.3	2.6	3.7	7.0	9.5	9.5	9.7	11.8	14.1	16.1	17.7
BEV 3	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.7	1.2	1.7	2.0
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	4	1	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	23	25	26	24	0	0	0	0	0	0	0
10-Speed Automatic	0	1	1	1	26	26	15	11	1	1	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	71	65	63	59	56	54	30	29	19	11	3

**Table 558 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	11	12	12	12	11	11	10	0
Cylinder Deactivation	20	20	6	5	5	4	4	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	9	11	10	10	10	9	8	7	5
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	2	2	1	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	44	44	33	33	21	20	11	11	10	0
Mild Hybrid Powertrains	16.4	16.4	6.5	4.4	4.5	4.7	4.7	0.2	0.2	0.2	0.2
Strong Hybrid Powertrains Total	0.0	0.0	20.2	31.5	31.7	48.0	48.7	51.3	33.5	33.7	35.3
Plug-In Hybrid Powertrains	4.7	4.7	4.7	0.0	0.0	0.1	0.1	9.8	25.3	24.4	33.2
Battery Electric Vehicles (BEVs)	0.0	4.8	7.6	17.7	18.0	18.0	18.0	19.2	22.1	24.7	26.7
BEV 1	0.0	2.4	2.4	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.5
BEV 2	0.0	2.1	4.8	9.8	10.0	10.0	10.0	10.9	12.9	14.7	16.1
BEV 3	0.0	0.3	0.3	5.1	5.1	5.1	5.1	5.6	6.5	7.4	8.1
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	2	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	65	61	38	30	30	14	12	5	0	0	0
9-Speed Automatic	28	27	27	8	1	1	0	0	0	0	0
10-Speed Automatic	0	0	0	12	19	19	21	14	19	17	5
DCT Transmissions	1	1	1	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 559 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	13	40	60	60	57	53	30	14	13	12
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	24	24	24	23	20	19	18	8	1	1	1
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	76	74	75	74	64	61	58	36	13	12	12
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.9	0.9	0.8
Strong Hybrid Powertrains Total	0.0	0.0	0.0	1.3	1.1	1.0	2.8	28.5	45.6	42.8	40.7
Plug-In Hybrid Powertrains	0.5	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.0	4.7	4.9
Battery Electric Vehicles (BEVs)	0.0	5.2	5.1	5.3	17.6	21.6	25.7	29.7	34.2	38.2	41.2
BEV 1	0.0	3.1	3.0	2.9	3.3	3.4	3.5	3.6	3.8	4.0	4.2
BEV 2	0.0	1.1	1.1	1.4	7.9	10.0	12.1	14.1	16.5	18.6	20.1
BEV 3	0.0	1.0	1.0	1.0	6.5	8.3	10.1	11.9	13.9	15.7	16.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	4	4	3	3	3	3	2	2	2	2	1
CVT Transmissions	95	91	91	90	79	75	69	36	14	13	12



**Table 560 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0	0	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
BEV 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BEV 2	18.5	18.5	18.4	18.3	18.3	18.3	18.2	18.2	18.2	18.3	18.3
BEV 3	56.9	57.1	57.2	57.4	57.5	57.5	57.5	57.6	57.6	57.5	57.5
BEV 4	24.6	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.2	24.2	24.3
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 561 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	25	24	31	31	33	32	27	26	20	14	7
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	7	17	18	24	27	26	24	19	13	0
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	25	26	26	23	23	19	17	17	7	1
Mild Hybrid Powertrains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strong Hybrid Powertrains Total	24.8	25.1	25.3	25.8	21.7	21.3	23.6	24.0	30.1	36.0	49.2
Plug-In Hybrid Powertrains	2.4	1.4	1.4	0.0	0.0	0.0	0.0	0.2	1.1	4.4	10.1
Battery Electric Vehicles (BEVs)	0.0	2.4	2.3	4.0	15.8	17.7	21.1	24.4	28.1	31.4	33.9
BEV 1	0.0	1.4	1.4	2.6	7.1	7.6	8.5	9.4	10.5	11.6	12.4
BEV 2	0.0	0.6	0.6	0.9	5.3	6.2	7.6	9.1	10.7	12.1	13.2
BEV 3	0.0	0.4	0.4	0.6	3.4	3.9	4.9	5.8	6.8	7.7	8.4
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
5-Speed Automatic	6	6	0	0	0	0	0	0	0	0	0
6-Speed Automatic	11	11	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	34	33	50	49	44	36	14	4	1	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	6	6	6	6	6	5	19	25	24	15	0
DCT Transmissions	1	1	1	1	1	1	1	1	1	0	0
CVT Transmissions	15	14	14	13	12	18	22	22	16	13	7

**Table 562 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	0	0	0	0	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	64	65	65	65	63	64	64	64	39	37	18
Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	5	5	3	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0	0	0	0	0	0	0
Mild Hybrid Powertrains	27.2	26.8	26.4	26.1	23.8	23.7	23.7	23.7	22.4	21.2	3.7
Strong Hybrid Powertrains Total	0.0	0.0	1.7	4.7	6.8	6.8	6.8	6.8	27.9	26.1	41.3
Plug-In Hybrid Powertrains	17.6	14.9	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Battery Electric Vehicles (BEVs)	13.4	15.6	15.1	29.9	29.7	29.6	29.5	29.5	33.3	37.3	40.2
BEV 1	3.5	6.3	6.2	6.1	6.1	6.0	6.0	6.0	6.0	6.0	6.1
BEV 2	9.9	9.3	8.9	8.5	8.3	8.2	8.1	8.0	8.5	9.0	9.5
BEV 3	0.0	0.0	0.0	15.2	15.3	15.4	15.4	15.4	18.8	22.2	24.6
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	69	69	68	65	63	41	41	27	5	5	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0	23	23	37	34	32	18
DCT Transmissions	0	0	0	0	0	0	0	0	0	0	0
CVT Transmissions	0	0	0	0	0	0	0	0	0	0	0

**Table 563 - Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC6LT8**

<b>Powertrain Technology Penetration Rate (%) by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Non-Hybrid High Compression Engines	0	0	11	11	11	11	11	11	3	3	1
Cylinder Deactivation	1	0	0	0	0	0	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0	0	0	0	0	0	0
Non-Hybrid Turbocharged Engines	61	57	49	39	32	31	15	15	11	1	0
Variable Geometry Turbo	19	20	3	1	0	0	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0	0	0	0	0	0	0
Diesel Engines	0	0	0	0	0	0	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0	0	0	0	0	0	0
12V Stop-Start (non-hybrid)	81	78	57	46	43	41	26	25	14	4	1
Mild Hybrid Powertrains	8.3	8.2	4.2	4.3	0.4	0.2	0.2	0.2	0.2	0.0	0.0
Strong Hybrid Powertrains Total	0.0	0.0	21.1	31.7	35.2	37.5	51.7	49.4	51.3	58.2	59.5
Plug-In Hybrid Powertrains	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	5.3	5.0	4.8
Battery Electric Vehicles (BEVs)	7.1	10.5	14.5	16.8	20.8	20.7	21.9	25.3	29.2	32.6	35.2
BEV 1	2.8	6.2	6.3	6.3	6.3	6.3	6.3	6.1	6.0	5.8	5.7
BEV 2	4.1	4.0	8.1	8.9	12.9	12.8	13.4	15.2	17.3	19.2	20.6
BEV 3	0.2	0.2	0.2	1.5	1.6	1.6	2.2	4.0	5.9	7.6	8.9
BEV 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cell Vehicles (FCVs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
6-Speed Automatic	2	2	0	0	0	0	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
8-Speed Automatic	60	59	38	35	33	19	5	0	0	0	0
9-Speed Automatic	0	0	0	0	0	0	0	0	0	0	0
10-Speed Automatic	0	1	2	2	1	14	21	25	14	4	1
DCT Transmissions	30	26	22	13	10	8	0	0	0	0	0
CVT Transmissions	0	0	1	1	0	0	0	0	0	0	0

## Mass Reduction Penetration Rate, by Model Year

**Table 564 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, No Action Alternative (Baseline)**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	16	15	14	13	12	11	10	7	6	5	1
Mass Reduction Level 1 (%)	24	24	21	21	22	22	22	25	26	27	31
Mass Reduction Level 2 (%)	13	13	11	6	6	4	3	3	2	2	2
Mass Reduction Level 3 (%)	39	39	44	49	50	51	51	51	51	51	52
Mass Reduction Level 4 (%)	8	8	8	9	9	10	11	11	12	12	12
Mass Reduction Level 5 (%)	1	2	2	2	2	2	2	2	2	2	2
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,042	4,039	4,034	4,030	4,023	4,017
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 565 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, No Action Alternative (Baseline)**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	10	10	9	9	6	5	4	3	2	1	0
Mass Reduction Level 1 (%)	28	28	25	23	25	24	23	24	24	24	25
Mass Reduction Level 2 (%)	12	12	10	6	5	5	5	5	4	4	4
Mass Reduction Level 3 (%)	36	36	41	45	46	46	46	46	47	47	47
Mass Reduction Level 4 (%)	12	12	13	15	16	17	20	20	21	22	22
Mass Reduction Level 5 (%)	1	2	2	2	2	2	2	2	2	2	2
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,042	4,039	4,034	4,030	4,023	4,017
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 566 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, No Action Alternative (Baseline)**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	19	18	17	15	14	14	13	10	8	6	1
Mass Reduction Level 1 (%)	21	21	19	21	21	21	21	25	26	29	33
Mass Reduction Level 2 (%)	13	13	12	6	6	3	2	2	2	2	2
Mass Reduction Level 3 (%)	41	41	45	52	52	54	54	54	54	54	54
Mass Reduction Level 4 (%)	5	5	6	6	6	6	7	8	8	8	8
Mass Reduction Level 5 (%)	0	2	2	2	2	2	2	2	2	2	2
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,042	4,039	4,034	4,030	4,023	4,017
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 567 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, No Action Alternative (Baseline)**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	4	3	2	1	1	0	0	0	0
Mass Reduction Level 1 (%)	19	19	13	9	10	10	10	10	10	10	10
Mass Reduction Level 2 (%)	17	17	14	9	7	7	7	7	5	5	5
Mass Reduction Level 3 (%)	42	42	52	56	57	58	58	58	59	59	59
Mass Reduction Level 4 (%)	15	15	15	20	20	20	21	21	23	23	24
Mass Reduction Level 5 (%)	3	3	3	3	3	3	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,042	4,039	4,034	4,030	4,023	4,017
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0



**Table 568 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, No Action Alternative (Baseline)**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, No Action Alternative (Baseline)</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	17	15	14	10	9	7	5	4	2	0
Mass Reduction Level 1 (%)	36	36	37	37	39	38	36	38	39	39	40
Mass Reduction Level 2 (%)	7	7	6	3	3	3	3	3	3	3	2
Mass Reduction Level 3 (%)	29	29	31	35	35	35	34	34	34	34	35
Mass Reduction Level 4 (%)	10	9	11	11	12	14	19	19	20	21	21
Mass Reduction Level 5 (%)	0	1	1	1	1	1	1	1	1	1	1
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,042	4,039	4,034	4,030	4,023	4,017
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 569 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC1LT3**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	16	15	14	13	12	11	11	7	6	4	0
Mass Reduction Level 1 (%)	24	24	21	21	22	22	22	24	22	23	26
Mass Reduction Level 2 (%)	13	13	11	6	6	4	3	3	2	2	2
Mass Reduction Level 3 (%)	39	39	44	49	50	47	48	46	48	43	40
Mass Reduction Level 4 (%)	8	8	8	9	9	13	14	18	19	25	28
Mass Reduction Level 5 (%)	1	2	2	2	2	3	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,034	4,031	4,018	4,007	3,990	3,977
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	7	17	23	34	40

**Table 570 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC1LT3**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	10	10	9	9	6	5	4	3	2	1	0
Mass Reduction Level 1 (%)	28	28	25	23	25	24	23	24	24	24	24
Mass Reduction Level 2 (%)	12	12	10	6	5	5	5	5	4	4	4
Mass Reduction Level 3 (%)	36	36	41	45	46	46	47	45	43	41	41
Mass Reduction Level 4 (%)	12	12	13	15	16	17	17	20	23	26	27
Mass Reduction Level 5 (%)	1	2	2	2	2	4	4	4	4	4	4
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,034	4,031	4,018	4,007	3,990	3,977
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	7	17	23	34	40

**Table 571 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC1LT3**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	19	18	17	15	14	14	13	9	7	5	0
Mass Reduction Level 1 (%)	21	21	19	21	21	21	21	24	21	23	27
Mass Reduction Level 2 (%)	13	13	12	6	6	3	2	2	2	2	2
Mass Reduction Level 3 (%)	41	41	45	52	52	48	48	47	51	43	39
Mass Reduction Level 4 (%)	5	5	6	6	6	12	13	17	17	24	29
Mass Reduction Level 5 (%)	0	2	2	2	2	2	2	2	2	2	2
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,034	4,031	4,018	4,007	3,990	3,977
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	7	17	23	34	40

**Table 572 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC1LT3**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	4	3	2	1	1	0	0	0	0
Mass Reduction Level 1 (%)	19	19	13	9	10	10	10	10	9	9	9
Mass Reduction Level 2 (%)	17	17	14	9	7	7	7	7	5	5	5
Mass Reduction Level 3 (%)	42	42	52	56	57	57	57	54	50	49	48
Mass Reduction Level 4 (%)	15	15	15	20	20	20	20	25	31	32	33
Mass Reduction Level 5 (%)	3	3	3	3	3	4	5	5	5	5	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,034	4,031	4,018	4,007	3,990	3,977
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	7	17	23	34	40

**Table 573 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC1LT3**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC1LT3</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	17	15	14	10	9	7	5	4	2	0
Mass Reduction Level 1 (%)	36	36	37	37	39	38	36	38	39	38	39
Mass Reduction Level 2 (%)	7	7	6	3	3	3	3	3	3	3	2
Mass Reduction Level 3 (%)	29	29	31	35	35	34	37	36	36	33	34
Mass Reduction Level 4 (%)	10	9	11	11	12	13	13	15	16	20	21
Mass Reduction Level 5 (%)	0	1	1	1	1	3	4	4	4	4	4
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,034	4,031	4,018	4,007	3,990	3,977
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	7	17	23	34	40

**Table 574 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	16	15	14	13	12	11	11	7	6	4	0
Mass Reduction Level 1 (%)	24	24	21	21	22	22	20	22	19	20	21
Mass Reduction Level 2 (%)	13	13	11	6	6	4	3	3	2	2	4
Mass Reduction Level 3 (%)	39	39	44	49	50	46	45	43	44	38	36
Mass Reduction Level 4 (%)	8	8	8	9	9	15	18	22	25	32	36
Mass Reduction Level 5 (%)	1	2	2	2	2	3	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,032	4,024	4,009	3,995	3,976	3,959
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	10	15	25	35	48	58



**Table 575 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	10	10	9	9	6	5	4	3	2	1	0
Mass Reduction Level 1 (%)	28	28	25	23	25	24	21	22	22	21	18
Mass Reduction Level 2 (%)	12	12	10	6	5	5	5	5	4	4	5
Mass Reduction Level 3 (%)	36	36	41	45	46	44	45	42	38	35	35
Mass Reduction Level 4 (%)	12	12	13	15	16	18	20	23	30	34	38
Mass Reduction Level 5 (%)	1	2	2	2	2	4	4	5	5	5	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,032	4,024	4,009	3,995	3,976	3,959
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	10	15	25	35	48	58



**Table 576 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	19	18	17	15	14	14	13	9	7	5	0
Mass Reduction Level 1 (%)	21	21	19	21	21	21	20	22	18	20	22
Mass Reduction Level 2 (%)	13	13	12	6	6	3	2	2	2	2	4
Mass Reduction Level 3 (%)	41	41	45	52	52	47	45	44	47	40	36
Mass Reduction Level 4 (%)	5	5	6	6	6	13	17	22	23	31	35
Mass Reduction Level 5 (%)	0	2	2	2	2	2	2	2	2	2	2
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,032	4,024	4,009	3,995	3,976	3,959
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	10	15	25	35	48	58

**Table 577 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	4	3	2	1	1	0	0	0	0
Mass Reduction Level 1 (%)	19	19	13	9	10	10	10	10	9	9	2
Mass Reduction Level 2 (%)	17	17	14	9	7	7	7	7	5	5	6
Mass Reduction Level 3 (%)	42	42	52	56	57	54	54	50	42	38	36
Mass Reduction Level 4 (%)	15	15	15	20	20	24	24	28	40	43	51
Mass Reduction Level 5 (%)	3	3	3	3	3	4	5	5	5	5	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,032	4,024	4,009	3,995	3,976	3,959
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	10	15	25	35	48	58

**Table 578 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	17	15	14	10	9	7	5	4	2	0
Mass Reduction Level 1 (%)	36	36	37	37	39	38	33	34	34	33	34
Mass Reduction Level 2 (%)	7	7	6	3	3	3	3	3	3	3	3
Mass Reduction Level 3 (%)	29	29	31	35	35	34	37	34	34	32	33
Mass Reduction Level 4 (%)	10	9	11	11	12	13	17	19	21	25	25
Mass Reduction Level 5 (%)	0	1	1	1	1	3	4	5	5	5	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,032	4,024	4,009	3,995	3,976	3,959
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	10	15	25	35	48	58

**Table 579 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC3LT5**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	16	15	14	13	12	11	11	7	6	4	0
Mass Reduction Level 1 (%)	24	24	21	21	22	22	20	22	19	19	19
Mass Reduction Level 2 (%)	13	13	11	6	6	4	3	3	2	2	2
Mass Reduction Level 3 (%)	39	39	44	49	50	43	39	37	38	31	28
Mass Reduction Level 4 (%)	8	8	8	9	9	17	24	28	32	40	45
Mass Reduction Level 5 (%)	1	2	2	2	2	3	3	4	4	4	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	4,000	3,983	3,961	3,934
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	34	47	62	82

**Table 580 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC3LT5**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	10	10	9	9	6	5	4	3	2	1	0
Mass Reduction Level 1 (%)	28	28	25	23	25	24	21	22	21	20	17
Mass Reduction Level 2 (%)	12	12	10	6	5	5	5	5	4	4	4
Mass Reduction Level 3 (%)	36	36	41	45	46	42	37	34	29	25	23
Mass Reduction Level 4 (%)	12	12	13	15	16	20	28	31	38	43	49
Mass Reduction Level 5 (%)	1	2	2	2	2	4	5	6	6	6	7
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	4,000	3,983	3,961	3,934
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	34	47	62	82

**Table 581 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC3LT5**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	19	18	17	15	14	14	13	9	7	5	0
Mass Reduction Level 1 (%)	21	21	19	21	21	21	20	22	17	19	20
Mass Reduction Level 2 (%)	13	13	12	6	6	3	2	2	2	2	1
Mass Reduction Level 3 (%)	41	41	45	52	52	44	40	38	42	33	30
Mass Reduction Level 4 (%)	5	5	6	6	6	16	22	27	29	38	44
Mass Reduction Level 5 (%)	0	2	2	2	2	2	3	3	3	3	4
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	4,000	3,983	3,961	3,934
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	34	47	62	82

**Table 582 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC3LT5**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	4	3	2	1	1	0	0	0	0
Mass Reduction Level 1 (%)	19	19	13	9	10	10	10	10	9	9	2
Mass Reduction Level 2 (%)	17	17	14	9	7	7	7	7	5	5	5
Mass Reduction Level 3 (%)	42	42	52	56	57	51	41	37	29	24	22
Mass Reduction Level 4 (%)	15	15	15	20	20	26	36	40	52	56	63
Mass Reduction Level 5 (%)	3	3	3	3	3	5	6	6	6	6	8
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	4,000	3,983	3,961	3,934
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	34	47	62	82

**Table 583 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC3LT5**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC3LT5</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	17	15	14	10	9	7	5	4	2	0
Mass Reduction Level 1 (%)	36	36	37	37	39	38	33	34	33	31	32
Mass Reduction Level 2 (%)	7	7	6	3	3	3	3	3	3	3	2
Mass Reduction Level 3 (%)	29	29	31	35	35	34	34	30	29	26	24
Mass Reduction Level 4 (%)	10	9	11	11	12	13	20	21	25	31	35
Mass Reduction Level 5 (%)	0	1	1	1	1	3	4	6	6	6	6
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	4,000	3,983	3,961	3,934
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	34	47	62	82



**Table 584 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC6LT8**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Total Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	16	15	14	13	12	11	11	7	6	4	0
Mass Reduction Level 1 (%)	24	24	21	21	22	22	20	21	18	17	14
Mass Reduction Level 2 (%)	13	13	11	6	6	4	3	2	2	2	1
Mass Reduction Level 3 (%)	39	39	44	49	50	43	39	37	37	26	16
Mass Reduction Level 4 (%)	8	8	8	9	9	17	24	29	34	46	63
Mass Reduction Level 5 (%)	1	2	2	2	2	3	3	4	4	5	6
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	3,998	3,977	3,945	3,895
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	36	53	78	121

**Table 585 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC6LT8**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Passenger Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	10	10	9	9	6	5	4	3	2	1	0
Mass Reduction Level 1 (%)	28	28	25	23	25	24	21	22	21	19	15
Mass Reduction Level 2 (%)	12	12	10	6	5	5	5	3	2	2	1
Mass Reduction Level 3 (%)	36	36	41	45	46	42	36	34	29	21	11
Mass Reduction Level 4 (%)	12	12	13	15	16	20	30	32	40	49	64
Mass Reduction Level 5 (%)	1	2	2	2	2	4	5	6	7	8	10
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	3,998	3,977	3,945	3,895
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	36	53	78	121

**Table 586 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC6LT8**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Light Truck Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	19	18	17	15	14	14	13	9	7	5	0
Mass Reduction Level 1 (%)	21	21	19	21	21	21	20	21	16	16	13
Mass Reduction Level 2 (%)	13	13	12	6	6	3	2	2	2	2	1
Mass Reduction Level 3 (%)	41	41	45	52	52	44	40	38	40	28	19
Mass Reduction Level 4 (%)	5	5	6	6	6	16	22	28	32	45	62
Mass Reduction Level 5 (%)	0	2	2	2	2	2	3	3	3	3	5
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	3,998	3,977	3,945	3,895
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	36	53	78	121

**Table 587 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC6LT8**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Domestic Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	4	3	2	1	1	0	0	0	0
Mass Reduction Level 1 (%)	19	19	13	9	10	10	10	10	9	9	2
Mass Reduction Level 2 (%)	17	17	14	9	7	7	7	3	0	0	0
Mass Reduction Level 3 (%)	42	42	52	56	57	51	41	42	33	27	15
Mass Reduction Level 4 (%)	15	15	15	20	20	26	36	40	51	56	73
Mass Reduction Level 5 (%)	3	3	3	3	3	5	6	6	7	8	10
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	3,998	3,977	3,945	3,895
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	36	53	78	121

**Table 588 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC6LT8**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Total) Imported Car Fleet, Alternative PC6LT8</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	17	15	14	10	9	7	5	4	2	0
Mass Reduction Level 1 (%)	36	36	37	37	39	38	33	34	32	29	28
Mass Reduction Level 2 (%)	7	7	6	3	3	3	3	3	3	3	1
Mass Reduction Level 3 (%)	29	29	31	35	35	34	31	27	25	16	6
Mass Reduction Level 4 (%)	10	9	11	11	12	13	23	25	29	42	55
Mass Reduction Level 5 (%)	0	1	1	1	1	3	4	6	7	8	10
Avg Curb Weight - Fleet (pounds)	4,019	4,031	4,036	4,039	4,042	4,028	4,015	3,998	3,977	3,945	3,895
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	14	24	36	53	78	121

**Table A.-589 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (BMW) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	43	42	32	31	14	14	5	3	1	1	0
Mass Reduction Level 1 (%)	35	35	41	41	58	58	67	69	71	71	71
Mass Reduction Level 2 (%)	22	23	23	24	24	24	24	24	24	24	24
Mass Reduction Level 3 (%)	0	0	4	4	4	4	4	4	4	4	4
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	1
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,301	4,322	4,323	4,339	4,320	4,326	4,316	4,316	4,312	4,307	4,297
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-1	-2	-1	0	6

**Table 0-590 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Ford) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	13	9	9	9	9	9	9	0	0	0	0
Mass Reduction Level 1 (%)	6	6	5	5	5	5	5	5	5	5	5
Mass Reduction Level 2 (%)	7	7	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	64	64	71	71	71	28	19	13	12	12	5
Mass Reduction Level 4 (%)	10	10	10	10	10	53	61	77	78	78	85
Mass Reduction Level 5 (%)	0	5	5	5	5	5	5	5	5	5	5
Avg Curb Weight - Fleet (pounds)	4,396	4,373	4,372	4,375	4,377	4,301	4,289	4,235	4,232	4,231	4,219
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	77	90	129	132	132	144

**Table 0-591 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (GM) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (GM) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	4	4	3	2	1	0	0	0	0	0	0
Mass Reduction Level 1 (%)	36	35	11	6	3	3	3	3	1	1	0
Mass Reduction Level 2 (%)	39	40	41	12	12	0	0	0	0	0	0
Mass Reduction Level 3 (%)	21	21	41	74	74	87	87	75	72	37	30
Mass Reduction Level 4 (%)	0	0	4	4	8	8	8	20	26	61	68
Mass Reduction Level 5 (%)	0	0	0	0	0	1	1	1	1	1	1
Avg Curb Weight - Fleet (pounds)	4,310	4,332	4,307	4,288	4,284	4,269	4,272	4,259	4,248	4,180	4,164
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	2	2	16	21	85	100



**Table 0-592 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Honda) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	2	2	2	1	1	0	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 2 (%)	12	12	11	7	7	7	7	7	7	7	7
Mass Reduction Level 3 (%)	86	87	87	91	92	92	92	92	92	92	92
Mass Reduction Level 4 (%)	0	0	0	0	0	1	1	1	1	1	1
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,559	3,578	3,593	3,602	3,609	3,610	3,612	3,614	3,612	3,608	3,606
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-1	-2	-1	0	1

**Table 0-593 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Hyundai KiH) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	1	1	1	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	6	6	6	6	5	2	0	0	0	0	0
Mass Reduction Level 2 (%)	12	11	11	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	65	66	67	80	80	77	76	76	76	76	75
Mass Reduction Level 4 (%)	16	14	13	13	13	13	12	12	12	12	13
Mass Reduction Level 5 (%)	0	2	2	2	2	8	12	12	12	12	12
Avg Curb Weight - Fleet (pounds)	3,524	3,536	3,548	3,549	3,555	3,538	3,528	3,529	3,528	3,524	3,523
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	8	13	12	13	13	14

**Table 0-594 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Hyundai KiK) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 2 (%)	3	3	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	83	84	87	87	88	86	86	62	62	35	35
Mass Reduction Level 4 (%)	14	13	13	13	12	12	12	30	30	57	57
Mass Reduction Level 5 (%)	0	0	0	0	0	2	2	8	8	8	8
Avg Curb Weight - Fleet (pounds)	3,485	3,503	3,515	3,528	3,534	3,532	3,535	3,496	3,494	3,451	3,449
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	6	6	46	46	86	87

**Table 0-595 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (JLR) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	1	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	62	62	62	62	62	62	63	63	63	51	24
Mass Reduction Level 2 (%)	18	18	18	18	18	18	18	18	18	18	0
Mass Reduction Level 3 (%)	18	19	19	19	19	19	19	19	19	19	19
Mass Reduction Level 4 (%)	1	1	1	1	1	1	1	1	1	12	57
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,736	4,735	4,737	4,739	4,739	4,740	4,740	4,740	4,740	4,693	4,543
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	46	197

**Table 0-596 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Karma) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	100	100	100	100	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	100	100	100	100	100	100	100
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	5,250	5,250	5,250	5,250	5,064	5,064	5,064	5,064	5,064	5,064	5,064
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 0-597 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Lucid) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	100	100	100	100	100	100	100	100	100	100	0
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	100
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,019
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 0-598 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mazda) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	47	48	48	48	49	49	49	0	0	0	0
Mass Reduction Level 1 (%)	15	15	16	16	16	16	16	64	64	64	64
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	34	34	33	33	33	33	33	33	33	33	33
Mass Reduction Level 4 (%)	4	3	3	3	3	3	3	3	3	3	3
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,651	3,659	3,665	3,671	3,674	3,676	3,677	3,610	3,610	3,608	3,607
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	-1	0	0	0

**Table 0-599 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mercedes-Benz) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	54	54	54	54	44	38	16	10	8	7	7
Mass Reduction Level 1 (%)	0	0	0	0	10	15	37	43	45	46	46
Mass Reduction Level 2 (%)	18	17	17	17	17	17	17	17	17	17	17
Mass Reduction Level 3 (%)	0	0	0	0	0	1	1	1	1	1	1
Mass Reduction Level 4 (%)	28	28	28	29	29	29	29	29	29	29	29
Mass Reduction Level 5 (%)	1	1	1	1	1	1	1	1	1	1	1
Avg Curb Weight - Fleet (pounds)	4,266	4,276	4,284	4,292	4,281	4,273	4,236	4,228	4,223	4,220	4,219
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-1	-1	-1	0	0



**Table 0-600 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Mitsubishi) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	81	81	82	83	83	83	83	83	83	34	22
Mass Reduction Level 1 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	19	19	0	0	0	0	0	0	0	49	61
Mass Reduction Level 4 (%)	0	0	18	17	17	17	17	17	17	17	17
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,295	3,308	3,303	3,312	3,317	3,321	3,322	3,324	3,322	3,191	3,161
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-1	-1	-1	64	79

**Table 0-601 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Nissan) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	17	15	15	15	14	14	14	14	2	2	0
Mass Reduction Level 1 (%)	40	40	39	40	41	41	17	17	25	25	16
Mass Reduction Level 2 (%)	44	43	37	25	22	21	9	5	0	0	0
Mass Reduction Level 3 (%)	0	0	5	5	9	8	8	8	3	3	0
Mass Reduction Level 4 (%)	0	0	0	12	12	12	47	50	64	65	79
Mass Reduction Level 5 (%)	0	2	2	2	2	4	5	5	5	5	5
Avg Curb Weight - Fleet (pounds)	3,740	3,744	3,759	3,751	3,757	3,757	3,666	3,659	3,611	3,606	3,570
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	62	61	77	78	108

**Table 0-602 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Stellantis) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	22	20	20	14	13	13	13	0	0	0	0
Mass Reduction Level 1 (%)	43	43	39	42	42	42	42	48	28	28	13
Mass Reduction Level 2 (%)	1	1	1	1	0	0	0	0	0	0	15
Mass Reduction Level 3 (%)	21	21	25	28	28	28	27	35	51	49	39
Mass Reduction Level 4 (%)	13	13	14	14	14	14	14	14	18	21	30
Mass Reduction Level 5 (%)	0	2	2	2	3	3	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,539	4,532	4,532	4,520	4,520	4,522	4,523	4,490	4,442	4,437	4,410
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	22	68	72	98



**Table 0-603 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Subaru) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	99	99	99	99	99	99	99	99	99	99	99
Mass Reduction Level 2 (%)	1	1	1	1	1	1	1	1	1	1	0
Mass Reduction Level 3 (%)	0	0	0	0	0	0	0	0	0	0	1
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,634	3,639	3,643	3,646	3,647	3,649	3,649	3,650	3,649	3,648	3,647
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 0-604 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Tesla) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 4 (%)	85	85	85	85	85	85	85	85	85	85	85
Mass Reduction Level 5 (%)	15	15	15	15	15	15	15	15	15	15	15
Avg Curb Weight - Fleet (pounds)	4,300	4,300	4,300	4,301	4,301	4,301	4,301	4,301	4,301	4,301	4,301
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 0-605 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Toyota) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	25	25	26	26	26	27	27	27	27	20	0
Mass Reduction Level 1 (%)	20	20	19	19	18	18	18	18	18	25	45
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	55	55	55	55	55	55	55	55	55	55	55
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,924	3,945	3,960	3,975	3,982	3,987	3,990	3,992	3,990	3,973	3,939
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-1	-2	-1	0	1

**Table 0-606 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (Volvo) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	28	28	27	27	8	8	8	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	19	19	19	27	27	27	27
Mass Reduction Level 2 (%)	72	72	73	73	73	73	73	73	73	73	73
Mass Reduction Level 3 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 4 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 5 (%)	0	0	0	0	0	0	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,378	4,379	4,379	4,380	4,354	4,354	4,354	4,341	4,341	4,340	4,340
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	0	0	0	0	0	0

**Table 0-607 - Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC2LT4**

<b>Mass Reduction Penetration Rate and Curb Weights by Model Year for Manufacturer (VWA) Total Fleet, Alternative PC2LT4</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mass Reduction Level 0 (%)	59	60	42	27	23	21	19	14	9	2	0
Mass Reduction Level 1 (%)	20	19	36	51	54	55	41	47	34	30	31
Mass Reduction Level 2 (%)	0	0	0	0	0	0	0	0	0	0	0
Mass Reduction Level 3 (%)	20	17	18	18	19	19	32	32	32	36	36
Mass Reduction Level 4 (%)	0	0	0	0	0	2	4	4	22	28	29
Mass Reduction Level 5 (%)	0	3	3	3	3	3	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,024	4,031	4,017	4,005	4,002	3,999	3,978	3,970	3,911	3,875	3,868
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0	-1	-15	-15	35	46	48



## Powertrain Technology Penetration Rate, by Alternative

**Table 608 - Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Total Fleet by Alternative**

Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Total Fleet by Alternative					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	19	15	13	11	3
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	22	12	10	7	2
Variable Geometry Turbo	0	1	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	26	14	11	8	2
Mild Hybrid	1.4	2.0	0.6	1.3	0.4
Strong Hybrid	21.5	30.9	33.1	35.2	41.7
Plug-In Hybrid	2.9	6.2	7.5	7.9	11.9
Battery Electric Vehicles (BEVs)	32.26	32.25	32.26	32.27	32.27
BEV 1	6.72	6.72	6.72	6.74	6.73
BEV 2	17.11	17.11	17.10	17.10	17.10
BEV 3	7.64	7.64	7.64	7.63	7.64
BEV 4	0.80	0.80	0.80	0.80	0.80
Fuel Cell Vehicles (FCVs)	0.03	0.03	0.03	0.03	0.03
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	13	7	5	1	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	13	7	5	5	2
DCT Transmissions	0	0	0	0	0
CVT Transmissions	16	13	12	13	3

**Table 609 - Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	27	26	25	23	6
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	17	12	10	8	0
Variable Geometry Turbo	0	2	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	19	15	14	10	2
Mild Hybrid	2.1	3.4	0.3	3.6	0.8
Strong Hybrid	12.7	15.5	19.2	22.9	37.6
Plug-In Hybrid	0.0	0.0	0.0	0.1	1.4
Battery Electric Vehicles (BEVs)	42.24	42.24	42.24	42.23	42.24
BEV 1	13.67	13.67	13.67	13.67	13.67
BEV 2	17.42	17.42	17.42	17.41	17.41
BEV 3	8.68	8.68	8.68	8.68	8.68
BEV 4	2.47	2.47	2.47	2.47	2.47
Fuel Cell Vehicles (FCVs)	0.08	0.08	0.08	0.08	0.08
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	8	6	3	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	4	4	4	4	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	30	29	27	26	6

**Table 610 - Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	16	10	7	6	1
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	25	12	9	7	3
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	30	13	9	7	2
Mild Hybrid	1.1	1.4	0.8	0.2	0.2
Strong Hybrid	25.7	38.2	39.7	41.0	43.7
Plug-In Hybrid	4.3	9.1	11.0	11.6	16.9
Battery Electric Vehicles (BEVs)	27.54	27.54	27.53	27.52	27.52
BEV 1	3.43	3.43	3.43	3.43	3.43
BEV 2	16.96	16.96	16.96	16.95	16.95
BEV 3	7.14	7.14	7.14	7.14	7.14
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	15	7	6	1	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	17	9	6	6	3
DCT Transmissions	0	0	0	0	0
CVT Transmissions	9	6	5	6	1

**Table 611 - Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	27	27	27	25	6
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	18	11	10	7	1
Variable Geometry Turbo	0	4	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	22	14	13	10	5
Mild Hybrid	0.2	4.8	0.2	4.0	1.4
Strong Hybrid	9.1	12.9	18.2	21.4	39.1
Plug-In Hybrid	0.0	0.0	0.0	0.2	0.9
Battery Electric Vehicles (BEVs)	45.06	45.06	45.06	45.05	45.06
BEV 1	11.28	11.28	11.27	11.27	11.27
BEV 2	16.66	16.66	16.65	16.65	16.65
BEV 3	12.33	12.33	12.33	12.33	12.33
BEV 4	4.80	4.80	4.80	4.80	4.80
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	5	3	1	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	7	7	4	2	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	33	31	31	29	6

**Table 612 - Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	26	26	23	21	6
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	15	12	11	9	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	16	16	15	10	0
Mild Hybrid	3.9	2.1	0.5	3.2	0.3
Strong Hybrid	16.1	18.1	20.1	24.4	36.2
Plug-In Hybrid	0.0	0.0	0.0	0.0	1.8
Battery Electric Vehicles (BEVs)	39.49	39.49	39.49	39.48	39.48
BEV 1	16.01	16.01	16.01	16.01	16.01
BEV 2	18.16	18.16	18.16	18.15	18.16
BEV 3	5.12	5.12	5.12	5.12	5.12
BEV 4	0.19	0.19	0.19	0.19	0.19
Fuel Cell Vehicles (FCVs)	0.16	0.16	0.16	0.16	0.16
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	11	9	4	1	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	1	1	5	5	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	27	27	24	23	6

**Table 613 - Powertrain Technology Penetration Rate (%) for Manufacturer (BMW), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (BMW), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	4	4	4	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	9	2	2	2	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	47.6	54.0	54.0	54.0	56.5
Plug-In Hybrid	0.0	0.0	0.0	0.0	1.3
Battery Electric Vehicles (BEVs)	42.17	42.17	42.17	42.17	42.17
BEV 1	4.10	4.10	4.11	4.12	4.12
BEV 2	17.24	17.24	17.26	17.28	17.28
BEV 3	20.54	20.55	20.53	20.49	20.50
BEV 4	0.28	0.28	0.28	0.28	0.28
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	7	1	1	1	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	1	1	1	1	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 614 - Powertrain Technology Penetration Rate (%) for Manufacturer (Ford), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Ford), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	2	2	2	2	2
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	36	4	1	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	35	5	3	2	2
Mild Hybrid	0.0	0.5	0.0	0.0	0.0
Strong Hybrid	36.4	68.8	64.7	65.0	64.3
Plug-In Hybrid	0.7	1.1	2.3	2.3	3.0
Battery Electric Vehicles (BEVs)	23.87	23.87	23.87	23.87	23.87
BEV 1	2.95	2.95	2.96	2.96	2.96
BEV 2	18.75	18.75	18.75	18.75	18.75
BEV 3	2.16	2.16	2.16	2.16	2.16
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	10	2	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	28	3	3	2	2
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 615 - Powertrain Technology Penetration Rate (%) for Manufacturer (GM), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (GM), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	8	1	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	28	6	6	5	5
Variable Geometry Turbo	0	5	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	1	1	1	1	1
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	26	0	1	0	0
Mild Hybrid	3.7	8.2	1.1	1.1	1.1
Strong Hybrid	22.6	25.9	31.6	31.3	31.2
Plug-In Hybrid	19.3	30.0	30.6	32.4	32.5
Battery Electric Vehicles (BEVs)	21.74	21.74	21.74	21.74	21.74
BEV 1	2.73	2.73	2.73	2.74	2.73
BEV 2	18.96	18.96	18.96	18.96	18.96
BEV 3	0.04	0.04	0.04	0.04	0.04
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	14	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	19	11	7	6	6
DCT Transmissions	0	0	0	0	0
CVT Transmissions	4	2	0	0	0



**Table 616 - Powertrain Technology Penetration Rate (%) for Manufacturer (Honda), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Honda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	11	11	11	11	5
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	41	29	20	12	2
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	48	36	26	19	7
Mild Hybrid	0.0	0.0	0.6	0.0	0.0
Strong Hybrid	10.6	22.9	31.7	39.9	55.9
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.4
Battery Electric Vehicles (BEVs)	36.74	36.74	36.74	36.74	36.74
BEV 1	16.77	16.77	16.77	16.80	16.79
BEV 2	16.06	16.06	16.06	16.04	16.05
BEV 3	3.91	3.91	3.91	3.90	3.90
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	19	19	10	2	2
DCT Transmissions	0	0	0	0	0
CVT Transmissions	33	21	21	21	5

**Table 617 - Powertrain Technology Penetration Rate (%) for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	39	34	20	15	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	7	5	5	4	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	33	29	18	10	0
Mild Hybrid	6.2	4.0	0.0	2.2	0.0
Strong Hybrid	18.1	19.0	29.0	20.3	17.4
Plug-In Hybrid	0.0	2.1	6.9	0.0	1.7
Battery Electric Vehicles (BEVs)	29.96	29.96	29.96	29.96	29.96
BEV 1	10.21	10.21	10.21	10.22	10.22
BEV 2	16.74	16.74	16.74	16.73	16.73
BEV 3	3.01	3.01	3.01	3.01	3.01
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.14	0.14	0.14	0.14	0.14
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	21	19	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	2	1	9	3	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	18	16	12	12	0

**Table 618 - Powertrain Technology Penetration Rate (%) for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	49	37	25	13	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	16	13	9	8	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	24	16	8	7	0
Mild Hybrid	0.9	7.6	5.7	0.0	0.0
Strong Hybrid	9.2	12.3	14.5	15.6	35.0
Plug-In Hybrid	0.0	5.8	11.2	11.1	12.3
Battery Electric Vehicles (BEVs)	26.65	26.65	26.65	26.65	26.65
BEV 1	5.34	5.34	5.35	5.36	5.35
BEV 2	20.00	20.00	19.99	19.98	19.98
BEV 3	1.31	1.31	1.32	1.32	1.31
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	20	9	9	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	8	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	37	37	25	13	0

**Table 619 - Powertrain Technology Penetration Rate (%) for Manufacturer (JLR), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (JLR), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	18	13	13	13	13
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	18	13	13	13	13
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	42.6	44.6	44.1	44.1	44.1
Plug-In Hybrid	0.0	3.6	4.1	4.1	4.1
Battery Electric Vehicles (BEVs)	39.05	39.05	39.05	39.05	39.05
BEV 1	4.27	4.27	4.27	4.27	4.27
BEV 2	18.99	19.00	19.00	19.01	19.01
BEV 3	15.80	15.78	15.79	15.77	15.77
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	1	1	1	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	18	12	12	13	13
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 620 - Powertrain Technology Penetration Rate (%) for Manufacturer (Karma), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Karma), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	50.00	50.00	50.00	50.00	50.00
BEV 2	50.00	50.00	50.00	50.00	50.00
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 621 - Powertrain Technology Penetration Rate (%) for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	0.00	0.00	0.00	0.00	0.00
BEV 2	0.00	0.00	0.00	0.00	0.00
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	100.00	100.00	100.00	100.00	100.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 622 - Powertrain Technology Penetration Rate (%) for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	45	45	45	35	2
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	17.9	17.9	17.9	17.9	19.2
Plug-In Hybrid	0.0	0.0	0.0	9.3	29.6
Battery Electric Vehicles (BEVs)	37.48	37.48	37.48	37.48	37.48
BEV 1	9.43	9.43	9.43	9.44	9.44
BEV 2	24.10	24.10	24.10	24.09	24.09
BEV 3	3.96	3.95	3.95	3.95	3.95
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	40	40	40	12	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	1	1
DCT Transmissions	0	0	0	0	0
CVT Transmissions	4	4	4	21	0

**Table 623 - Powertrain Technology Penetration Rate (%) for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	16	3	3	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	16	3	3	0	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	41.7	55.6	55.6	58.2	58.2
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	41.83	41.83	41.83	41.83	41.83
BEV 1	6.40	6.40	6.41	6.44	6.43
BEV 2	12.24	12.24	12.24	12.24	12.24
BEV 3	21.69	21.69	21.68	21.65	21.66
BEV 4	1.50	1.50	1.50	1.50	1.50
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	14	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0



**Table 624 - Powertrain Technology Penetration Rate (%) for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	57	49	30	27	11
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	12	12	12	12	12
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	0.0	18.7	3.5	16.2	0.0
Strong Hybrid	9.5	17.3	35.9	17.0	4.0
Plug-In Hybrid	0.0	0.0	0.0	22.4	19.2
Battery Electric Vehicles (BEVs)	21.57	21.57	21.57	21.57	21.57
BEV 1	4.76	4.77	4.77	4.78	4.78
BEV 2	16.81	16.80	16.80	16.79	16.79
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	69	61	42	39	23

**Table 625 - Powertrain Technology Penetration Rate (%) for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	39	30	27	23	3
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	10	10	3	1	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	12	4	0	0	0
Mild Hybrid	0.0	0.0	0.0	6.4	2.8
Strong Hybrid	9.0	28.1	24.9	31.1	42.2
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.2
Battery Electric Vehicles (BEVs)	24.68	24.68	24.68	24.68	24.68
BEV 1	4.96	4.96	4.96	4.96	4.96
BEV 2	17.70	17.70	17.70	17.71	17.71
BEV 3	2.02	2.03	2.02	2.01	2.02
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	22	13	3	1	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	45	34	34	31	3

**Table 626 - Powertrain Technology Penetration Rate (%) for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	16	5	2	2	0
Cylinder Deactivation	1	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	17	6	6	5	5
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	25	5	2	0	0
Mild Hybrid	1.0	0.2	0.2	1.7	0.2
Strong Hybrid	37.1	49.1	49.1	50.4	35.3
Plug-In Hybrid	2.3	13.1	16.6	16.5	33.2
Battery Electric Vehicles (BEVs)	26.66	26.66	26.66	26.66	26.66
BEV 1	2.53	2.53	2.54	2.54	2.54
BEV 2	16.06	16.06	16.06	16.06	16.06
BEV 3	8.06	8.06	8.06	8.05	8.06
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	13	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	21	11	7	6	5
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 627 - Powertrain Technology Penetration Rate (%) for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	43	43	43	43	12
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	15	15	15	15	1
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	46	46	46	46	12
Mild Hybrid	0.0	0.0	0.0	0.0	0.8
Strong Hybrid	0.8	0.8	0.8	1.0	40.7
Plug-In Hybrid	0.0	0.0	0.0	0.0	4.9
Battery Electric Vehicles (BEVs)	41.25	41.25	41.25	41.25	41.25
BEV 1	4.18	4.18	4.19	4.21	4.20
BEV 2	20.11	20.11	20.11	20.10	20.11
BEV 3	16.96	16.96	16.95	16.93	16.94
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	56	56	56	56	12

**Table 628 - Powertrain Technology Penetration Rate (%) for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	0	0	0	0	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	0.00	0.00	0.00	0.00	0.00
BEV 2	18.28	18.28	18.28	18.29	18.29
BEV 3	57.48	57.48	57.47	57.45	57.46
BEV 4	24.24	24.24	24.25	24.26	24.25
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	0	0	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	0	0	0	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 629 - Powertrain Technology Penetration Rate (%) for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	26	26	25	22	7
Cylinder Deactivation	1	1	1	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	22	22	22	17	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	18	18	19	14	1
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	17.1	17.1	17.2	24.1	43.1
Plug-In Hybrid	0.0	0.0	1.1	2.8	10.1
Battery Electric Vehicles (BEVs)	33.92	33.92	33.92	33.92	33.92
BEV 1	12.33	12.33	12.34	12.37	12.36
BEV 2	13.18	13.18	13.17	13.15	13.15
BEV 3	8.42	8.42	8.42	8.41	8.41
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.11	0.11	0.11	0.11	0.11
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	27	27	26	3	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	4	4	4	13	0
DCT Transmissions	0	0	0	0	0
CVT Transmissions	17	17	17	23	7

**Table 630 - Powertrain Technology Penetration Rate (%) for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	0	0	0	0	0
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	54	42	30	23	18
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	0	0	0	0	0
Mild Hybrid	20.2	20.2	15.6	8.2	3.7
Strong Hybrid	5.8	17.9	29.6	37.0	41.3
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.1
Battery Electric Vehicles (BEVs)	40.20	40.20	40.19	40.20	40.20
BEV 1	6.06	6.06	6.07	6.07	6.07
BEV 2	9.44	9.43	9.45	9.50	9.48
BEV 3	24.70	24.70	24.68	24.62	24.64
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	54	9	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	0	33	30	23	18
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0

**Table 631 - Powertrain Technology Penetration Rate (%) for Manufacturer (VWA), MY 2032 Total Fleet by Alternative**

<b>Powertrain Technology Penetration Rate (%) for Manufacturer (VWA), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Non-Hybrid High Compression Engines	9	3	1	1	1
Cylinder Deactivation	0	0	0	0	0
Dynamic Cylinder Deactivation	0	0	0	0	0
Non-Hybrid Turbocharged Engines	22	13	8	5	0
Variable Geometry Turbo	0	0	0	0	0
Electric Variable Geometry Turbo	0	0	0	0	0
Diesel Engines	0	0	0	0	0
Compressed Natural Gas	0	0	0	0	0
12V Stop-Start (non-hybrid)	26	16	9	1	1
Mild Hybrid	5.5	0.1	0.1	5.3	0.0
Strong Hybrid	33.8	43.8	51.2	54.2	59.5
Plug-In Hybrid	0.0	4.8	4.8	4.8	4.8
Battery Electric Vehicles (BEVs)	35.18	35.19	35.19	35.19	35.18
BEV 1	5.69	5.69	5.69	5.69	5.69
BEV 2	20.58	20.57	20.58	20.60	20.59
BEV 3	8.90	8.91	8.90	8.88	8.89
BEV 4	0.01	0.01	0.01	0.02	0.01
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00
5-Speed Automatic	0	0	0	0	0
6-Speed Automatic	0	0	0	0	0
7-Speed Automatic	0	0	0	0	0
8-Speed Automatic	22	3	0	0	0
9-Speed Automatic	0	0	0	0	0
10-Speed Automatic	4	8	3	1	1
DCT Transmissions	0	0	0	0	0
CVT Transmissions	0	0	0	0	0



## Mass Reduction Penetration Rate, by Alternative

**Table 632 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Total Fleet by Alternative**

Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Total Fleet by Alternative					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	1	0	0	0	0
Mass Reduction Level 1 (%)	31	26	21	19	14
Mass Reduction Level 2 (%)	2	2	4	2	1
Mass Reduction Level 3 (%)	52	40	36	28	16
Mass Reduction Level 4 (%)	12	28	36	45	63
Mass Reduction Level 5 (%)	2	3	3	5	6
Avg Curb Weight - Fleet (pounds)	4,017	3,977	3,959	3,934	3,895
Diff. from Baseline - Fleet (pounds)	0	40	58	82	121
Avg Curb Weight - Passenger Car (pounds)	3,414	3,401	3,377	3,355	3,324
Diff. from Baseline - Passenger Car (pounds)	0	13	36	59	90
Avg Curb Weight - Light Truck (pounds)	4,301	4,249	4,235	4,211	4,167
Diff. from Baseline - Light Trucks (pounds)	0	53	67	91	134

**Table 633 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	25	24	18	17	15
Mass Reduction Level 2 (%)	4	4	5	4	1
Mass Reduction Level 3 (%)	47	41	35	23	11
Mass Reduction Level 4 (%)	22	27	38	49	64
Mass Reduction Level 5 (%)	2	4	5	7	10
Avg Curb Weight - Fleet (pounds)	4,017	3,977	3,959	3,934	3,895
Diff. from Baseline - Fleet (pounds)	0	40	58	82	121
Avg Curb Weight - Passenger Car (pounds)	3,414	3,401	3,377	3,355	3,324
Diff. from Baseline - Passenger Car (pounds)	0	13	36	59	90
Avg Curb Weight - Light Truck (pounds)	4,301	4,249	4,235	4,211	4,167
Diff. from Baseline - Light Trucks (pounds)	0	53	67	91	134

**Table 634 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	1	0	0	0	0
Mass Reduction Level 1 (%)	33	27	22	20	13
Mass Reduction Level 2 (%)	2	2	4	1	1
Mass Reduction Level 3 (%)	54	39	36	30	19
Mass Reduction Level 4 (%)	8	29	35	44	62
Mass Reduction Level 5 (%)	2	2	2	4	5
Avg Curb Weight - Fleet (pounds)	4,017	3,977	3,959	3,934	3,895
Diff. from Baseline - Fleet (pounds)	0	40	58	82	121
Avg Curb Weight - Passenger Car (pounds)	3,414	3,401	3,377	3,355	3,324
Diff. from Baseline - Passenger Car (pounds)	0	13	36	59	90
Avg Curb Weight - Light Truck (pounds)	4,301	4,249	4,235	4,211	4,167
Diff. from Baseline - Light Trucks (pounds)	0	53	67	91	134

**Table 635 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	10	9	2	2	2
Mass Reduction Level 2 (%)	5	5	6	5	0
Mass Reduction Level 3 (%)	59	48	36	22	15
Mass Reduction Level 4 (%)	24	33	51	63	73
Mass Reduction Level 5 (%)	3	5	5	8	10
Avg Curb Weight - Fleet (pounds)	4,017	3,977	3,959	3,934	3,895
Diff. from Baseline - Fleet (pounds)	0	40	58	82	121
Avg Curb Weight - Passenger Car (pounds)	3,414	3,401	3,377	3,355	3,324
Diff. from Baseline - Passenger Car (pounds)	0	13	36	59	90
Avg Curb Weight - Light Truck (pounds)	4,301	4,249	4,235	4,211	4,167
Diff. from Baseline - Light Trucks (pounds)	0	53	67	91	134

**Table 636 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	40	39	34	32	28
Mass Reduction Level 2 (%)	2	2	3	2	1
Mass Reduction Level 3 (%)	35	34	33	24	6
Mass Reduction Level 4 (%)	21	21	25	35	55
Mass Reduction Level 5 (%)	1	4	5	6	10
Avg Curb Weight - Fleet (pounds)	4,017	3,977	3,959	3,934	3,895
Diff. from Baseline - Fleet (pounds)	0	40	58	82	121
Avg Curb Weight - Passenger Car (pounds)	3,414	3,401	3,377	3,355	3,324
Diff. from Baseline - Passenger Car (pounds)	0	13	36	59	90
Avg Curb Weight - Light Truck (pounds)	4,301	4,249	4,235	4,211	4,167
Diff. from Baseline - Light Trucks (pounds)	0	53	67	91	134

**Table 637 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (BMW), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (BMW), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	72	71	71	71	58
Mass Reduction Level 2 (%)	24	24	24	24	0
Mass Reduction Level 3 (%)	4	4	4	4	0
Mass Reduction Level 4 (%)	0	1	1	1	42
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,303	4,297	4,297	4,295	4,199
Diff. from Baseline - Fleet (pounds)	0	6	6	8	104
Avg Curb Weight - Passenger Car (pounds)	3,759	3,759	3,759	3,759	3,647
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	112
Avg Curb Weight - Light Truck (pounds)	4,800	4,789	4,789	4,789	4,706
Diff. from Baseline - Light Trucks (pounds)	0	11	11	11	94

**Table 638 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Ford), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Ford), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	14	5	5	5	5
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	71	30	5	5	5
Mass Reduction Level 4 (%)	10	60	85	85	84
Mass Reduction Level 5 (%)	5	5	5	5	6
Avg Curb Weight - Fleet (pounds)	4,362	4,255	4,219	4,218	4,216
Diff. from Baseline - Fleet (pounds)	0	108	144	144	147
Avg Curb Weight - Passenger Car (pounds)	3,792	3,754	3,685	3,685	3,654
Diff. from Baseline - Passenger Car (pounds)	0	38	107	107	138
Avg Curb Weight - Light Truck (pounds)	4,420	4,305	4,273	4,273	4,273
Diff. from Baseline - Light Trucks (pounds)	0	115	147	147	147

**Table 639 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (GM), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (GM), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	1	1	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	88	30	30	28	28
Mass Reduction Level 4 (%)	11	67	68	66	66
Mass Reduction Level 5 (%)	0	1	1	5	5
Avg Curb Weight - Fleet (pounds)	4,264	4,168	4,164	4,155	4,155
Diff. from Baseline - Fleet (pounds)	0	96	100	110	109
Avg Curb Weight - Passenger Car (pounds)	3,197	3,110	3,095	3,055	3,055
Diff. from Baseline - Passenger Car (pounds)	0	87	102	142	142
Avg Curb Weight - Light Truck (pounds)	4,536	4,437	4,437	4,437	4,437
Diff. from Baseline - Light Trucks (pounds)	0	99	99	99	99



**Table 640 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Honda), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Honda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0
Mass Reduction Level 2 (%)	7	7	7	7	0
Mass Reduction Level 3 (%)	92	92	92	47	21
Mass Reduction Level 4 (%)	1	1	1	44	74
Mass Reduction Level 5 (%)	0	0	0	1	5
Avg Curb Weight - Fleet (pounds)	3,607	3,607	3,606	3,546	3,488
Diff. from Baseline - Fleet (pounds)	0	0	1	61	119
Avg Curb Weight - Passenger Car (pounds)	3,154	3,154	3,154	3,095	3,042
Diff. from Baseline - Passenger Car (pounds)	0	0	0	58	111
Avg Curb Weight - Light Truck (pounds)	4,017	4,017	4,017	3,957	3,893
Diff. from Baseline - Light Trucks (pounds)	0	0	0	60	123

**Table 641 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	75	75	75	12	0
Mass Reduction Level 4 (%)	23	13	13	67	76
Mass Reduction Level 5 (%)	2	12	12	21	24
Avg Curb Weight - Fleet (pounds)	3,537	3,523	3,523	3,412	3,393
Diff. from Baseline - Fleet (pounds)	0	14	14	125	144
Avg Curb Weight - Passenger Car (pounds)	3,215	3,198	3,198	3,145	3,112
Diff. from Baseline - Passenger Car (pounds)	0	17	17	69	103
Avg Curb Weight - Light Truck (pounds)	3,928	3,918	3,918	3,737	3,737
Diff. from Baseline - Light Trucks (pounds)	0	10	10	190	190

**Table 642 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	88	41	35	20	11
Mass Reduction Level 4 (%)	12	57	57	59	66
Mass Reduction Level 5 (%)	0	2	8	20	23
Avg Curb Weight - Fleet (pounds)	3,536	3,465	3,449	3,402	3,388
Diff. from Baseline - Fleet (pounds)	0	72	87	135	149
Avg Curb Weight - Passenger Car (pounds)	3,140	3,087	3,058	3,051	3,024
Diff. from Baseline - Passenger Car (pounds)	0	53	82	89	116
Avg Curb Weight - Light Truck (pounds)	3,958	3,867	3,867	3,779	3,779
Diff. from Baseline - Light Trucks (pounds)	0	92	92	180	180

**Table 643 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (JLR), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (JLR), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	62	24	24	24	24
Mass Reduction Level 2 (%)	18	0	0	0	0
Mass Reduction Level 3 (%)	19	19	19	18	18
Mass Reduction Level 4 (%)	1	57	57	58	58
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,740	4,543	4,543	4,541	4,541
Diff. from Baseline - Fleet (pounds)	0	197	197	198	198
Avg Curb Weight - Passenger Car (pounds)	3,655	3,655	3,655	3,589	3,589
Diff. from Baseline - Passenger Car (pounds)	0	0	0	66	66
Avg Curb Weight - Light Truck (pounds)	4,763	4,562	4,562	4,562	4,562
Diff. from Baseline - Light Trucks (pounds)	0	201	201	201	201

**Table 644 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Karma), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Karma), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	100	100	100	100	100
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	0	0	0
Mass Reduction Level 4 (%)	0	0	0	0	0
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	5,064	5,064	5,064	5,064	5,064
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0
Avg Curb Weight - Passenger Car (pounds)	5,064	5,064	5,064	5,064	5,064
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	0
Avg Curb Weight - Light Truck (pounds)	0	0	0	0	0
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	0

**Table 645 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	0	0	0
Mass Reduction Level 4 (%)	100	100	100	100	100
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	5,019	5,019	5,019	5,019	5,019
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0
Avg Curb Weight - Passenger Car (pounds)	5,019	5,019	5,019	5,019	5,019
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	0
Avg Curb Weight - Light Truck (pounds)	0	0	0	0	0
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	0

**Table 646 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	64	64	64	64	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	33	33	33	0	0
Mass Reduction Level 4 (%)	3	3	3	3	51
Mass Reduction Level 5 (%)	0	0	0	33	49
Avg Curb Weight - Fleet (pounds)	3,608	3,608	3,607	3,522	3,312
Diff. from Baseline - Fleet (pounds)	0	0	0	85	296
Avg Curb Weight - Passenger Car (pounds)	3,007	3,007	3,007	2,823	2,815
Diff. from Baseline - Passenger Car (pounds)	0	0	0	184	192
Avg Curb Weight - Light Truck (pounds)	3,692	3,692	3,692	3,622	3,382
Diff. from Baseline - Light Trucks (pounds)	0	0	0	70	310



**Table 647 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	7	7	7	7	7
Mass Reduction Level 1 (%)	46	46	46	33	33
Mass Reduction Level 2 (%)	17	17	17	17	9
Mass Reduction Level 3 (%)	1	1	1	1	1
Mass Reduction Level 4 (%)	29	29	29	41	49
Mass Reduction Level 5 (%)	1	1	1	1	1
Avg Curb Weight - Fleet (pounds)	4,219	4,219	4,219	4,182	4,167
Diff. from Baseline - Fleet (pounds)	0	0	0	37	53
Avg Curb Weight - Passenger Car (pounds)	3,945	3,945	3,945	3,863	3,849
Diff. from Baseline - Passenger Car (pounds)	0	0	0	83	97
Avg Curb Weight - Light Truck (pounds)	4,430	4,430	4,430	4,430	4,413
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	17



**Table 648 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	22	22	22	22	22
Mass Reduction Level 1 (%)	61	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	61	61	0
Mass Reduction Level 4 (%)	17	78	17	17	78
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,240	3,083	3,161	3,160	3,082
Diff. from Baseline - Fleet (pounds)	0	157	79	80	158
Avg Curb Weight - Passenger Car (pounds)	2,946	2,808	2,877	2,877	2,808
Diff. from Baseline - Passenger Car (pounds)	0	138	69	69	138
Avg Curb Weight - Light Truck (pounds)	3,530	3,354	3,442	3,442	3,354
Diff. from Baseline - Light Trucks (pounds)	0	176	88	88	176

**Table 649 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	55	55	16	2	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	9	9	0	0	0
Mass Reduction Level 4 (%)	32	32	79	93	93
Mass Reduction Level 5 (%)	5	5	5	5	7
Avg Curb Weight - Fleet (pounds)	3,678	3,678	3,570	3,521	3,512
Diff. from Baseline - Fleet (pounds)	0	0	108	157	166
Avg Curb Weight - Passenger Car (pounds)	3,208	3,208	3,081	3,081	3,064
Diff. from Baseline - Passenger Car (pounds)	0	0	127	127	144
Avg Curb Weight - Light Truck (pounds)	4,191	4,191	4,105	4,005	4,005
Diff. from Baseline - Light Trucks (pounds)	0	0	86	186	186

**Table 650 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	5	0	0	0	0
Mass Reduction Level 1 (%)	49	28	13	13	13
Mass Reduction Level 2 (%)	0	0	15	0	0
Mass Reduction Level 3 (%)	28	46	39	54	39
Mass Reduction Level 4 (%)	14	23	30	30	45
Mass Reduction Level 5 (%)	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	4,509	4,431	4,410	4,401	4,383
Diff. from Baseline - Fleet (pounds)	0	78	98	108	125
Avg Curb Weight - Passenger Car (pounds)	3,755	3,743	3,631	3,618	3,593
Diff. from Baseline - Passenger Car (pounds)	0	11	123	136	162
Avg Curb Weight - Light Truck (pounds)	4,603	4,516	4,508	4,499	4,482
Diff. from Baseline - Light Trucks (pounds)	0	86	95	103	120

**Table 651 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	99	99	99	99	99
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	1	1	1	1	0
Mass Reduction Level 4 (%)	0	0	0	0	1
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	3,648	3,648	3,647	3,647	3,646
Diff. from Baseline - Fleet (pounds)	0	0	0	0	1
Avg Curb Weight - Passenger Car (pounds)	3,276	3,276	3,276	3,276	3,270
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	6
Avg Curb Weight - Light Truck (pounds)	3,703	3,703	3,703	3,703	3,703
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	0



**Table 652 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	0	0	0	0	0
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	0	0	0	0	0
Mass Reduction Level 4 (%)	85	85	85	85	85
Mass Reduction Level 5 (%)	15	15	15	15	15
Avg Curb Weight - Fleet (pounds)	4,301	4,301	4,301	4,301	4,301
Diff. from Baseline - Fleet (pounds)	0	0	0	0	0
Avg Curb Weight - Passenger Car (pounds)	4,294	4,294	4,294	4,294	4,294
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	0
Avg Curb Weight - Light Truck (pounds)	4,416	4,416	4,416	4,416	4,416
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	0

**Table 653 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	45	45	45	45	18
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	55	55	55	55	25
Mass Reduction Level 4 (%)	0	0	0	0	56
Mass Reduction Level 5 (%)	0	0	0	0	1
Avg Curb Weight - Fleet (pounds)	3,940	3,940	3,939	3,938	3,803
Diff. from Baseline - Fleet (pounds)	0	0	1	2	137
Avg Curb Weight - Passenger Car (pounds)	3,350	3,350	3,350	3,350	3,316
Diff. from Baseline - Passenger Car (pounds)	0	0	0	0	34
Avg Curb Weight - Light Truck (pounds)	4,265	4,265	4,265	4,265	4,073
Diff. from Baseline - Light Trucks (pounds)	0	0	0	0	192

**Table 654 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	27	27	27	27	27
Mass Reduction Level 2 (%)	73	73	73	44	44
Mass Reduction Level 3 (%)	0	0	0	0	0
Mass Reduction Level 4 (%)	0	0	0	29	29
Mass Reduction Level 5 (%)	0	0	0	0	0
Avg Curb Weight - Fleet (pounds)	4,340	4,340	4,340	4,269	4,269
Diff. from Baseline - Fleet (pounds)	0	0	0	72	72
Avg Curb Weight - Passenger Car (pounds)	4,279	4,279	4,279	4,235	4,235
Diff. from Baseline - Passenger Car (pounds)	0	0	0	44	44
Avg Curb Weight - Light Truck (pounds)	4,362	4,362	4,362	4,281	4,281
Diff. from Baseline - Light Trucks (pounds)	0	0	0	82	82



**Table 655 - Mass Reduction Penetration Rate and Curb Weights for Manufacturer (VWA), MY 2032 Total Fleet by Alternative**

<b>Mass Reduction Penetration Rate and Curb Weights for Manufacturer (VWA), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mass Reduction Level 0 (%)	0	0	0	0	0
Mass Reduction Level 1 (%)	55	55	31	19	19
Mass Reduction Level 2 (%)	0	0	0	0	0
Mass Reduction Level 3 (%)	22	40	36	36	18
Mass Reduction Level 4 (%)	20	2	29	42	59
Mass Reduction Level 5 (%)	3	3	3	3	3
Avg Curb Weight - Fleet (pounds)	3,916	3,937	3,868	3,828	3,808
Diff. from Baseline - Fleet (pounds)	0	-21	48	88	108
Avg Curb Weight - Passenger Car (pounds)	3,384	3,442	3,432	3,411	3,353
Diff. from Baseline - Passenger Car (pounds)	0	-58	-48	-27	31
Avg Curb Weight - Light Truck (pounds)	4,208	4,208	4,108	4,060	4,060
Diff. from Baseline - Light Trucks (pounds)	0	0	100	149	149



## Electrification Rates

Table 656 - Electrification Rates (%) for Manufacturer (Total), MY 2032 Total Fleet by Alternative

Electrification Rates (%) for Manufacturer (Total), MY 2032 Total Fleet by Alternative					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	1.4	2.0	0.6	1.3	0.4
Strong Hybrid	21.9	32.8	36.9	40.7	51.0
Plug-In Hybrid	30.5	33.8	35.1	35.5	39.4
Battery Electric Vehicles (BEVs)	32.26	32.25	32.26	32.27	32.27
BEV 1	6.72	6.72	6.72	6.74	6.73
BEV 2	17.11	17.11	17.10	17.10	17.10
BEV 3	7.64	7.64	7.64	7.63	7.64
BEV 4	0.80	0.80	0.80	0.80	0.80
Fuel Cell Vehicles (FCVs)	0.03	0.03	0.03	0.03	0.03

**Table 657 - Electrification Rates (%) for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Total), MY 2032 Passenger Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	2.1	3.4	0.3	3.6	0.8
Strong Hybrid	12.8	16.1	20.6	25.1	49.8
Plug-In Hybrid	21.6	21.6	21.7	21.7	22.8
Battery Electric Vehicles (BEVs)	42.24	42.24	42.24	42.23	42.24
BEV 1	13.67	13.67	13.67	13.67	13.67
BEV 2	17.42	17.42	17.42	17.41	17.41
BEV 3	8.68	8.68	8.68	8.68	8.68
BEV 4	2.47	2.47	2.47	2.47	2.47
Fuel Cell Vehicles (FCVs)	0.08	0.08	0.08	0.08	0.08

**Table 658 - Electrification Rates (%) for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Total), MY 2032 Light Truck Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	1.1	1.4	0.8	0.2	0.2
Strong Hybrid	26.2	40.7	44.6	48.2	51.6
Plug-In Hybrid	34.7	39.6	41.5	42.0	47.3
Battery Electric Vehicles (BEVs)	27.54	27.54	27.53	27.52	27.52
BEV 1	3.43	3.43	3.43	3.43	3.43
BEV 2	16.96	16.96	16.96	16.95	16.95
BEV 3	7.14	7.14	7.14	7.14	7.14
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 659 - Electrification Rates (%) for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Total), MY 2032 Domestic Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.2	4.8	0.2	4.0	1.4
Strong Hybrid	9.1	12.9	18.2	22.9	47.8
Plug-In Hybrid	18.5	18.5	18.5	18.7	19.4
Battery Electric Vehicles (BEVs)	45.06	45.06	45.06	45.05	45.06
BEV 1	11.28	11.28	11.27	11.27	11.27
BEV 2	16.66	16.66	16.65	16.65	16.65
BEV 3	12.33	12.33	12.33	12.33	12.33
BEV 4	4.80	4.80	4.80	4.80	4.80
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 660 - Electrification Rates (%) for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Total), MY 2032 Imported Car Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	3.9	2.1	0.5	3.2	0.3
Strong Hybrid	16.3	19.3	23.0	27.2	51.8
Plug-In Hybrid	24.7	24.7	24.7	24.7	26.0
Battery Electric Vehicles (BEVs)	39.49	39.49	39.49	39.48	39.48
BEV 1	16.01	16.01	16.01	16.01	16.01
BEV 2	18.16	18.16	18.16	18.15	18.16
BEV 3	5.12	5.12	5.12	5.12	5.12
BEV 4	0.19	0.19	0.19	0.19	0.19
Fuel Cell Vehicles (FCVs)	0.16	0.16	0.16	0.16	0.16

**Table 661 - Electrification Rates (%) for Manufacturer (BMW), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (BMW), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	47.6	54.0	54.0	54.0	56.5
Plug-In Hybrid	29.8	29.8	29.8	29.8	31.1
Battery Electric Vehicles (BEVs)	42.17	42.17	42.17	42.17	42.17
BEV 1	4.10	4.10	4.11	4.12	4.12
BEV 2	17.24	17.24	17.26	17.28	17.28
BEV 3	20.54	20.55	20.53	20.49	20.50
BEV 4	0.28	0.28	0.28	0.28	0.28
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 662 - Electrification Rates (%) for Manufacturer (Ford), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Ford), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.5	0.0	0.0	0.0
Strong Hybrid	36.4	68.8	70.6	71.0	70.2
Plug-In Hybrid	60.0	60.4	61.5	61.5	62.2
Battery Electric Vehicles (BEVs)	23.87	23.87	23.87	23.87	23.87
BEV 2	18.75	18.75	18.75	18.75	18.75
BEV 3	2.16	2.16	2.16	2.16	2.16
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 663 - Electrification Rates (%) for Manufacturer (GM), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (GM), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	3.7	8.2	1.1	1.1	1.1
Strong Hybrid	22.6	35.0	40.2	39.9	39.8
Plug-In Hybrid	46.8	57.5	58.0	59.8	59.9
Battery Electric Vehicles (BEVs)	21.74	21.74	21.74	21.74	21.74
BEV 1	2.73	2.73	2.73	2.74	2.73
BEV 2	18.96	18.96	18.96	18.96	18.96
BEV 3	0.04	0.04	0.04	0.04	0.04
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00



**Table 664 - Electrification Rates (%) for Manufacturer (Honda), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Honda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.6	0.0	0.0
Strong Hybrid	10.6	22.9	31.7	39.9	55.9
Plug-In Hybrid	40.3	40.3	40.3	40.3	40.7
Battery Electric Vehicles (BEVs)	36.74	36.74	36.74	36.74	36.74
BEV 1	16.77	16.77	16.77	16.80	16.79
BEV 2	16.06	16.06	16.06	16.04	16.05
BEV 3	3.91	3.91	3.91	3.90	3.90
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 665 - Electrification Rates (%) for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Hyundai KiH), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	6.2	4.0	0.0	2.2	0.0
Strong Hybrid	24.1	28.1	38.1	51.3	68.2
Plug-In Hybrid	11.9	14.1	18.9	11.9	13.1
Battery Electric Vehicles (BEVs)	29.96	29.96	29.96	29.96	29.96
BEV 1	10.21	10.21	10.21	10.22	10.22
BEV 2	16.74	16.74	16.74	16.73	16.73
BEV 3	3.01	3.01	3.01	3.01	3.01
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.14	0.14	0.14	0.14	0.14

**Table 666 - Electrification Rates (%) for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Hyundai KiK), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.9	7.6	5.7	0.0	0.0
Strong Hybrid	9.2	17.4	28.6	40.9	61.1
Plug-In Hybrid	16.6	22.5	27.8	27.8	28.0
Battery Electric Vehicles (BEVs)	26.65	26.65	26.65	26.65	26.65
BEV 1	5.34	5.34	5.35	5.36	5.35
BEV 2	20.00	20.00	19.99	19.98	19.98
BEV 3	1.31	1.31	1.32	1.32	1.31
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 667 - Electrification Rates (%) for Manufacturer (JLR), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (JLR), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	42.6	44.6	44.1	44.1	44.1
Plug-In Hybrid	37.8	41.4	41.9	41.9	41.9
Battery Electric Vehicles (BEVs)	39.05	39.05	39.05	39.05	39.05
BEV 1	4.27	4.27	4.27	4.27	4.27
BEV 2	18.99	19.00	19.00	19.01	19.01
BEV 3	15.80	15.78	15.79	15.77	15.77
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 668 - Electrification Rates (%) for Manufacturer (Karma), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Karma), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	50.00	50.00	50.00	50.00	50.00
BEV 2	50.00	50.00	50.00	50.00	50.00
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 669 - Electrification Rates (%) for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Lucid), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	0.00	0.00	0.00	0.00	0.00
BEV 2	0.00	0.00	0.00	0.00	0.00
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	100.00	100.00	100.00	100.00	100.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 670 - Electrification Rates (%) for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Mazda), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	17.9	17.9	17.9	17.9	31.1
Plug-In Hybrid	17.9	17.9	17.9	27.2	47.2
Battery Electric Vehicles (BEVs)	37.48	37.48	37.48	37.48	37.48
BEV 1	9.43	9.43	9.43	9.44	9.44
BEV 2	24.10	24.10	24.10	24.09	24.09
BEV 3	3.96	3.95	3.95	3.95	3.95
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 671 - Electrification Rates (%) for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Mercedes-Benz), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	41.7	55.6	55.6	58.2	58.2
Plug-In Hybrid	47.5	47.5	47.5	47.5	47.5
Battery Electric Vehicles (BEVs)	41.83	41.83	41.83	41.83	41.83
BEV 1	6.40	6.40	6.41	6.44	6.43
BEV 2	12.24	12.24	12.24	12.24	12.24
BEV 3	21.69	21.69	21.68	21.65	21.66
BEV 4	1.50	1.50	1.50	1.50	1.50
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00



**Table 672 - Electrification Rates (%) for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Mitsubishi), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	18.7	3.5	16.2	0.0
Strong Hybrid	9.5	17.3	35.9	17.0	36.4
Plug-In Hybrid	0.0	0.0	0.0	22.4	19.2
Battery Electric Vehicles (BEVs)	21.57	21.57	21.57	21.57	21.57
BEV 1	4.76	4.77	4.77	4.78	4.78
BEV 2	16.81	16.80	16.80	16.79	16.79
BEV 3	0.00	0.00	0.00	0.00	0.00
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 673 - Electrification Rates (%) for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Nissan), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	6.4	2.8
Strong Hybrid	9.0	28.1	37.7	43.8	72.3
Plug-In Hybrid	34.3	34.3	34.3	34.3	34.5
Battery Electric Vehicles (BEVs)	24.68	24.68	24.68	24.68	24.68
BEV 1	4.96	4.96	4.96	4.96	4.96
BEV 2	17.70	17.70	17.70	17.71	17.71
BEV 3	2.02	2.03	2.02	2.01	2.02
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 674 - Electrification Rates (%) for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Stellantis), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	1.0	0.2	0.2	1.7	0.2
Strong Hybrid	37.1	49.1	49.1	50.4	35.3
Plug-In Hybrid	9.3	20.1	23.6	23.5	40.2
Battery Electric Vehicles (BEVs)	26.66	26.66	26.66	26.66	26.66
BEV 1	2.53	2.53	2.54	2.54	2.54
BEV 2	16.06	16.06	16.06	16.06	16.06
BEV 3	8.06	8.06	8.06	8.05	8.06
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 675 - Electrification Rates (%) for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Subaru), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.8
Strong Hybrid	0.8	0.8	0.8	1.0	40.7
Plug-In Hybrid	2.6	2.6	2.6	2.6	7.6
Battery Electric Vehicles (BEVs)	41.25	41.25	41.25	41.25	41.25
BEV 1	4.18	4.18	4.19	4.21	4.20
BEV 2	20.11	20.11	20.11	20.10	20.11
BEV 3	16.96	16.96	16.95	16.93	16.94
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 676 - Electrification Rates (%) for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Tesla), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	0.0	0.0	0.0	0.0	0.0
Plug-In Hybrid	0.0	0.0	0.0	0.0	0.0
Battery Electric Vehicles (BEVs)	100.00	100.00	100.00	100.00	100.00
BEV 1	0.00	0.00	0.00	0.00	0.00
BEV 2	18.28	18.28	18.28	18.29	18.29
BEV 3	57.48	57.48	57.47	57.45	57.46
BEV 4	24.24	24.24	24.25	24.26	24.25
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 677 - Electrification Rates (%) for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Toyota), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	0.0	0.0	0.0	0.0	0.0
Strong Hybrid	17.1	17.1	17.2	24.1	49.2
Plug-In Hybrid	22.6	22.6	23.7	25.4	32.7
Battery Electric Vehicles (BEVs)	33.92	33.92	33.92	33.92	33.92
BEV 1	12.33	12.33	12.34	12.37	12.36
BEV 2	13.18	13.18	13.17	13.15	13.15
BEV 3	8.42	8.42	8.42	8.41	8.41
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.11	0.11	0.11	0.11	0.11

**Table 678 - Electrification Rates (%) for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (Volvo), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	20.2	20.2	15.6	8.2	3.7
Strong Hybrid	5.8	17.9	29.6	37.0	41.3
Plug-In Hybrid	39.5	39.5	39.5	39.5	39.6
Battery Electric Vehicles (BEVs)	40.20	40.20	40.19	40.20	40.20
BEV 1	6.06	6.06	6.07	6.07	6.07
BEV 2	9.44	9.43	9.45	9.50	9.48
BEV 3	24.70	24.70	24.68	24.62	24.64
BEV 4	0.00	0.00	0.00	0.00	0.00
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00

**Table 679 - Electrification Rates (%) for Manufacturer (VWA), MY 2032 Total Fleet by Alternative**

<b>Electrification Rates (%) for Manufacturer (VWA), MY 2032 Total Fleet by Alternative</b>					
Alternative	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Mild Hybrid	5.5	0.1	0.1	5.3	0.0
Strong Hybrid	33.8	43.8	51.2	54.2	59.5
Plug-In Hybrid	53.4	58.2	58.2	58.2	58.2
Battery Electric Vehicles (BEVs)	35.18	35.19	35.19	35.19	35.18
BEV 1	5.69	5.69	5.69	5.69	5.69
BEV 2	20.58	20.57	20.58	20.60	20.59
BEV 3	8.90	8.91	8.90	8.88	8.89
BEV 4	0.01	0.01	0.01	0.02	0.01
Fuel Cell Vehicles (FCVs)	0.00	0.00	0.00	0.00	0.00



## Required and Achieved CAFE Levels, Comparison

Table 0-680 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4			
Model Year	Total		
	Required	Achieved	Difference
2022	35.8	34.1	-1.7
2023	36.1	35.5	-0.6
2024	39.0	38.4	-0.5
2025	42.2	40.9	-1.3
2026	46.8	43.8	-3.0
2027	48.4	45.9	-2.5
2028	50.1	47.3	-2.8
2029	51.9	49.1	-2.8
2030	53.8	50.7	-3.0
2031	55.7	52.8	-3.0
2032	57.8	54.4	-3.4

**Table 0-681 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4</b>			
Model Year	Total		
	Required	Achieved	Difference
2022	44.1	43.7	-0.4
2023	44.8	46.6	1.8
2024	48.7	51.3	2.6
2025	52.9	54.3	1.4
2026	58.8	59.5	0.7
2027	60.0	61.3	1.3
2028	61.2	63.2	2.0
2029	62.5	65.4	3.0
2030	63.7	67.5	3.7
2031	65.1	69.6	4.5
2032	66.4	71.4	5.0

**Table 0-682 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4			
Model Year	Total		
	Required	Achieved	Difference
2022	32.1	30.1	-2.0
2023	32.6	31.3	-1.3
2024	35.3	34.0	-1.3
2025	38.3	36.4	-1.9
2026	42.6	38.9	-3.8
2027	44.4	41.1	-3.3
2028	46.2	42.4	-3.9
2029	48.2	44.1	-4.1
2030	50.2	45.5	-4.6
2031	52.2	47.4	-4.9
2032	54.4	48.9	-5.5

**Table 0-683 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	37.6	32.9	-4.7	31.4	29.0	-2.4	32.5	29.1	-3.4	39.1	37.8	-1.3
2023	37.9	34.8	-3.1	31.8	30.1	-1.8	32.9	29.0	-3.9	39.4	40.2	0.8
2024	41.0	38.0	-3.0	34.3	33.5	-0.7	35.2	33.7	-1.5	42.7	40.2	-2.5
2025	44.4	41.5	-3.0	37.2	34.3	-2.9	38.2	37.1	-1.1	46.2	41.7	-4.4
2026	49.3	46.5	-2.8	41.4	36.4	-5.0	42.3	38.3	-3.9	51.2	45.7	-5.5
2027	50.8	46.4	-4.4	42.9	41.1	-1.8	43.8	39.8	-4.0	52.8	49.0	-3.7
2028	52.4	48.4	-4.0	44.7	43.0	-1.7	45.6	40.0	-5.5	54.5	51.3	-3.2
2029	54.1	50.7	-3.3	46.5	45.1	-1.4	47.2	40.4	-6.8	56.2	53.3	-2.9
2030	55.9	53.1	-2.8	48.4	45.2	-3.2	49.1	40.7	-8.4	58.1	56.1	-2.1
2031	57.8	55.3	-2.5	50.3	45.9	-4.3	51.0	43.3	-7.8	60.1	58.2	-1.9
2032	59.7	58.6	-1.1	52.3	46.7	-5.7	53.0	44.0	-9.0	62.0	60.6	-1.4

**Table 0-684 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	39.6	39.1	-0.5	39.5	38.5	-1.0	32.9	27.4	-5.5	40.6	66.7	26.1
2023	40.0	40.8	0.8	39.8	40.5	0.7	33.4	34.2	0.8	41.1	66.7	25.6
2024	43.3	41.0	-2.3	43.1	44.7	1.6	36.2	36.7	0.5	44.3	66.7	22.4
2025	46.8	44.9	-1.9	46.7	44.7	-2.0	39.4	36.8	-2.6	48.1	66.7	18.6
2026	51.9	49.0	-3.0	51.7	49.3	-2.4	43.7	38.9	-4.8	53.5	138.6	85.1
2027	53.5	50.1	-3.4	53.3	49.2	-4.1	45.5	39.8	-5.7	55.2	138.6	83.4
2028	55.1	53.6	-1.5	55.0	49.2	-5.9	47.4	39.8	-7.6	56.3	138.6	82.3
2029	56.8	54.9	-1.9	56.7	52.7	-4.0	49.4	40.7	-8.7	57.5	138.6	81.1
2030	58.6	56.6	-2.0	58.5	54.1	-4.4	51.4	42.8	-8.5	58.6	138.6	80.0
2031	60.5	58.5	-2.0	60.5	57.4	-3.1	53.6	46.4	-7.2	59.8	138.6	78.8
2032	62.3	60.4	-1.9	62.4	59.5	-2.9	55.8	49.0	-6.7	61.1	138.6	77.5

**Table 0-685 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	40.6	166.5	125.9	37.3	35.1	-2.2	36.8	31.6	-5.3	42.0	38.6	-3.4
2023	41.1	166.5	125.4	37.8	41.2	3.4	37.2	36.7	-0.5	42.5	38.8	-3.6
2024	44.3	166.5	122.2	41.0	42.4	1.4	40.2	37.3	-2.9	45.9	45.1	-0.8
2025	48.1	166.5	118.4	44.4	42.5	-2.0	43.6	37.8	-5.9	49.8	48.0	-1.7
2026	53.5	166.5	113.0	49.4	46.8	-2.6	48.4	43.4	-5.0	55.2	53.4	-1.8
2027	55.2	166.5	111.3	51.3	49.2	-2.1	49.9	44.9	-5.0	56.9	53.3	-3.6
2028	56.3	166.5	110.2	53.3	50.8	-2.5	51.5	47.4	-4.2	58.7	53.3	-5.4
2029	57.5	166.5	109.0	55.4	53.2	-2.2	53.3	49.4	-3.8	60.5	53.2	-7.3
2030	58.6	166.5	107.9	57.6	55.6	-2.0	55.0	53.6	-1.4	62.5	53.3	-9.2
2031	59.8	166.5	106.7	59.9	57.7	-2.2	56.9	55.8	-1.1	64.6	63.6	-1.0
2032	61.1	170.6	109.5	62.3	59.3	-2.9	58.8	57.8	-1.0	66.6	64.4	-2.2

**Table 0-686 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	38.9	36.8	-2.2	31.9	27.3	-4.5	37.8	36.7	-1.1	40.7	160.7	120.0
2023	39.3	39.6	0.4	32.3	28.5	-3.8	38.2	40.3	2.1	41.2	160.7	119.4
2024	42.4	41.4	-1.1	34.9	31.4	-3.5	41.4	42.2	0.8	44.8	160.7	115.9
2025	46.0	43.8	-2.1	38.0	37.0	-0.9	44.9	44.1	-0.9	48.6	160.6	112.0
2026	50.9	46.6	-4.3	42.1	37.5	-4.6	50.0	50.0	0.0	54.1	160.6	106.5
2027	52.4	46.7	-5.8	43.8	40.1	-3.7	51.9	52.3	0.4	55.2	160.6	105.4
2028	54.1	50.8	-3.3	45.6	40.2	-5.3	53.9	54.3	0.4	56.4	160.6	104.2
2029	55.8	52.5	-3.2	47.3	42.8	-4.5	56.0	56.6	0.6	57.7	160.6	102.9
2030	57.6	56.4	-1.2	49.2	44.4	-4.8	58.2	59.5	1.2	58.9	160.6	101.7
2031	59.5	57.7	-1.8	51.1	45.4	-5.7	60.5	62.0	1.5	60.3	160.6	100.4
2032	61.4	59.0	-2.5	53.2	47.3	-5.9	62.9	64.2	1.3	61.5	160.6	99.1

**Table 0-687 - Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Total Fleet for Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	37.1	36.6	-0.4	36.0	39.0	3.1	37.9	33.8	-4.0	35.8	34.1	-1.7
2023	37.4	37.7	0.3	36.4	41.3	5.0	38.2	35.2	-3.0	36.1	35.5	-0.6
2024	40.4	40.6	0.3	39.4	41.3	2.0	41.3	40.3	-1.0	39.0	38.4	-0.5
2025	43.6	41.7	-1.9	42.6	45.3	2.7	44.8	42.9	-1.9	42.2	40.9	-1.3
2026	48.4	46.6	-1.8	47.4	45.8	-1.5	49.6	45.0	-4.6	46.8	43.8	-3.0
2027	50.0	47.8	-2.3	49.0	46.3	-2.7	51.3	45.8	-5.5	48.4	45.9	-2.5
2028	51.8	49.2	-2.6	50.8	46.2	-4.6	53.1	47.8	-5.3	50.1	47.3	-2.8
2029	53.6	50.8	-2.8	52.7	46.7	-6.0	55.0	49.4	-5.6	51.9	49.1	-2.8
2030	55.5	52.7	-2.8	54.6	52.7	-2.0	57.0	53.4	-3.5	53.8	50.7	-3.0
2031	57.5	54.9	-2.6	56.7	54.8	-1.9	59.0	56.5	-2.4	55.7	52.8	-3.0
2032	59.5	57.0	-2.5	58.7	57.6	-1.1	61.1	58.7	-2.4	57.8	54.4	-3.4

**Table 0-688 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	43.3	35.4	-7.9	43.4	40.7	-2.7	45.1	39.1	-6.0	44.7	43.4	-1.3
2023	44.0	38.7	-5.3	44.1	40.8	-3.3	45.8	39.3	-6.5	45.4	47.0	1.6
2024	47.8	48.1	0.3	47.9	56.2	8.3	49.7	49.2	-0.6	49.4	47.2	-2.2
2025	52.0	51.7	-0.3	52.1	57.9	5.8	54.1	52.0	-2.1	53.7	48.8	-4.9
2026	57.7	56.2	-1.5	57.9	57.9	0.0	60.1	56.8	-3.3	59.6	53.6	-6.0
2027	58.9	56.2	-2.7	59.0	65.5	6.5	61.3	57.0	-4.3	60.8	57.1	-3.7
2028	60.1	60.3	0.2	60.2	65.5	5.3	62.6	57.0	-5.5	62.1	60.1	-2.0
2029	61.3	63.2	1.9	61.5	65.5	4.0	63.9	61.5	-2.3	63.3	62.2	-1.1
2030	62.6	65.9	3.3	62.7	66.0	3.3	65.1	62.3	-2.8	64.6	64.6	0.0
2031	63.9	68.5	4.6	64.0	66.9	2.9	66.5	63.6	-2.9	66.0	67.0	1.0
2032	65.2	70.6	5.4	65.3	68.2	2.9	67.8	64.3	-3.5	67.3	69.5	2.2



**Table 0-689 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	44.2	42.9	-1.3	44.7	44.3	-0.5	43.2	29.4	-13.8	40.6	66.7	26.1
2023	44.9	46.0	1.1	45.4	46.5	1.1	43.8	54.5	10.7	41.1	66.7	25.6
2024	48.8	46.4	-2.5	49.4	55.7	6.3	47.6	54.5	6.9	44.3	66.7	22.4
2025	53.1	50.2	-2.9	53.6	55.7	2.0	51.8	54.5	2.7	48.1	66.7	18.6
2026	59.0	55.8	-3.2	59.6	57.9	-1.6	57.5	61.7	4.2	53.5	138.6	85.1
2027	60.2	57.6	-2.5	60.8	58.0	-2.8	58.7	61.8	3.1	55.2	138.6	83.4
2028	61.4	59.9	-1.5	62.1	58.0	-4.1	59.9	61.9	2.0	56.3	138.6	82.3
2029	62.7	61.4	-1.3	63.3	60.8	-2.5	61.1	63.2	2.1	57.5	138.6	81.1
2030	64.0	63.2	-0.7	64.6	62.4	-2.2	62.4	65.4	3.0	58.6	138.6	80.0
2031	65.3	65.5	0.2	65.9	64.3	-1.6	63.6	67.4	3.8	59.8	138.6	78.8
2032	66.6	66.9	0.3	67.2	65.5	-1.8	64.9	69.1	4.2	61.1	138.6	77.5

**Table 0-690 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	40.6	166.5	125.9	46.1	40.1	-6.0	41.8	34.1	-7.7	47.0	41.4	-5.6
2023	41.1	166.5	125.4	46.8	40.8	-6.0	42.4	41.6	-0.8	47.7	41.7	-6.0
2024	44.3	166.5	122.2	50.9	49.6	-1.3	46.1	43.7	-2.4	51.9	50.4	-1.5
2025	48.1	166.5	118.4	55.3	51.5	-3.8	50.1	45.6	-4.5	56.4	54.1	-2.3
2026	53.5	166.5	113.0	61.5	56.8	-4.7	55.6	54.0	-1.6	62.7	62.0	-0.7
2027	55.2	166.5	111.3	62.7	60.4	-2.3	56.8	56.2	-0.6	63.9	62.0	-1.9
2028	56.3	166.5	110.2	64.0	62.4	-1.6	57.9	56.2	-1.7	65.2	62.0	-3.2
2029	57.5	166.5	109.0	65.3	64.6	-0.7	59.1	59.3	0.2	66.6	62.0	-4.6
2030	58.6	166.5	107.9	66.7	67.2	0.5	60.3	61.6	1.3	67.9	62.0	-5.9
2031	59.8	166.5	106.7	68.0	69.7	1.7	61.6	64.0	2.4	69.3	69.5	0.2
2032	61.1	170.6	109.5	69.4	71.8	2.4	62.8	66.6	3.8	70.7	70.5	-0.2

**Table 0-691 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	44.7	42.4	-2.3	41.8	28.2	-13.6	46.0	37.0	-9.0	41.1	161.0	119.9
2023	45.4	46.5	1.1	42.4	30.5	-11.9	46.7	46.1	-0.6	41.7	161.0	119.3
2024	49.3	50.0	0.6	46.1	41.2	-4.9	50.7	46.1	-4.6	45.3	161.0	115.7
2025	53.6	54.1	0.5	50.0	51.1	1.0	55.1	52.9	-2.2	49.3	161.0	111.7
2026	59.6	58.6	-1.0	55.6	52.4	-3.2	61.3	58.6	-2.7	54.8	161.0	106.2
2027	60.8	58.8	-2.0	56.8	52.4	-4.4	62.5	60.7	-1.8	55.9	161.0	105.1
2028	62.1	59.6	-2.5	57.9	53.1	-4.8	63.8	63.0	-0.8	57.0	161.0	104.0
2029	63.3	60.8	-2.5	59.1	56.1	-3.0	65.1	66.0	0.9	58.2	161.0	102.8
2030	64.6	63.1	-1.5	60.3	57.9	-2.4	66.4	69.0	2.6	59.4	161.0	101.7
2031	65.9	64.5	-1.4	61.5	60.2	-1.4	67.8	71.9	4.1	60.7	161.0	100.4
2032	67.3	66.3	-0.9	62.8	61.6	-1.1	69.2	75.2	6.0	61.9	161.0	99.2

**Table 0-692 - Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Passenger Car Fleet for Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	44.7	44.0	-0.7	42.9	53.6	10.6	45.0	37.8	-7.2	44.1	43.7	-0.4
2023	45.4	46.3	0.9	43.6	55.4	11.8	45.7	38.8	-6.9	44.8	46.6	1.8
2024	49.4	47.7	-1.7	47.4	56.0	8.6	49.7	44.3	-5.3	48.7	51.3	2.6
2025	53.6	49.3	-4.3	51.5	59.6	8.1	54.0	47.4	-6.6	52.9	54.3	1.4
2026	59.6	56.2	-3.4	57.2	61.8	4.5	60.0	53.6	-6.4	58.8	59.5	0.7
2027	60.8	58.4	-2.4	58.3	61.8	3.4	61.2	55.5	-5.7	60.0	61.3	1.3
2028	62.1	60.4	-1.7	59.5	61.8	2.2	62.5	62.5	0.0	61.2	63.2	2.0
2029	63.4	62.4	-1.0	60.8	62.5	1.7	63.8	64.4	0.6	62.5	65.4	3.0
2030	64.6	64.7	0.0	62.0	65.9	3.9	65.1	66.6	1.5	63.7	67.5	3.7
2031	65.9	67.0	1.0	63.3	68.2	5.0	66.4	68.8	2.5	65.1	69.6	4.5
2032	67.3	68.7	1.4	64.6	71.6	7.1	67.7	70.5	2.7	66.4	71.4	5.0

**Table 0-693 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4</b>												
Model Year	BMW			Ford			GM			Honda		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	32.5	30.3	-2.2	30.3	27.9	-2.4	29.8	26.8	-3.0	34.0	32.8	-1.2
2023	33.0	31.3	-1.7	30.8	29.1	-1.7	30.3	26.9	-3.4	34.5	34.8	0.3
2024	35.9	31.3	-4.6	33.2	32.1	-1.1	32.5	30.9	-1.6	37.5	34.9	-2.6
2025	39.0	34.9	-4.1	36.1	32.9	-3.2	35.4	34.5	-0.9	40.8	36.7	-4.1
2026	43.4	40.1	-3.3	40.2	35.1	-5.1	39.3	35.4	-3.9	45.3	40.2	-5.1
2027	45.2	40.1	-5.1	41.8	39.7	-2.1	40.9	37.0	-3.9	47.2	43.6	-3.6
2028	47.0	41.2	-5.8	43.6	41.6	-2.0	42.7	37.3	-5.4	49.2	45.4	-3.8
2029	49.0	43.2	-5.8	45.4	43.8	-1.6	44.4	37.3	-7.1	51.2	47.5	-3.7
2030	51.0	45.2	-5.8	47.3	43.8	-3.5	46.3	37.5	-8.8	53.4	50.2	-3.2
2031	53.2	47.0	-6.2	49.2	44.5	-4.7	48.2	40.0	-8.2	55.6	52.0	-3.6
2032	55.4	50.7	-4.7	51.3	45.2	-6.1	50.2	40.7	-9.5	57.9	54.3	-3.6

**Table 0-694 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4</b>												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	34.0	34.3	0.3	34.0	32.6	-1.4	32.7	27.3	-5.4	0.0	0.0	0.0
2023	34.5	35.1	0.6	34.5	34.9	0.4	33.2	33.9	0.7	0.0	0.0	0.0
2024	37.5	35.4	-2.1	37.5	36.3	-1.2	36.0	36.4	0.4	0.0	0.0	0.0
2025	40.7	39.6	-1.1	40.8	36.6	-4.2	39.2	36.5	-2.7	0.0	0.0	0.0
2026	45.3	42.6	-2.7	45.3	42.5	-2.8	43.5	38.6	-4.9	0.0	0.0	0.0
2027	47.2	43.4	-3.8	47.2	42.5	-4.7	45.3	39.5	-5.8	0.0	0.0	0.0
2028	49.1	47.7	-1.4	49.2	42.5	-6.7	47.2	39.5	-7.7	0.0	0.0	0.0
2029	51.2	48.9	-2.3	51.2	46.4	-4.8	49.2	40.4	-8.8	0.0	0.0	0.0
2030	53.3	50.3	-3.0	53.3	47.5	-5.8	51.2	42.5	-8.7	0.0	0.0	0.0
2031	55.5	51.8	-3.7	55.6	51.5	-4.1	53.4	46.0	-7.4	0.0	0.0	0.0
2032	57.8	54.0	-3.8	57.9	54.2	-3.7	55.6	48.7	-6.9	0.0	0.0	0.0

**Table 0-695 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4</b>												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	0.0	0.0	0.0	36.0	34.3	-1.7	32.9	29.4	-3.5	37.0	35.6	-1.4
2023	0.0	0.0	0.0	36.6	41.3	4.7	33.4	33.1	-0.3	37.6	35.9	-1.7
2024	0.0	0.0	0.0	39.8	41.4	1.6	36.3	33.2	-3.1	40.8	40.5	-0.3
2025	0.0	0.0	0.0	43.2	41.4	-1.8	39.5	33.2	-6.3	44.4	43.1	-1.3
2026	0.0	0.0	0.0	48.0	45.6	-2.4	43.9	37.6	-6.3	49.3	46.9	-2.4
2027	0.0	0.0	0.0	50.0	48.0	-2.0	45.7	38.9	-6.8	51.4	46.9	-4.5
2028	0.0	0.0	0.0	52.1	49.6	-2.5	47.6	42.4	-5.2	53.5	46.9	-6.6
2029	0.0	0.0	0.0	54.3	52.0	-2.3	49.6	44.0	-5.6	55.7	46.9	-8.8
2030	0.0	0.0	0.0	56.5	54.3	-2.2	51.6	48.9	-2.7	58.1	46.9	-11.2
2031	0.0	0.0	0.0	58.9	56.3	-2.6	53.8	50.8	-3.0	60.5	58.7	-1.8
2032	0.0	0.0	0.0	61.4	57.9	-3.5	56.0	52.4	-3.6	63.0	59.3	-3.7

**Table 0-696 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4</b>												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	32.9	30.9	-2.0	30.7	27.2	-3.5	36.5	36.6	0.1	33.4	154.4	121.0
2023	33.4	33.3	-0.1	31.2	28.3	-2.9	37.0	39.4	2.4	33.9	154.4	120.5
2024	36.3	34.2	-2.1	33.8	30.4	-3.4	40.2	41.6	1.4	36.9	154.4	117.5
2025	39.5	36.0	-3.5	36.8	35.8	-1.0	43.7	43.0	-0.7	40.1	154.4	114.3
2026	43.9	38.1	-5.8	40.9	36.2	-4.7	48.6	48.9	0.3	44.5	154.4	109.9
2027	45.7	38.2	-7.5	42.6	39.0	-3.6	50.6	51.3	0.7	46.4	154.4	108.0
2028	47.6	43.9	-3.7	44.4	39.1	-5.3	52.7	53.3	0.6	48.3	154.4	106.1
2029	49.6	46.0	-3.6	46.2	41.7	-4.5	54.9	55.4	0.5	50.3	154.4	104.1
2030	51.7	50.7	-1.0	48.1	43.1	-5.0	57.2	58.3	1.1	52.4	154.4	102.0
2031	53.8	51.8	-2.0	50.1	44.1	-6.0	59.6	60.8	1.2	54.6	154.4	99.8
2032	56.1	52.6	-3.5	52.2	45.9	-6.3	62.1	62.9	0.8	56.9	154.4	97.5



**Table 0-697 - Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Light Truck Fleet for Alternative PC2LT4</b>												
Model Year	Toyota			Volvo			VWA			Total		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	33.0	32.7	-0.3	33.4	34.5	1.1	34.0	31.5	-2.5	32.1	30.1	-2.0
2023	33.5	33.6	0.1	33.9	37.2	3.3	34.5	33.1	-1.4	32.6	31.3	-1.3
2024	36.3	37.2	0.9	36.8	37.3	0.5	37.5	38.2	0.7	35.3	34.0	-1.3
2025	39.4	38.3	-1.1	40.0	41.5	1.5	40.8	40.7	-0.1	38.3	36.4	-1.9
2026	43.8	42.5	-1.3	44.5	41.8	-2.7	45.3	41.4	-3.9	42.6	38.9	-3.8
2027	45.6	43.4	-2.2	46.3	42.4	-3.9	47.2	41.9	-5.3	44.4	41.1	-3.3
2028	47.5	44.7	-2.8	48.3	42.4	-5.9	49.2	42.5	-6.7	46.2	42.4	-3.9
2029	49.5	46.2	-3.3	50.3	42.8	-7.5	51.2	44.0	-7.2	48.2	44.1	-4.1
2030	51.6	47.9	-3.7	52.4	49.1	-3.3	53.4	48.3	-5.1	50.2	45.5	-4.6
2031	53.7	50.0	-3.7	54.6	51.1	-3.5	55.6	51.5	-4.1	52.2	47.4	-4.9
2032	55.9	52.1	-3.8	56.8	53.7	-3.1	57.9	53.7	-4.2	54.4	48.9	-5.5

**Table 0-698 - Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4</b>												
Model Year	BMW			Ford			GM			Honda		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	0.0	0.0	0.0	43.4	40.7	-2.7	44.3	38.3	-6.0	44.7	43.4	-1.3
2023	0.0	0.0	0.0	44.1	40.8	-3.3	45.0	38.6	-6.4	45.4	47.0	1.6
2024	0.0	0.0	0.0	47.9	56.2	8.3	48.9	49.6	0.7	49.4	47.2	-2.2
2025	0.0	0.0	0.0	52.1	57.9	5.8	53.2	52.3	-0.9	53.7	48.8	-4.9
2026	0.0	0.0	0.0	57.9	57.9	0.0	59.1	56.3	-2.8	59.6	53.6	-6.0
2027	0.0	0.0	0.0	59.0	65.5	6.5	60.3	56.6	-3.7	60.8	57.1	-3.7
2028	0.0	0.0	0.0	60.2	65.5	5.3	61.5	56.6	-4.9	62.1	60.1	-2.0
2029	0.0	0.0	0.0	61.5	65.5	4.0	62.8	61.5	-1.3	63.3	62.2	-1.1
2030	0.0	0.0	0.0	62.7	66.0	3.3	64.0	61.6	-2.4	64.6	64.6	0.0
2031	0.0	0.0	0.0	64.0	66.9	2.9	65.4	62.5	-2.9	66.0	67.0	1.0
2032	0.0	0.0	0.0	65.3	68.2	2.9	66.7	63.3	-3.4	67.3	69.5	2.2

**Table 0-699 - Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4</b>												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	48.7	50.7	2.0	45.8	45.0	-0.8	0.0	0.0	0.0	40.6	66.7	26.1
2023	49.5	284.8	235.3	46.5	45.0	-1.5	0.0	0.0	0.0	41.1	66.7	25.6
2024	53.8	284.8	231.0	50.6	61.5	10.9	0.0	0.0	0.0	44.3	66.7	22.4
2025	58.4	284.8	226.4	55.0	61.5	6.5	0.0	0.0	0.0	48.1	66.7	18.6
2026	64.9	284.8	219.9	61.1	61.5	0.4	0.0	0.0	0.0	53.5	138.6	85.1
2027	66.3	284.8	218.5	62.3	61.5	-0.8	0.0	0.0	0.0	55.2	138.6	83.4
2028	67.6	301.4	233.8	63.6	61.5	-2.1	0.0	0.0	0.0	56.3	138.6	82.3
2029	69.0	301.4	232.4	64.9	62.5	-2.4	0.0	0.0	0.0	57.5	138.6	81.1
2030	70.4	301.4	231.0	66.2	64.1	-2.1	0.0	0.0	0.0	58.6	138.6	80.0
2031	71.8	301.4	229.6	67.6	65.7	-1.9	0.0	0.0	0.0	59.8	138.6	78.8
2032	73.3	301.4	228.1	69.0	66.9	-2.1	0.0	0.0	0.0	61.1	138.6	77.5

**Table 0-700 - Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4**

Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	40.6	166.5	125.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	41.1	166.5	125.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024	44.3	166.5	122.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	48.1	166.5	118.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	53.5	166.5	113.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2027	55.2	166.5	111.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2028	56.3	166.5	110.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2029	57.5	166.5	109.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2030	58.6	166.5	107.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2031	59.8	166.5	106.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2032	61.1	170.6	109.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 0-701 - Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4</b>												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	44.5	41.7	-2.8	41.4	27.8	-13.6	0.0	0.0	0.0	40.8	157.5	116.7
2023	45.2	42.8	-2.4	42.0	30.1	-11.9	0.0	0.0	0.0	41.4	157.5	116.1
2024	49.1	46.4	-2.7	45.7	41.2	-4.5	0.0	0.0	0.0	45.0	157.5	112.5
2025	53.4	51.4	-2.0	49.6	50.7	1.1	0.0	0.0	0.0	48.9	157.5	108.6
2026	59.3	57.1	-2.2	55.1	51.7	-3.4	0.0	0.0	0.0	54.4	157.5	103.1
2027	60.5	57.4	-3.1	56.3	51.7	-4.6	0.0	0.0	0.0	55.5	157.5	102.0
2028	61.8	57.5	-4.3	57.4	52.4	-5.0	0.0	0.0	0.0	56.6	157.5	100.9
2029	63.0	58.8	-4.2	58.6	55.7	-2.9	0.0	0.0	0.0	57.8	157.5	99.7
2030	64.3	61.2	-3.1	59.8	57.5	-2.3	0.0	0.0	0.0	58.9	157.5	98.6
2031	65.6	62.6	-3.0	61.0	59.8	-1.2	0.0	0.0	0.0	60.2	157.5	97.3
2032	67.0	64.7	-2.3	62.2	61.1	-1.1	0.0	0.0	0.0	61.4	157.5	96.1

**Table 0-702 - Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Domestic Car Fleet for Alternative PC2LT4</b>												
Model Year	Toyota			Volvo			VWA			Total		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	43.1	41.0	-2.1	42.3	42.2	-0.1	41.4	32.8	-8.6	43.5	44.9	1.3
2023	43.7	41.5	-2.2	42.9	45.5	2.6	42.0	32.8	-9.2	44.2	46.9	2.7
2024	47.5	44.6	-2.9	46.7	45.5	-1.2	45.7	38.2	-7.5	48.1	53.2	5.1
2025	51.7	48.1	-3.6	50.7	49.5	-1.2	49.6	38.2	-11.4	52.3	56.7	4.5
2026	57.4	52.5	-4.9	56.4	53.7	-2.7	55.2	80.6	25.4	58.0	61.3	3.2
2027	58.6	54.9	-3.7	57.5	53.7	-3.8	56.3	80.6	24.3	59.2	63.5	4.2
2028	59.8	56.6	-3.2	58.7	53.7	-5.0	57.4	81.1	23.7	60.4	64.9	4.4
2029	61.0	58.4	-2.6	59.9	53.7	-6.2	58.6	85.2	26.6	61.7	67.2	5.5
2030	62.2	60.6	-1.6	61.1	58.8	-2.3	59.8	87.1	27.3	62.9	69.1	6.2
2031	63.5	62.7	-0.8	62.3	61.2	-1.1	61.0	88.8	27.8	64.2	70.9	6.7
2032	64.8	64.4	-0.4	63.6	63.1	-0.5	62.3	91.0	28.7	65.5	72.8	7.3

**Table 0-703 - Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4</b>												
Model Year	BMW			Ford			GM			Honda		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	43.3	35.4	-7.9	0.0	0.0	0.0	47.1	41.1	-6.0	44.9	29.4	-15.5
2023	44.0	38.7	-5.3	0.0	0.0	0.0	47.9	41.2	-6.7	45.6	30.0	-15.6
2024	47.8	48.1	0.3	0.0	0.0	0.0	52.0	48.0	-4.0	49.5	30.1	-19.4
2025	52.0	51.7	-0.3	0.0	0.0	0.0	56.5	51.4	-5.1	53.8	30.2	-23.6
2026	57.7	56.2	-1.5	0.0	0.0	0.0	62.8	58.1	-4.7	59.8	103.6	43.8
2027	58.9	56.2	-2.7	0.0	0.0	0.0	64.1	58.1	-6.0	61.1	103.4	42.3
2028	60.1	60.3	0.2	0.0	0.0	0.0	65.4	58.1	-7.3	62.3	103.2	40.9
2029	61.3	63.2	1.9	0.0	0.0	0.0	66.8	61.6	-5.2	63.6	103.1	39.5
2030	62.6	65.9	3.3	0.0	0.0	0.0	68.1	64.2	-3.9	64.9	102.9	38.0
2031	63.9	68.5	4.6	0.0	0.0	0.0	69.5	66.9	-2.6	66.2	102.7	36.5
2032	65.2	70.6	5.4	0.0	0.0	0.0	70.9	66.9	-4.0	67.6	102.6	35.0

**Table 0-704 - Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4</b>												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	44.1	42.7	-1.4	44.4	44.1	-0.3	43.2	29.4	-13.8	0.0	0.0	0.0
2023	44.8	44.7	-0.1	45.0	46.9	1.9	43.8	54.5	10.7	0.0	0.0	0.0
2024	48.7	45.1	-3.6	49.0	54.0	5.0	47.6	54.5	6.9	0.0	0.0	0.0
2025	52.9	48.8	-4.1	53.2	54.0	0.8	51.8	54.5	2.7	0.0	0.0	0.0
2026	58.8	54.3	-4.5	59.1	56.9	-2.2	57.5	61.7	4.2	0.0	0.0	0.0
2027	60.0	56.2	-3.8	60.3	56.9	-3.4	58.7	61.8	3.1	0.0	0.0	0.0
2028	61.2	58.3	-2.9	61.6	56.9	-4.7	59.9	61.9	2.0	0.0	0.0	0.0
2029	62.5	59.8	-2.7	62.8	60.3	-2.5	61.1	63.2	2.1	0.0	0.0	0.0
2030	63.8	61.6	-2.2	64.1	61.8	-2.3	62.4	65.4	3.0	0.0	0.0	0.0
2031	65.1	63.9	-1.2	65.4	63.9	-1.5	63.6	67.4	3.8	0.0	0.0	0.0
2032	66.4	65.2	-1.2	66.7	65.0	-1.7	64.9	69.1	4.2	0.0	0.0	0.0



**Table 0-705 - Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4</b>												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	0.0	0.0	0.0	46.1	40.1	-6.0	41.8	34.1	-7.7	47.0	41.4	-5.6
2023	0.0	0.0	0.0	46.8	40.8	-6.0	42.4	41.6	-0.8	47.7	41.7	-6.0
2024	0.0	0.0	0.0	50.9	49.6	-1.3	46.1	43.7	-2.4	51.9	50.4	-1.5
2025	0.0	0.0	0.0	55.3	51.5	-3.8	50.1	45.6	-4.5	56.4	54.1	-2.3
2026	0.0	0.0	0.0	61.5	56.8	-4.7	55.6	54.0	-1.6	62.7	62.0	-0.7
2027	0.0	0.0	0.0	62.7	60.4	-2.3	56.8	56.2	-0.6	63.9	62.0	-1.9
2028	0.0	0.0	0.0	64.0	62.4	-1.6	57.9	56.2	-1.7	65.2	62.0	-3.2
2029	0.0	0.0	0.0	65.3	64.6	-0.7	59.1	59.3	0.2	66.6	62.0	-4.6
2030	0.0	0.0	0.0	66.7	67.2	0.5	60.3	61.6	1.3	67.9	62.0	-5.9
2031	0.0	0.0	0.0	68.0	69.7	1.7	61.6	64.0	2.4	69.3	69.5	0.2
2032	0.0	0.0	0.0	69.4	71.8	2.4	62.8	66.6	3.8	70.7	70.5	-0.2

**Table 0-706 - Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4</b>												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	45.2	44.3	-0.9	44.9	32.2	-12.7	46.0	37.0	-9.0	42.4	177.7	135.3
2023	45.9	60.2	14.3	45.5	34.1	-11.4	46.7	46.1	-0.6	43.1	177.7	134.6
2024	49.9	62.5	12.6	49.5	41.0	-8.5	50.7	46.1	-4.6	46.8	177.7	130.9
2025	54.3	62.6	8.3	53.8	54.3	0.5	55.1	52.9	-2.2	50.9	177.7	126.8
2026	60.3	62.7	2.4	59.8	59.2	-0.6	61.3	58.6	-2.7	56.6	177.7	121.1
2027	61.5	62.7	1.2	61.0	59.2	-1.8	62.5	60.7	-1.8	57.7	177.7	120.0
2028	62.8	65.6	2.8	62.3	59.2	-3.1	63.8	63.0	-0.8	58.9	177.7	118.8
2029	64.0	66.8	2.8	63.5	59.8	-3.7	65.1	66.0	0.9	60.1	177.7	117.6
2030	65.4	68.5	3.1	64.8	61.8	-3.0	66.4	69.0	2.6	61.3	177.7	116.4
2031	66.7	69.8	3.1	66.1	63.1	-3.0	67.8	71.9	4.1	62.6	177.7	115.1
2032	68.0	70.9	2.9	67.5	66.0	-1.5	69.2	75.2	6.0	63.8	177.7	113.9

**Table 0-707 - Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4**

<b>Required and Achieved CAFE Levels (mpg) for Imported Car Fleet for Alternative PC2LT4</b>												
Model Year	Toyota			Volvo			VWA			Total		
	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference	Required	Achieved	Difference
2022	45.3	45.2	-0.1	43.2	60.6	17.4	45.3	38.2	-7.1	44.7	42.7	-2.0
2023	46.0	48.2	2.2	43.9	61.2	17.3	46.0	39.4	-6.6	45.4	46.3	0.9
2024	50.0	48.8	-1.2	47.7	62.2	14.5	50.0	44.9	-5.1	49.3	49.6	0.3
2025	54.3	49.8	-4.5	51.8	65.4	13.6	54.4	48.3	-6.1	53.6	52.2	-1.4
2026	60.4	57.6	-2.8	57.6	66.0	8.4	60.4	52.3	-8.1	59.5	57.9	-1.6
2027	61.6	59.7	-1.9	58.7	66.0	7.3	61.6	54.2	-7.4	60.7	59.3	-1.4
2028	62.9	61.8	-1.1	59.9	66.0	6.1	62.9	61.4	-1.5	62.0	61.6	-0.4
2029	64.2	63.8	-0.4	61.2	67.2	6.0	64.2	63.2	-1.0	63.3	63.8	0.5
2030	65.5	66.2	0.7	62.4	69.6	7.2	65.5	65.4	-0.1	64.6	65.9	1.4
2031	66.8	68.5	1.7	63.7	71.8	8.1	66.8	67.6	0.8	65.9	68.4	2.5
2032	68.2	70.3	2.1	65.0	76.1	11.1	68.2	69.3	1.1	67.2	70.0	2.8

## Regulatory Cost, Comparison

Table 0-708 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	2.0	2.0	0.0
2023	11.3	11.3	0.0
2024	17.9	17.9	0.0
2025	22.3	22.3	0.0
2026	29.3	29.3	0.0
2027	31.3	37.0	5.7
2028	31.3	40.3	9.0
2029	31.1	42.1	11.0
2030	30.7	42.4	11.7
2031	31.9	43.9	11.9
2032	31.0	44.6	13.6

**Table 0-709 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.9	0.9	0.0
2023	2.4	2.4	0.0
2024	4.5	4.5	0.0
2025	5.3	5.3	0.0
2026	7.0	7.0	0.0
2027	7.3	9.2	1.9
2028	7.1	9.8	2.7
2029	6.8	10.2	3.3
2030	6.7	9.9	3.2
2031	6.6	9.7	3.1
2032	6.3	9.4	3.1

**Table 0-710 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	1.1	1.1	0.0
2023	8.9	8.9	0.0
2024	13.4	13.4	0.0
2025	17.0	17.0	0.0
2026	22.3	22.3	0.0
2027	24.0	27.8	3.8
2028	24.2	30.5	6.3
2029	24.3	31.9	7.7
2030	24.0	32.5	8.4
2031	25.3	34.2	8.9
2032	24.7	35.2	10.6

**Table 0-711 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.2	0.2	0.0	0.1	0.1	0.0	0.5	0.5	0.0	0.0	0.0	0.0
2023	0.2	0.2	0.0	3.1	3.1	0.0	0.7	0.7	0.0	0.7	0.7	0.0
2024	0.4	0.4	0.0	4.4	4.4	0.0	3.3	3.3	0.0	0.8	0.8	0.0
2025	0.6	0.6	0.0	4.5	4.5	0.0	4.2	4.2	0.0	1.1	1.1	0.0
2026	0.6	0.6	0.0	5.0	5.0	0.0	4.6	4.6	0.0	1.9	1.9	0.0
2027	0.6	0.7	0.1	5.2	6.3	1.1	4.6	6.4	1.8	2.2	2.4	0.3
2028	0.7	0.8	0.1	5.1	6.7	1.6	4.4	6.7	2.3	2.3	2.5	0.3
2029	0.7	0.8	0.1	4.8	6.9	2.0	4.1	6.8	2.7	2.3	2.6	0.3
2030	0.7	0.8	0.1	4.5	6.4	1.9	3.8	7.0	3.2	2.3	2.6	0.3
2031	0.8	0.9	0.1	4.4	6.5	2.1	5.0	8.5	3.5	2.3	2.6	0.3
2032	0.7	0.8	0.1	4.3	6.7	2.4	4.7	8.7	4.0	2.1	2.4	0.3

**Table 0-712 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.6	0.6	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2024	0.5	0.5	0.0	0.4	0.4	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2025	0.9	0.9	0.0	0.3	0.3	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2026	1.5	1.5	0.0	0.8	0.8	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2027	1.6	2.7	1.1	0.7	1.1	0.4	0.2	0.2	0.0	0.0	0.0	0.0
2028	1.6	3.7	2.1	0.7	1.2	0.5	0.2	0.2	0.0	0.0	0.0	0.0
2029	1.6	3.6	2.0	0.7	2.0	1.4	0.2	0.2	0.1	0.0	0.0	0.0
2030	1.6	3.4	1.8	0.7	2.0	1.3	0.2	0.3	0.1	0.0	0.0	0.0
2031	1.6	3.3	1.7	0.7	2.1	1.4	0.2	0.2	0.1	0.0	0.0	0.0
2032	1.6	3.2	1.7	0.7	2.0	1.3	0.2	0.3	0.1	0.0	0.0	0.0



**Table 0-713 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2023	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2024	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.0
2025	0.0	0.0	0.0	0.2	0.2	0.0	0.4	0.4	0.0	0.2	0.2	0.0
2026	0.0	0.0	0.0	0.4	0.4	0.0	0.6	0.6	0.0	0.2	0.2	0.0
2027	0.0	0.0	0.0	0.4	0.4	0.0	0.6	0.7	0.1	0.2	0.2	0.0
2028	0.0	0.0	0.0	0.4	0.4	0.0	0.6	0.7	0.1	0.2	0.3	0.1
2029	0.0	0.0	0.0	0.4	0.5	0.0	0.6	0.7	0.1	0.2	0.3	0.1
2030	0.0	0.0	0.0	0.4	0.5	0.0	0.6	0.7	0.1	0.2	0.3	0.1
2031	0.0	0.0	0.0	0.4	0.5	0.0	0.7	0.7	0.1	0.2	0.2	0.1
2032	0.0	0.0	0.0	0.4	0.4	0.0	0.7	0.8	0.1	0.2	0.2	0.1

**Table 0-714 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	1.4	1.4	0.0	2.4	2.4	0.0	0.4	0.4	0.0	0.0	0.0	0.0
2024	1.5	1.5	0.0	3.5	3.5	0.0	0.4	0.4	0.0	0.0	0.0	0.0
2025	1.9	1.9	0.0	5.0	5.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0
2026	2.1	2.1	0.0	5.1	5.1	0.0	1.4	1.4	0.0	0.0	0.0	0.0
2027	2.6	2.7	0.1	5.4	5.9	0.5	1.7	1.7	0.0	0.0	0.0	0.0
2028	2.5	3.0	0.5	5.2	6.2	1.0	1.8	1.8	0.0	0.0	0.0	0.0
2029	2.5	3.0	0.5	5.3	6.7	1.4	1.9	1.9	0.0	0.0	0.0	0.0
2030	2.5	3.0	0.5	5.3	6.8	1.5	2.0	2.0	0.0	0.0	0.0	0.0
2031	2.4	2.9	0.5	5.3	6.9	1.7	2.0	2.0	0.0	0.0	0.0	0.0
2032	2.3	2.8	0.5	5.1	7.6	2.4	1.9	1.9	0.0	0.0	0.0	0.0

**Table 0-715 - Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	2.0	2.0	0.0
2023	0.5	0.5	0.0	0.0	0.0	0.0	0.8	0.8	0.0	11.3	11.3	0.0
2024	1.0	1.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	17.9	17.9	0.0
2025	1.2	1.2	0.0	0.1	0.1	0.0	1.1	1.1	0.0	22.3	22.3	0.0
2026	3.5	3.5	0.0	0.1	0.1	0.0	1.3	1.3	0.0	29.3	29.3	0.0
2027	3.7	3.7	0.0	0.1	0.2	0.0	1.4	1.6	0.2	31.3	37.0	5.7
2028	4.1	4.1	0.0	0.1	0.2	0.1	1.4	1.7	0.3	31.3	40.3	9.0
2029	4.2	4.2	0.0	0.1	0.2	0.1	1.5	1.7	0.3	31.1	42.1	11.0
2030	4.4	4.4	0.0	0.1	0.2	0.1	1.5	1.9	0.4	30.7	42.4	11.7
2031	4.4	4.4	0.0	0.2	0.2	0.1	1.5	1.9	0.4	31.9	43.9	11.9
2032	4.4	4.5	0.2	0.2	0.2	0.1	1.4	1.8	0.4	31.0	44.6	13.6

**Table 0-716 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2023	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.3	0.0
2024	0.3	0.3	0.0	0.2	0.2	0.0	0.7	0.7	0.0	0.3	0.3	0.0
2025	0.4	0.4	0.0	0.3	0.3	0.0	0.7	0.7	0.0	0.5	0.5	0.0
2026	0.3	0.3	0.0	0.3	0.3	0.0	0.8	0.8	0.0	0.8	0.8	0.0
2027	0.3	0.4	0.0	0.2	0.4	0.1	0.7	1.2	0.5	0.9	0.9	0.1
2028	0.3	0.4	0.0	0.2	0.3	0.1	0.7	1.3	0.6	0.8	0.9	0.1
2029	0.3	0.4	0.0	0.2	0.3	0.1	0.6	1.4	0.8	0.8	0.9	0.0
2030	0.3	0.4	0.0	0.2	0.3	0.1	0.6	1.5	0.9	0.8	0.8	0.0
2031	0.3	0.4	0.0	0.2	0.3	0.1	0.6	1.4	0.8	0.8	0.8	0.0
2032	0.3	0.3	0.0	0.1	0.3	0.2	0.5	1.4	0.9	0.7	0.7	0.0

**Table 0-717 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2024	0.5	0.5	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2025	0.6	0.6	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	0.9	0.9	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2027	0.9	1.5	0.6	0.3	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
2028	0.9	2.0	1.1	0.3	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
2029	0.9	1.9	1.0	0.3	1.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0
2030	0.9	1.9	1.0	0.3	1.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0
2031	0.9	1.8	0.9	0.3	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0
2032	0.9	1.8	0.9	0.3	1.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0

**Table 0-718 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2023	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1	0.0
2025	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1	0.0
2026	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.1	0.0
2027	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.1	0.0
2028	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.0
2029	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.1	0.1	0.0
2030	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.1	0.1	0.1
2031	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.1	0.0
2032	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.1	0.1	0.0

**Table 0-719 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.4	0.4	0.0	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2024	0.5	0.5	0.0	0.7	0.7	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2025	0.7	0.7	0.0	0.7	0.7	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2026	0.8	0.8	0.0	0.7	0.7	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2027	1.0	1.0	0.1	0.7	0.7	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2028	0.8	0.9	0.1	0.7	0.8	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2029	0.8	0.9	0.1	0.7	0.7	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2030	0.8	0.9	0.1	0.6	0.7	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2031	0.8	0.9	0.1	0.6	0.8	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2032	0.8	0.9	0.1	0.6	0.8	0.2	0.2	0.2	0.0	0.0	0.0	0.0

**Table 0-720 - Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.9	0.9	0.0
2023	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	2.4	2.4	0.0
2024	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.0	4.5	4.5	0.0
2025	0.4	0.4	0.0	0.0	0.0	0.0	0.3	0.3	0.0	5.3	5.3	0.0
2026	1.0	1.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	7.0	7.0	0.0
2027	1.1	1.1	0.0	0.0	0.0	0.0	0.5	0.5	0.1	7.3	9.2	1.9
2028	1.2	1.2	0.0	0.0	0.0	0.0	0.5	0.6	0.1	7.1	9.8	2.7
2029	1.2	1.2	0.0	0.0	0.0	0.0	0.5	0.6	0.1	6.8	10.2	3.3
2030	1.2	1.2	0.0	0.0	0.0	0.0	0.5	0.5	0.1	6.7	9.9	3.2
2031	1.2	1.2	0.0	0.0	0.0	0.0	0.5	0.5	0.0	6.6	9.7	3.1
2032	1.1	1.1	0.0	0.0	0.0	0.0	0.4	0.5	0.0	6.3	9.4	3.1



**Table 0-721 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0
2023	0.1	0.1	0.0	3.0	3.0	0.0	0.6	0.6	0.0	0.4	0.4	0.0
2024	0.1	0.1	0.0	4.1	4.1	0.0	2.7	2.7	0.0	0.5	0.5	0.0
2025	0.2	0.2	0.0	4.2	4.2	0.0	3.5	3.5	0.0	0.6	0.6	0.0
2026	0.3	0.3	0.0	4.8	4.8	0.0	3.8	3.8	0.0	1.1	1.1	0.0
2027	0.3	0.3	0.0	5.0	5.9	0.9	3.9	5.2	1.3	1.3	1.5	0.2
2028	0.3	0.4	0.0	4.9	6.4	1.5	3.7	5.4	1.7	1.4	1.6	0.2
2029	0.4	0.4	0.1	4.6	6.6	1.9	3.4	5.4	1.9	1.5	1.7	0.2
2030	0.4	0.5	0.1	4.3	6.1	1.8	3.2	5.6	2.4	1.5	1.8	0.3
2031	0.4	0.5	0.1	4.3	6.2	1.9	4.4	7.1	2.7	1.5	1.8	0.3
2032	0.4	0.5	0.1	4.2	6.3	2.2	4.2	7.3	3.1	1.5	1.8	0.3

**Table 0-722 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2024	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2025	0.3	0.3	0.0	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2026	0.6	0.6	0.0	0.5	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2027	0.6	1.2	0.5	0.4	0.5	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2028	0.6	1.6	1.0	0.4	0.6	0.1	0.2	0.2	0.0	0.0	0.0	0.0
2029	0.7	1.6	0.9	0.4	0.8	0.4	0.1	0.2	0.1	0.0	0.0	0.0
2030	0.7	1.6	0.9	0.4	0.8	0.4	0.1	0.3	0.1	0.0	0.0	0.0
2031	0.7	1.5	0.8	0.4	1.0	0.6	0.1	0.2	0.1	0.0	0.0	0.0
2032	0.7	1.5	0.8	0.4	1.0	0.6	0.1	0.3	0.1	0.0	0.0	0.0

**Table 0-723 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0
2024	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0
2025	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0
2026	0.0	0.0	0.0	0.3	0.3	0.0	0.3	0.3	0.0	0.1	0.1	0.0
2027	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.1	0.1	0.0
2028	0.0	0.0	0.0	0.4	0.4	0.0	0.3	0.4	0.1	0.1	0.1	0.0
2029	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.4	0.1	0.1	0.1	0.0
2030	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.5	0.1	0.1	0.2	0.1
2031	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.5	0.1	0.1	0.1	0.1
2032	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.5	0.1	0.1	0.1	0.1

**Table 0-724 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2023	1.0	1.0	0.0	2.2	2.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2024	1.0	1.0	0.0	2.8	2.8	0.0	0.2	0.2	0.0	0.0	0.0	0.0
2025	1.2	1.2	0.0	4.3	4.3	0.0	0.3	0.3	0.0	0.0	0.0	0.0
2026	1.3	1.3	0.0	4.3	4.3	0.0	1.2	1.2	0.0	0.0	0.0	0.0
2027	1.6	1.7	0.1	4.6	5.1	0.5	1.5	1.5	0.0	0.0	0.0	0.0
2028	1.7	2.1	0.4	4.5	5.4	0.9	1.6	1.6	0.0	0.0	0.0	0.0
2029	1.7	2.1	0.4	4.6	5.9	1.3	1.7	1.7	0.0	0.0	0.0	0.0
2030	1.7	2.2	0.5	4.7	6.1	1.4	1.8	1.8	0.0	0.0	0.0	0.0
2031	1.6	2.1	0.4	4.6	6.1	1.5	1.8	1.8	0.0	0.0	0.0	0.0
2032	1.6	2.0	0.4	4.5	6.8	2.3	1.8	1.8	0.0	0.0	0.0	0.0

**Table 0-725 - Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Regulatory Costs (\$b) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	1.1	1.1	0.0
2023	0.3	0.3	0.0	0.0	0.0	0.0	0.7	0.7	0.0	8.9	8.9	0.0
2024	0.7	0.7	0.0	0.0	0.0	0.0	0.7	0.7	0.0	13.4	13.4	0.0
2025	0.8	0.8	0.0	0.1	0.1	0.0	0.8	0.8	0.0	17.0	17.0	0.0
2026	2.4	2.4	0.0	0.1	0.1	0.0	0.9	0.9	0.0	22.3	22.3	0.0
2027	2.6	2.6	0.0	0.1	0.1	0.0	0.9	1.0	0.1	24.0	27.8	3.8
2028	3.0	3.0	0.0	0.1	0.2	0.1	0.9	1.1	0.2	24.2	30.5	6.3
2029	3.1	3.1	0.0	0.1	0.2	0.1	1.0	1.1	0.2	24.3	31.9	7.7
2030	3.2	3.2	0.0	0.1	0.2	0.1	1.0	1.4	0.4	24.0	32.5	8.4
2031	3.3	3.3	0.0	0.1	0.2	0.1	1.0	1.4	0.4	25.3	34.2	8.9
2032	3.3	3.4	0.2	0.1	0.2	0.1	1.0	1.4	0.4	24.7	35.2	10.6

## Vehicle Price Increase

**Table 0-726 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	138	138	0
2023	744	744	0
2024	1,195	1,195	0
2025	1,500	1,500	0
2026	1,920	1,920	0
2027	1,998	2,367	369
2028	1,977	2,555	578
2029	1,993	2,708	716
2030	2,012	2,790	777
2031	2,132	2,942	810
2032	2,077	3,008	932

**Table 0-727 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	159	159	0
2023	436	436	0
2024	868	868	0
2025	1,078	1,078	0
2026	1,417	1,417	0
2027	1,462	1,847	384
2028	1,412	1,966	554
2029	1,389	2,087	697
2030	1,386	2,069	683
2031	1,383	2,033	650
2032	1,312	1,966	654

**Table 0-728 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>			
Model Year	Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	125	125	0
2023	918	918	0
2024	1,367	1,367	0
2025	1,708	1,708	0
2026	2,159	2,159	0
2027	2,248	2,609	360
2028	2,239	2,826	587
2029	2,270	2,992	722
2030	2,302	3,122	819
2031	2,484	3,369	885
2032	2,438	3,502	1,064



**Table 0-729 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	446	446	0	76	76	0	283	283	0	0	0	0
2023	491	491	0	1,737	1,737	0	355	355	0	464	464	0
2024	1,127	1,127	0	2,470	2,470	0	1,728	1,728	0	536	536	0
2025	1,613	1,613	0	2,526	2,526	0	2,171	2,171	0	736	736	0
2026	1,703	1,703	0	2,741	2,741	0	2,313	2,313	0	1,307	1,307	0
2027	1,577	1,800	224	2,759	3,325	566	2,250	3,128	878	1,437	1,610	173
2028	1,781	1,997	216	2,652	3,519	867	2,128	3,252	1,124	1,498	1,673	175
2029	1,948	2,188	240	2,541	3,624	1,083	1,991	3,333	1,342	1,522	1,716	194
2030	2,030	2,299	269	2,407	3,470	1,064	1,884	3,518	1,634	1,552	1,777	225
2031	2,124	2,429	305	2,434	3,583	1,149	2,545	4,334	1,789	1,564	1,777	212
2032	2,066	2,357	291	2,384	3,720	1,336	2,422	4,469	2,048	1,467	1,701	234

**Table 0-730 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	499	499	0	0	0	0
2023	597	597	0	122	122	0	1,599	1,599	0	0	0	0
2024	592	592	0	579	579	0	2,118	2,118	0	0	0	0
2025	1,049	1,049	0	564	564	0	2,115	2,115	0	0	0	0
2026	1,632	1,632	0	1,219	1,219	0	1,718	1,718	0	-2,171	-2,171	0
2027	1,702	2,944	1,242	1,159	1,783	624	1,901	2,163	263	-2,499	-2,499	0
2028	1,696	3,956	2,260	1,092	1,935	843	1,793	2,351	558	-2,671	-2,671	0
2029	1,734	3,904	2,169	1,051	3,214	2,163	1,731	2,565	834	-2,960	-2,960	0
2030	1,778	3,859	2,081	1,123	3,280	2,157	1,813	3,054	1,241	-3,214	-3,214	0
2031	1,830	3,800	1,970	1,168	3,461	2,293	1,808	2,973	1,164	-3,343	-3,343	0
2032	1,786	3,703	1,917	1,151	3,387	2,235	1,819	3,189	1,370	-3,543	-3,543	0

**Table 0-731 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	638	638	0	226	226	0
2023	0	0	0	736	736	0	853	853	0	261	261	0
2024	0	0	0	807	807	0	893	893	0	1,333	1,333	0
2025	0	0	0	872	872	0	1,309	1,309	0	1,471	1,471	0
2026	0	0	0	1,797	1,797	0	2,271	2,271	0	2,039	2,039	0
2027	0	0	0	1,974	2,036	61	2,271	2,503	232	1,908	2,080	172
2028	0	0	0	2,109	2,157	48	1,960	2,427	466	1,806	2,246	440
2029	0	0	0	2,198	2,260	62	2,162	2,570	408	1,695	2,396	701
2030	0	0	0	2,283	2,354	70	2,338	2,636	298	1,600	2,609	1,009
2031	0	0	0	2,340	2,406	66	2,460	2,765	305	1,462	2,104	642
2032	-62	-62	0	2,303	2,366	62	2,470	2,836	365	1,421	2,057	636

**Table 0-732 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	34	34	0	465	465	0	0	0	0	0	0	0
2023	1,361	1,361	0	1,394	1,394	0	439	439	0	5	5	0
2024	1,515	1,515	0	2,031	2,031	0	450	450	0	9	9	0
2025	1,932	1,932	0	2,898	2,898	0	563	563	0	14	14	0
2026	2,089	2,089	0	2,867	2,867	0	1,644	1,644	0	15	15	0
2027	2,508	2,642	134	2,920	3,209	289	1,934	1,936	3	15	15	0
2028	2,407	2,901	495	2,785	3,333	548	2,104	2,105	1	14	15	0
2029	2,437	2,958	521	2,892	3,643	751	2,210	2,211	1	14	14	0
2030	2,457	3,009	552	2,973	3,837	864	2,335	2,336	1	14	14	0
2031	2,438	2,960	521	3,000	3,971	970	2,413	2,413	0	14	14	0
2032	2,363	2,902	539	2,956	4,388	1,432	2,384	2,384	0	13	13	0

**Table 0-733 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	295	295	0	138	138	0
2023	211	211	0	131	131	0	1,242	1,242	0	744	744	0
2024	416	416	0	167	167	0	1,483	1,483	0	1,195	1,195	0
2025	482	482	0	1,051	1,051	0	1,790	1,790	0	1,500	1,500	0
2026	1,390	1,390	0	1,020	1,020	0	1,972	1,972	0	1,920	1,920	0
2027	1,462	1,466	4	926	1,160	234	2,157	2,404	246	1,998	2,367	369
2028	1,602	1,606	4	852	1,330	478	2,066	2,482	416	1,977	2,555	578
2029	1,671	1,677	6	717	1,429	712	2,196	2,640	444	1,993	2,708	716
2030	1,754	1,762	8	942	1,471	529	2,261	2,972	711	2,012	2,790	777
2031	1,818	1,827	9	1,181	1,689	508	2,303	2,946	643	2,132	2,942	810
2032	1,794	1,867	73	1,202	1,768	566	2,249	2,913	665	2,077	3,008	932

**Table 0-734 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	446	446	0	76	76	0	283	283	0	0	0	0
2023	491	491	0	1,737	1,737	0	355	355	0	464	464	0
2024	1,127	1,127	0	2,470	2,470	0	1,728	1,728	0	536	536	0
2025	1,613	1,613	0	2,526	2,526	0	2,171	2,171	0	736	736	0
2026	1,703	1,703	0	2,741	2,741	0	2,313	2,313	0	1,307	1,307	0
2027	1,577	1,800	224	2,759	3,325	566	2,250	3,128	878	1,437	1,610	173
2028	1,781	1,997	216	2,652	3,519	867	2,128	3,252	1,124	1,498	1,673	175
2029	1,948	2,188	240	2,541	3,624	1,083	1,991	3,333	1,342	1,522	1,716	194
2030	2,030	2,299	269	2,407	3,470	1,064	1,884	3,518	1,634	1,552	1,777	225
2031	2,124	2,429	305	2,434	3,583	1,149	2,545	4,334	1,789	1,564	1,777	212
2032	2,066	2,357	291	2,384	3,720	1,336	2,422	4,469	2,048	1,467	1,701	234

**Table 0-735 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	499	499	0	0	0	0
2023	597	597	0	122	122	0	1,599	1,599	0	0	0	0
2024	592	592	0	579	579	0	2,118	2,118	0	0	0	0
2025	1,049	1,049	0	564	564	0	2,115	2,115	0	0	0	0
2026	1,632	1,632	0	1,219	1,219	0	1,718	1,718	0	-2,171	-2,171	0
2027	1,702	2,944	1,242	1,159	1,783	624	1,901	2,163	263	-2,499	-2,499	0
2028	1,696	3,956	2,260	1,092	1,935	843	1,793	2,351	558	-2,671	-2,671	0
2029	1,734	3,904	2,169	1,051	3,214	2,163	1,731	2,565	834	-2,960	-2,960	0
2030	1,778	3,859	2,081	1,123	3,280	2,157	1,813	3,054	1,241	-3,214	-3,214	0
2031	1,830	3,800	1,970	1,168	3,461	2,293	1,808	2,973	1,164	-3,343	-3,343	0
2032	1,786	3,703	1,917	1,151	3,387	2,235	1,819	3,189	1,370	-3,543	-3,543	0

**Table 0-736 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	638	638	0	226	226	0
2023	0	0	0	736	736	0	853	853	0	261	261	0
2024	0	0	0	807	807	0	893	893	0	1,333	1,333	0
2025	0	0	0	872	872	0	1,309	1,309	0	1,471	1,471	0
2026	0	0	0	1,797	1,797	0	2,271	2,271	0	2,039	2,039	0
2027	0	0	0	1,974	2,036	61	2,271	2,503	232	1,908	2,080	172
2028	0	0	0	2,109	2,157	48	1,960	2,427	466	1,806	2,246	440
2029	0	0	0	2,198	2,260	62	2,162	2,570	408	1,695	2,396	701
2030	0	0	0	2,283	2,354	70	2,338	2,636	298	1,600	2,609	1,009
2031	0	0	0	2,340	2,406	66	2,460	2,765	305	1,462	2,104	642
2032	-62	-62	0	2,303	2,366	62	2,470	2,836	365	1,421	2,057	636



**Table 0-737 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	34	34	0	465	465	0	0	0	0	0	0	0
2023	1,361	1,361	0	1,394	1,394	0	439	439	0	5	5	0
2024	1,515	1,515	0	2,031	2,031	0	450	450	0	9	9	0
2025	1,932	1,932	0	2,898	2,898	0	563	563	0	14	14	0
2026	2,089	2,089	0	2,867	2,867	0	1,644	1,644	0	15	15	0
2027	2,508	2,642	134	2,920	3,209	289	1,934	1,936	3	15	15	0
2028	2,407	2,901	495	2,785	3,333	548	2,104	2,105	1	14	15	0
2029	2,437	2,958	521	2,892	3,643	751	2,210	2,211	1	14	14	0
2030	2,457	3,009	552	2,973	3,837	864	2,335	2,336	1	14	14	0
2031	2,438	2,960	521	3,000	3,971	970	2,413	2,413	0	14	14	0
2032	2,363	2,902	539	2,956	4,388	1,432	2,384	2,384	0	13	13	0

**Table 0-738 - Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	295	295	0	138	138	0
2023	211	211	0	131	131	0	1,242	1,242	0	744	744	0
2024	416	416	0	167	167	0	1,483	1,483	0	1,195	1,195	0
2025	482	482	0	1,051	1,051	0	1,790	1,790	0	1,500	1,500	0
2026	1,390	1,390	0	1,020	1,020	0	1,972	1,972	0	1,920	1,920	0
2027	1,462	1,466	4	926	1,160	234	2,157	2,404	246	1,998	2,367	369
2028	1,602	1,606	4	852	1,330	478	2,066	2,482	416	1,977	2,555	578
2029	1,671	1,677	6	717	1,429	712	2,196	2,640	444	1,993	2,708	716
2030	1,754	1,762	8	942	1,471	529	2,261	2,972	711	2,012	2,790	777
2031	1,818	1,827	9	1,181	1,689	508	2,303	2,946	643	2,132	2,942	810
2032	1,794	1,867	73	1,202	1,768	566	2,249	2,913	665	2,077	3,008	932

**Table 0-739 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	631	631	0	133	133	0	411	411	0	0	0	0
2023	622	622	0	74	74	0	280	280	0	339	339	0
2024	1,860	1,860	0	1,394	1,394	0	1,570	1,570	0	380	380	0
2025	2,024	2,024	0	1,611	1,611	0	1,741	1,741	0	710	710	0
2026	1,951	1,951	0	1,464	1,464	0	1,942	1,942	0	1,132	1,132	0
2027	1,789	2,066	277	1,304	2,034	730	1,781	3,035	1,254	1,204	1,294	90
2028	1,859	2,089	230	1,201	1,912	711	1,684	3,164	1,480	1,179	1,262	83
2029	1,889	2,088	199	1,073	1,769	695	1,577	3,574	1,997	1,152	1,228	76
2030	1,845	2,079	234	902	1,629	726	1,513	3,682	2,169	1,133	1,201	69
2031	1,842	2,102	259	916	1,776	860	1,442	3,553	2,111	1,109	1,171	63
2032	1,722	1,871	149	878	1,937	1,059	1,368	3,613	2,246	955	1,013	58

**Table 0-740 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	1,162	1,162	0	0	0	0
2023	911	911	0	60	60	0	4,315	4,315	0	0	0	0
2024	897	897	0	872	872	0	4,072	4,072	0	0	0	0
2025	1,210	1,210	0	806	806	0	3,866	3,866	0	0	0	0
2026	1,734	1,734	0	933	933	0	3,704	3,704	0	-2,171	-2,171	0
2027	1,847	3,045	1,198	913	1,951	1,038	3,679	3,890	211	-2,499	-2,499	0
2028	1,849	4,042	2,192	857	2,099	1,242	3,435	3,858	423	-2,671	-2,671	0
2029	1,850	3,968	2,118	828	3,785	2,957	3,103	3,728	625	-2,960	-2,960	0
2030	1,857	3,899	2,042	858	3,784	2,926	2,916	3,681	766	-3,214	-3,214	0
2031	1,873	3,826	1,953	878	3,546	2,668	2,878	3,484	606	-3,343	-3,343	0
2032	1,802	3,642	1,840	851	3,337	2,485	2,715	3,273	558	-3,543	-3,543	0

**Table 0-741 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	904	904	0	345	345	0
2023	0	0	0	858	858	0	1,375	1,375	0	312	312	0
2024	0	0	0	813	813	0	1,433	1,433	0	1,249	1,249	0
2025	0	0	0	889	889	0	1,926	1,926	0	1,418	1,418	0
2026	0	0	0	1,450	1,450	0	2,452	2,452	0	2,222	2,222	0
2027	0	0	0	1,651	1,750	100	2,304	2,554	250	2,064	2,255	191
2028	0	0	0	1,695	1,776	81	1,876	2,349	473	1,942	2,402	461
2029	0	0	0	1,688	1,766	77	1,976	2,381	405	1,806	2,501	695
2030	0	0	0	1,700	1,772	73	2,076	2,179	102	1,691	2,636	945
2031	0	0	0	1,705	1,774	69	2,148	2,278	129	1,537	1,739	202
2032	-62	-62	0	1,629	1,694	65	2,129	2,326	197	1,475	1,695	220

**Table 0-742 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	31	31	0	1,194	1,194	0	0	0	0	0	0	0
2023	743	743	0	881	881	0	1,014	1,014	0	0	0	0
2024	932	932	0	3,228	3,228	0	976	976	0	0	0	0
2025	1,267	1,267	0	3,614	3,614	0	1,409	1,409	0	0	0	0
2026	1,473	1,473	0	3,747	3,747	0	1,820	1,820	0	0	0	0
2027	1,795	1,926	131	3,558	3,725	167	1,798	1,802	4	0	0	0
2028	1,493	1,675	181	3,441	3,963	522	1,787	1,788	1	0	0	0
2029	1,499	1,667	168	3,339	3,770	431	1,718	1,719	1	0	0	0
2030	1,549	1,660	111	3,331	3,869	537	1,669	1,670	1	0	0	0
2031	1,550	1,664	114	3,312	4,046	734	1,622	1,623	0	0	0	0
2032	1,498	1,689	191	3,217	4,031	814	1,500	1,500	0	0	0	0

**Table 0-743 - Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	424	424	0	159	159	0
2023	206	206	0	45	45	0	529	529	0	436	436	0
2024	340	340	0	45	45	0	1,100	1,100	0	868	868	0
2025	455	455	0	399	399	0	1,303	1,303	0	1,078	1,078	0
2026	1,135	1,135	0	407	407	0	1,811	1,811	0	1,417	1,417	0
2027	1,213	1,213	0	387	518	130	2,097	2,362	265	1,462	1,847	384
2028	1,300	1,301	0	363	708	346	2,078	2,583	505	1,412	1,966	554
2029	1,310	1,310	1	202	689	487	2,067	2,588	521	1,389	2,087	697
2030	1,331	1,332	0	339	473	134	2,061	2,345	284	1,386	2,069	683
2031	1,341	1,341	0	481	641	160	2,094	2,232	137	1,383	2,033	650
2032	1,285	1,285	0	484	699	215	2,004	2,136	132	1,312	1,966	654

**Table 0-744 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	BMW			Ford			GM			Honda		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	226	226	0	69	69	0	240	240	0	0	0	0
2023	349	349	0	1,938	1,938	0	377	377	0	598	598	0
2024	382	382	0	2,592	2,592	0	1,773	1,773	0	692	692	0
2025	1,221	1,221	0	2,622	2,622	0	2,286	2,286	0	761	761	0
2026	1,474	1,474	0	2,872	2,872	0	2,408	2,408	0	1,466	1,466	0
2027	1,385	1,561	176	2,905	3,454	549	2,368	3,151	783	1,645	1,892	246
2028	1,711	1,915	204	2,796	3,678	882	2,239	3,273	1,035	1,782	2,036	254
2029	2,001	2,276	275	2,686	3,806	1,120	2,094	3,274	1,180	1,848	2,143	295
2030	2,196	2,495	299	2,556	3,652	1,096	1,977	3,478	1,501	1,924	2,285	361
2031	2,380	2,726	346	2,587	3,765	1,178	2,824	4,532	1,708	1,974	2,321	346
2032	2,380	2,802	422	2,536	3,901	1,365	2,690	4,688	1,998	1,929	2,324	395



**Table 0-745 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>												
Model Year	Hyundai KiH			Hyundai KiK			JLR			Karma		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	481	481	0	0	0	0
2023	142	142	0	200	200	0	1,530	1,530	0	0	0	0
2024	181	181	0	233	233	0	2,072	2,072	0	0	0	0
2025	845	845	0	294	294	0	2,076	2,076	0	0	0	0
2026	1,506	1,506	0	1,527	1,527	0	1,675	1,675	0	0	0	0
2027	1,527	2,823	1,295	1,419	1,607	188	1,863	2,127	264	0	0	0
2028	1,513	3,854	2,341	1,338	1,765	427	1,759	2,319	561	0	0	0
2029	1,597	3,828	2,231	1,283	2,627	1,344	1,703	2,541	838	0	0	0
2030	1,683	3,810	2,127	1,399	2,756	1,357	1,790	3,041	1,251	0	0	0
2031	1,779	3,769	1,990	1,475	3,371	1,895	1,785	2,962	1,176	0	0	0
2032	1,767	3,776	2,009	1,471	3,440	1,969	1,800	3,187	1,388	0	0	0

**Table 0-746 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Lucid			Mazda			Mercedes-Benz			Mitsubishi		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	371	371	0	74	74	0
2023	0	0	0	715	715	0	374	374	0	201	201	0
2024	0	0	0	806	806	0	430	430	0	1,425	1,425	0
2025	0	0	0	870	870	0	814	814	0	1,525	1,525	0
2026	0	0	0	1,847	1,847	0	2,131	2,131	0	1,858	1,858	0
2027	0	0	0	2,019	2,075	56	2,245	2,463	218	1,755	1,910	155
2028	0	0	0	2,166	2,209	43	2,024	2,485	461	1,675	2,096	421
2029	0	0	0	2,268	2,328	60	2,302	2,712	409	1,587	2,296	709
2030	0	0	0	2,364	2,434	70	2,536	2,980	445	1,513	2,584	1,071
2031	0	0	0	2,429	2,494	65	2,699	3,138	439	1,390	2,461	1,072
2032	0	0	0	2,398	2,461	62	2,733	3,229	495	1,368	2,414	1,046

**Table 0-747 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>												
Model Year	Nissan			Stellantis			Subaru			Tesla		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	39	39	0	347	347	0	0	0	0	0	0	0
2023	2,165	2,165	0	1,470	1,470	0	338	338	0	100	100	0
2024	2,222	2,222	0	1,865	1,865	0	363	363	0	177	177	0
2025	2,689	2,689	0	2,805	2,805	0	432	432	0	252	252	0
2026	2,769	2,769	0	2,756	2,756	0	1,618	1,618	0	248	248	0
2027	3,281	3,413	133	2,842	3,146	304	1,954	1,956	2	244	244	0
2028	3,385	4,208	823	2,705	3,256	552	2,150	2,151	1	240	240	0
2029	3,434	4,319	885	2,838	3,627	790	2,281	2,282	1	237	237	0
2030	3,429	4,445	1,016	2,929	3,833	904	2,433	2,433	0	233	233	0
2031	3,404	4,365	961	2,962	3,961	999	2,530	2,530	0	229	229	0
2032	3,306	4,229	923	2,924	4,433	1,509	2,516	2,516	0	226	226	0

**Table 0-748 - Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Average Vehicle Price Increase (dollars) for Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4												
Model Year	Toyota			Volvo			VWA			Total		
	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference	No Action Alternative (Baseline)	Alternative PC2LT4	Difference
2022	0	0	0	0	0	0	202	202	0	125	125	0
2023	214	214	0	170	170	0	1,709	1,709	0	918	918	0
2024	463	463	0	217	217	0	1,718	1,718	0	1,367	1,367	0
2025	499	499	0	1,302	1,302	0	2,069	2,069	0	1,708	1,708	0
2026	1,532	1,532	0	1,248	1,248	0	2,061	2,061	0	2,159	2,159	0
2027	1,599	1,604	5	1,123	1,393	271	2,190	2,426	236	2,248	2,609	360
2028	1,766	1,771	5	1,029	1,553	524	2,060	2,428	368	2,239	2,826	587
2029	1,865	1,872	7	902	1,692	790	2,266	2,668	402	2,270	2,992	722
2030	1,982	1,994	12	1,160	1,829	669	2,369	3,308	939	2,302	3,122	819
2031	2,079	2,092	13	1,438	2,073	635	2,417	3,336	919	2,484	3,369	885
2032	2,075	2,188	114	1,466	2,163	696	2,383	3,341	958	2,438	3,502	1,064

## Technology Costs, Price Increases, Sales, and Labor Utilization

**Table 0-749 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	138	138	0	0%	14.4	14.4	0.0	0.0%	889	889	0.0	0.0%
2023	9	9	0	0%	744	744	0	0%	15.2	15.2	0.0	0.0%	959	959	0.0	0.0%
2024	15	15	0	0%	1,195	1,195	0	0%	14.9	14.9	0.0	0.0%	955	955	0.0	0.0%
2025	19	19	0	0%	1,500	1,500	0	0%	14.9	14.9	0.0	0.0%	962	962	0.0	0.0%
2026	26	26	0	0%	1,920	1,920	0	0%	15.2	15.2	0.0	0.0%	997	997	0.0	0.0%
2027	27	31	4	16%	1,998	2,367	369	18%	15.7	15.6	0.0	-0.3%	1,028	1,030	2.8	0.3%
2028	28	34	7	24%	1,977	2,555	578	29%	15.8	15.8	-0.1	-0.4%	1,040	1,043	3.2	0.3%
2029	28	36	9	32%	1,993	2,708	716	36%	15.6	15.5	-0.1	-0.5%	1,027	1,033	5.5	0.5%
2030	27	37	9	34%	2,012	2,790	777	39%	15.3	15.2	-0.1	-0.5%	1,006	1,012	5.9	0.6%
2031	29	39	10	33%	2,132	2,942	810	38%	15.0	14.9	-0.1	-0.5%	992	998	6.2	0.6%
2032	28	39	11	38%	2,077	3,008	932	45%	14.9	14.8	-0.1	-0.5%	986	993	6.8	0.7%



**Table 0-750 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Passenger Car Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	159	159	0	0%	5.5	5.5	0.0	0.0%	301	301	0.0	0.0%
2023	2	2	0	0%	436	436	0	0%	5.5	5.5	0.0	0.0%	303	303	0.0	0.0%
2024	4	4	0	0%	868	868	0	0%	5.1	5.1	0.0	0.0%	288	288	0.0	0.0%
2025	5	5	0	0%	1,078	1,078	0	0%	4.9	4.9	0.0	0.0%	277	277	0.0	0.0%
2026	6	6	0	0%	1,417	1,417	0	0%	4.9	4.9	0.0	0.0%	280	280	0.0	0.0%
2027	6	8	1	22%	1,462	1,847	384	26%	5.0	5.0	0.0	-0.6%	284	282	-1.3	-0.5%
2028	6	8	2	31%	1,412	1,966	554	39%	5.0	5.0	0.0	-0.8%	285	283	-1.7	-0.6%
2029	6	9	3	44%	1,389	2,087	697	50%	4.9	4.9	-0.1	-1.0%	279	277	-2.1	-0.7%
2030	6	9	3	44%	1,386	2,069	683	49%	4.8	4.8	0.0	-0.8%	274	273	-1.5	-0.5%
2031	6	9	3	44%	1,383	2,033	650	47%	4.8	4.8	0.0	-0.6%	272	272	-0.8	-0.3%
2032	6	8	3	45%	1,312	1,966	654	50%	4.8	4.8	0.0	-0.4%	272	272	-0.1	0.0%

**Table 0-751 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Total) Light Truck Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	125	125	0	0%	8.9	8.9	0.0	0.0%	588	588	0.0	0.0%
2023	7	7	0	0%	918	918	0	0%	9.7	9.7	0.0	0.0%	656	656	0.0	0.0%
2024	11	11	0	0%	1,367	1,367	0	0%	9.8	9.8	0.0	0.0%	667	667	0.0	0.0%
2025	14	14	0	0%	1,708	1,708	0	0%	10.0	10.0	0.0	0.0%	685	685	0.0	0.0%
2026	19	19	0	0%	2,159	2,159	0	0%	10.3	10.3	0.0	0.0%	718	718	0.0	0.0%
2027	21	24	3	15%	2,248	2,609	360	16%	10.7	10.7	0.0	-0.1%	744	748	4.1	0.6%
2028	21	26	5	22%	2,239	2,826	587	26%	10.8	10.8	0.0	-0.2%	755	760	4.9	0.6%
2029	21	27	6	28%	2,270	2,992	722	32%	10.7	10.7	0.0	-0.2%	748	755	7.6	1.0%
2030	21	28	7	31%	2,302	3,122	819	36%	10.4	10.4	0.0	-0.3%	732	739	7.4	1.0%
2031	23	30	7	30%	2,484	3,369	885	36%	10.2	10.2	0.0	-0.4%	719	726	7.0	1.0%
2032	22	30	8	36%	2,438	3,502	1,064	44%	10.1	10.1	-0.1	-0.6%	715	722	6.8	1.0%



**Table 0-752 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (BMW) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (BMW) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	446	446	0	0%	0.4	0.4	0.0	0.0%	17	17	0.0	0.0%
2023	0	0	0	0%	491	491	0	0%	0.4	0.4	0.0	0.0%	18	18	0.0	0.0%
2024	0	0	0	0%	1,127	1,127	0	0%	0.4	0.4	0.0	0.0%	18	18	0.0	0.0%
2025	1	1	0	0%	1,613	1,613	0	0%	0.4	0.4	0.0	0.0%	19	19	0.0	0.0%
2026	1	1	0	0%	1,703	1,703	0	0%	0.4	0.4	0.0	0.0%	19	19	0.0	0.0%
2027	1	1	0	0%	1,577	1,800	224	14%	0.4	0.4	0.0	-0.3%	20	20	0.0	-0.2%
2028	1	1	0	-1%	1,781	1,997	216	12%	0.4	0.4	0.0	-0.5%	20	20	-0.1	-0.3%
2029	1	1	0	1%	1,948	2,188	240	12%	0.4	0.4	0.0	-0.6%	20	20	0.0	-0.2%
2030	1	1	0	1%	2,030	2,299	269	13%	0.4	0.4	0.0	-0.6%	20	20	-0.1	-0.3%
2031	1	1	0	1%	2,124	2,429	305	14%	0.4	0.4	0.0	-0.5%	19	19	-0.1	-0.4%
2032	1	1	0	6%	2,066	2,357	291	14%	0.4	0.4	0.0	-0.5%	19	19	0.0	-0.3%

**Table 0-753 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Ford) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Ford) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	76	76	0	0%	1.6	1.6	0.0	0.0%	146	146	0.0	0.0%
2023	3	3	0	0%	1,737	1,737	0	0%	1.8	1.8	0.0	0.0%	163	163	0.0	0.0%
2024	4	4	0	0%	2,470	2,470	0	0%	1.8	1.8	0.0	0.0%	165	165	0.0	0.0%
2025	4	4	0	0%	2,526	2,526	0	0%	1.8	1.8	0.0	0.0%	167	167	0.0	0.0%
2026	5	5	0	0%	2,741	2,741	0	0%	1.8	1.8	0.0	0.0%	173	173	0.0	0.0%
2027	5	6	1	23%	2,759	3,325	566	21%	1.9	1.9	0.0	-0.1%	179	180	1.5	0.9%
2028	5	6	2	36%	2,652	3,519	867	33%	1.9	1.9	0.0	-0.3%	181	183	2.1	1.2%
2029	4	6	2	47%	2,541	3,624	1,083	43%	1.9	1.9	0.0	-0.3%	178	181	2.8	1.6%
2030	4	6	2	49%	2,407	3,470	1,064	44%	1.9	1.8	0.0	-0.4%	174	176	2.5	1.4%
2031	4	6	2	44%	2,434	3,583	1,149	47%	1.8	1.8	0.0	-0.4%	170	172	2.0	1.2%
2032	4	6	2	44%	2,384	3,720	1,336	56%	1.8	1.8	0.0	-0.6%	169	171	1.7	1.0%

**Table 0-754 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (GM) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (GM) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	283	283	0	0%	1.8	1.8	0.0	0.0%	125	125	0.0	0.0%
2023	0	0	0	0%	355	355	0	0%	2.0	2.0	0.0	0.0%	135	135	0.0	0.0%
2024	3	3	0	0%	1,728	1,728	0	0%	1.9	1.9	0.0	0.0%	139	139	0.0	0.0%
2025	4	4	0	0%	2,171	2,171	0	0%	1.9	1.9	0.0	0.0%	141	141	0.0	0.0%
2026	4	4	0	0%	2,313	2,313	0	0%	2.0	2.0	0.0	0.0%	146	146	0.0	0.0%
2027	4	6	1	34%	2,250	3,128	878	39%	2.1	2.1	0.0	-0.2%	150	152	1.5	1.0%
2028	4	5	1	38%	2,128	3,252	1,124	53%	2.1	2.1	0.0	-0.3%	152	153	1.5	1.0%
2029	4	5	2	46%	1,991	3,333	1,342	67%	2.1	2.0	0.0	-0.4%	150	151	1.7	1.1%
2030	3	5	2	53%	1,884	3,518	1,634	87%	2.0	2.0	0.0	-0.4%	146	147	1.7	1.2%
2031	5	7	2	51%	2,545	4,334	1,789	70%	2.0	2.0	0.0	-0.5%	145	148	2.5	1.7%
2032	4	7	2	57%	2,422	4,469	2,048	85%	2.0	1.9	0.0	-0.6%	144	147	2.6	1.8%

**Table 0-755 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Honda) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Honda) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	1.5	1.5	0.0	0.0%	130	130	0.0	0.0%
2023	0	0	0	0%	464	464	0	0%	1.5	1.5	0.0	0.0%	138	138	0.0	0.0%
2024	0	0	0	0%	536	536	0	0%	1.5	1.5	0.0	0.0%	135	135	0.0	0.0%
2025	1	1	0	0%	736	736	0	0%	1.5	1.5	0.0	0.0%	134	134	0.0	0.0%
2026	2	2	0	0%	1,307	1,307	0	0%	1.5	1.5	0.0	0.0%	139	139	0.0	0.0%
2027	2	2	0	14%	1,437	1,610	173	12%	1.5	1.5	0.0	-0.3%	143	143	0.2	0.2%
2028	2	2	0	13%	1,498	1,673	175	12%	1.5	1.5	0.0	-0.5%	145	145	0.0	0.0%
2029	2	2	0	14%	1,522	1,716	194	13%	1.5	1.5	0.0	-0.6%	143	143	0.0	0.0%
2030	2	2	0	16%	1,552	1,777	225	15%	1.5	1.5	0.0	-0.6%	140	140	0.1	0.1%
2031	2	2	0	15%	1,564	1,777	212	14%	1.5	1.4	0.0	-0.5%	138	138	0.1	0.1%
2032	2	2	0	17%	1,467	1,701	234	16%	1.4	1.4	0.0	-0.5%	137	137	0.1	0.1%

**Table 0-756 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Hyundai KiH) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Hyundai KiH) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.9	0.9	0.0	0.0%	24	24	0.0	0.0%
2023	1	1	0	0%	597	597	0	0%	0.9	0.9	0.0	0.0%	25	25	0.0	0.0%
2024	1	1	0	0%	592	592	0	0%	0.9	0.9	0.0	0.0%	25	25	0.0	0.0%
2025	1	1	0	0%	1,049	1,049	0	0%	0.9	0.9	0.0	0.0%	25	25	0.0	0.0%
2026	1	1	0	0%	1,632	1,632	0	0%	0.9	0.9	0.0	0.0%	26	26	0.0	0.0%
2027	1	2	1	72%	1,702	2,944	1,242	73%	0.9	0.9	0.0	-0.4%	26	26	0.0	-0.1%
2028	1	4	2	146%	1,696	3,956	2,260	133%	0.9	0.9	0.0	-0.5%	26	26	0.0	0.1%
2029	1	3	2	136%	1,734	3,904	2,169	125%	0.9	0.9	0.0	-0.6%	26	26	0.0	0.0%
2030	1	3	2	126%	1,778	3,859	2,081	117%	0.9	0.9	0.0	-0.6%	25	25	0.0	0.0%
2031	1	3	2	115%	1,830	3,800	1,970	108%	0.9	0.9	0.0	-0.5%	25	25	0.0	0.1%
2032	1	3	2	115%	1,786	3,703	1,917	107%	0.9	0.9	0.0	-0.5%	25	25	0.0	0.0%

**Table 0-757 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Hyundai KiK) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Hyundai KiK) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.6	0.6	0.0	0.0%	29	29	0.0	0.0%
2023	0	0	0	0%	122	122	0	0%	0.6	0.6	0.0	0.0%	30	30	0.0	0.0%
2024	0	0	0	0%	579	579	0	0%	0.6	0.6	0.0	0.0%	30	30	0.0	0.0%
2025	0	0	0	0%	564	564	0	0%	0.6	0.6	0.0	0.0%	30	30	0.0	0.0%
2026	1	1	0	0%	1,219	1,219	0	0%	0.6	0.6	0.0	0.0%	31	31	0.0	0.0%
2027	1	1	0	39%	1,159	1,783	624	54%	0.6	0.6	0.0	-0.4%	32	32	-0.1	-0.3%
2028	1	1	0	39%	1,092	1,935	843	77%	0.6	0.6	0.0	-0.5%	32	32	-0.1	-0.4%
2029	1	2	1	207%	1,051	3,214	2,163	206%	0.6	0.6	0.0	-0.6%	32	31	-0.1	-0.4%
2030	1	2	1	185%	1,123	3,280	2,157	192%	0.6	0.6	0.0	-0.6%	31	31	-0.1	-0.4%
2031	1	2	1	203%	1,168	3,461	2,293	196%	0.6	0.6	0.0	-0.5%	30	30	0.1	0.2%
2032	1	2	1	204%	1,151	3,387	2,235	194%	0.6	0.6	0.0	-0.5%	30	30	0.2	0.6%

**Table 0-758 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (JLR) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (JLR) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	499	499	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2023	0	0	0	0%	1,599	1,599	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2024	0	0	0	0%	2,118	2,118	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2025	0	0	0	0%	2,115	2,115	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2026	0	0	0	0%	1,718	1,718	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2027	0	0	0	0%	1,901	2,163	263	14%	0.1	0.1	0.0	-0.1%	1	1	0.0	-0.1%
2028	0	0	0	0%	1,793	2,351	558	31%	0.1	0.1	0.0	-0.2%	1	1	0.0	-0.2%
2029	0	0	0	0%	1,731	2,565	834	48%	0.1	0.1	0.0	-0.2%	1	1	0.0	-0.2%
2030	0	0	0	14%	1,813	3,054	1,241	68%	0.1	0.1	0.0	-0.3%	1	1	0.0	0.1%
2031	0	0	0	22%	1,808	2,973	1,164	64%	0.1	0.1	0.0	-0.4%	1	1	0.0	0.0%
2032	0	0	0	37%	1,819	3,189	1,370	75%	0.1	0.1	0.0	-0.6%	1	1	0.0	-0.1%

**Table 0-759 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Karma) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Karma) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2023	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2024	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2025	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2026	0	0	0	0%	-2,171	-2,171	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2027	0	0	0	0%	-2,499	-2,499	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2028	0	0	0	0%	-2,671	-2,671	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2029	0	0	0	0%	-2,960	-2,960	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2030	0	0	0	0%	-3,214	-3,214	0	0%	0.0	0.0	0.0	1.1%	0	0	0.0	1.1%
2031	0	0	0	0%	-3,343	-3,343	0	0%	0.0	0.0	0.0	2.3%	0	0	0.0	2.3%
2032	0	0	0	0%	-3,543	-3,543	0	0%	0.0	0.0	0.0	2.3%	0	0	0.0	2.3%



**Table 0-760 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Lucid) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Lucid) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2023	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2024	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2025	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2026	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	0.0%	0	0	0.0	0.0%
2027	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	-0.7%	0	0	0.0	-0.7%
2028	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	-0.8%	0	0	0.0	-0.8%
2029	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	-1.2%	0	0	0.0	-1.2%
2030	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	-1.0%	0	0	0.0	-1.0%
2031	0	0	0	0%	0	0	0	0%	0.0	0.0	0.0	-0.8%	0	0	0.0	-0.8%
2032	0	0	0	0%	-62	-62	0	0%	0.0	0.0	0.0	-0.6%	0	0	0.0	-0.6%

**Table 0-761 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mazda) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mazda) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.2	0.2	0.0	0.0%	2	2	0.0	0.0%
2023	0	0	0	0%	736	736	0	0%	0.2	0.2	0.0	0.0%	2	2	0.0	0.0%
2024	0	0	0	0%	807	807	0	0%	0.2	0.2	0.0	0.0%	2	2	0.0	0.0%
2025	0	0	0	0%	872	872	0	0%	0.2	0.2	0.0	0.0%	2	2	0.0	0.0%
2026	0	0	0	0%	1,797	1,797	0	0%	0.2	0.2	0.0	0.0%	2	2	0.0	0.0%
2027	0	0	0	3%	1,974	2,036	61	3%	0.2	0.2	0.0	-0.2%	2	2	0.0	-0.1%
2028	0	0	0	2%	2,109	2,157	48	2%	0.2	0.2	0.0	-0.3%	3	3	0.0	-0.2%
2029	0	0	0	3%	2,198	2,260	62	3%	0.2	0.2	0.0	-0.3%	2	2	0.0	-0.2%
2030	0	0	0	3%	2,283	2,354	70	3%	0.2	0.2	0.0	-0.4%	2	2	0.0	-0.3%
2031	0	0	0	3%	2,340	2,406	66	3%	0.2	0.2	0.0	-0.5%	2	2	0.0	-0.4%
2032	0	0	0	2%	2,303	2,366	62	3%	0.2	0.2	0.0	-0.6%	2	2	0.0	-0.6%

**Table 0-762 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mercedes-Benz) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mercedes-Benz) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	638	638	0	0%	0.3	0.3	0.0	0.0%	9	9	0.0	0.0%
2023	0	0	0	0%	853	853	0	0%	0.3	0.3	0.0	0.0%	10	10	0.0	0.0%
2024	0	0	0	0%	893	893	0	0%	0.3	0.3	0.0	0.0%	10	10	0.0	0.0%
2025	0	0	0	0%	1,309	1,309	0	0%	0.3	0.3	0.0	0.0%	10	10	0.0	0.0%
2026	0	0	0	0%	2,271	2,271	0	0%	0.3	0.3	0.0	0.0%	10	10	0.0	0.0%
2027	0	0	0	1%	2,271	2,503	232	10%	0.3	0.3	0.0	-0.3%	10	10	0.0	-0.2%
2028	0	0	0	5%	1,960	2,427	466	24%	0.3	0.3	0.0	-0.5%	11	11	0.0	0.2%
2029	0	1	0	6%	2,162	2,570	408	19%	0.3	0.3	0.0	-0.5%	11	11	0.0	0.2%
2030	1	1	0	14%	2,338	2,636	298	13%	0.3	0.3	0.0	-0.5%	10	10	0.0	0.0%
2031	1	1	0	12%	2,460	2,765	305	12%	0.3	0.3	0.0	-0.5%	10	10	0.0	-0.1%
2032	1	1	0	11%	2,470	2,836	365	15%	0.3	0.3	0.0	-0.5%	10	10	0.0	-0.2%

**Table 0-763 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mitsubishi) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Mitsubishi) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	226	226	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2023	0	0	0	0%	261	261	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2024	0	0	0	0%	1,333	1,333	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2025	0	0	0	0%	1,471	1,471	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2026	0	0	0	0%	2,039	2,039	0	0%	0.1	0.1	0.0	0.0%	1	1	0.0	0.0%
2027	0	0	0	0%	1,908	2,080	172	9%	0.1	0.1	0.0	-0.3%	1	1	0.0	-0.3%
2028	0	0	0	0%	1,806	2,246	440	24%	0.1	0.1	0.0	-0.5%	1	1	0.0	-0.5%
2029	0	0	0	-1%	1,695	2,396	701	41%	0.1	0.1	0.0	-0.6%	1	1	0.0	-0.6%
2030	0	0	0	-1%	1,600	2,609	1,009	63%	0.1	0.1	0.0	-0.6%	1	1	0.0	-0.6%
2031	0	0	0	45%	1,462	2,104	642	44%	0.1	0.1	0.0	-0.5%	1	1	0.0	0.1%
2032	0	0	0	46%	1,421	2,057	636	45%	0.1	0.1	0.0	-0.5%	1	1	0.0	0.1%

**Table 0-764 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Nissan) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Nissan) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	34	34	0	0%	1.0	1.0	0.0	0.0%	59	59	0.0	0.0%
2023	1	1	0	0%	1,361	1,361	0	0%	1.0	1.0	0.0	0.0%	62	62	0.0	0.0%
2024	1	1	0	0%	1,515	1,515	0	0%	1.0	1.0	0.0	0.0%	61	61	0.0	0.0%
2025	2	2	0	0%	1,932	1,932	0	0%	1.0	1.0	0.0	0.0%	61	61	0.0	0.0%
2026	2	2	0	0%	2,089	2,089	0	0%	1.0	1.0	0.0	0.0%	62	62	0.0	0.0%
2027	2	2	0	0%	2,508	2,642	134	5%	1.0	1.0	0.0	-0.4%	64	64	-0.2	-0.3%
2028	2	3	0	18%	2,407	2,901	495	21%	1.0	1.0	0.0	-0.5%	65	65	0.3	0.5%
2029	2	3	0	19%	2,437	2,958	521	21%	1.0	1.0	0.0	-0.6%	64	64	0.3	0.5%
2030	2	3	1	24%	2,457	3,009	552	22%	1.0	1.0	0.0	-0.6%	62	63	0.5	0.7%
2031	2	3	1	23%	2,438	2,960	521	21%	1.0	1.0	0.0	-0.5%	61	62	0.4	0.7%
2032	2	3	1	24%	2,363	2,902	539	23%	1.0	1.0	0.0	-0.5%	61	62	0.4	0.7%

**Table 0-765 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Stellantis) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Stellantis) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	465	465	0	0%	1.6	1.6	0.0	0.0%	95	95	0.0	0.0%
2023	2	2	0	0%	1,394	1,394	0	0%	1.7	1.7	0.0	0.0%	109	109	0.0	0.0%
2024	3	3	0	0%	2,031	2,031	0	0%	1.7	1.7	0.0	0.0%	112	112	0.0	0.0%
2025	4	4	0	0%	2,898	2,898	0	0%	1.7	1.7	0.0	0.0%	117	117	0.0	0.0%
2026	5	5	0	0%	2,867	2,867	0	0%	1.8	1.8	0.0	0.0%	121	121	0.0	0.0%
2027	5	5	0	7%	2,920	3,209	289	10%	1.8	1.8	0.0	-0.2%	125	126	0.8	0.6%
2028	5	5	0	8%	2,785	3,333	548	20%	1.9	1.8	0.0	-0.3%	126	127	0.7	0.5%
2029	5	6	1	21%	2,892	3,643	751	26%	1.8	1.8	0.0	-0.3%	124	127	2.4	1.9%
2030	5	6	1	22%	2,973	3,837	864	29%	1.8	1.8	0.0	-0.4%	122	124	2.4	2.0%
2031	5	6	1	21%	3,000	3,971	970	32%	1.8	1.7	0.0	-0.4%	119	121	2.1	1.8%
2032	5	6	2	36%	2,956	4,388	1,432	48%	1.7	1.7	0.0	-0.6%	118	121	2.5	2.1%

**Table 0-766 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Subaru) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Subaru) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.7	0.7	0.0	0.0%	39	39	0.0	0.0%
2023	0	0	0	0%	439	439	0	0%	0.8	0.8	0.0	0.0%	42	42	0.0	0.0%
2024	0	0	0	0%	450	450	0	0%	0.8	0.8	0.0	0.0%	42	42	0.0	0.0%
2025	0	0	0	0%	563	563	0	0%	0.8	0.8	0.0	0.0%	42	42	0.0	0.0%
2026	1	1	0	0%	1,644	1,644	0	0%	0.8	0.8	0.0	0.0%	44	44	0.0	0.0%
2027	1	1	0	0%	1,934	1,936	3	0%	0.9	0.9	0.0	-0.2%	46	46	-0.1	-0.2%
2028	2	2	0	0%	2,104	2,105	1	0%	0.9	0.9	0.0	-0.3%	46	46	-0.1	-0.3%
2029	2	2	0	0%	2,210	2,211	1	0%	0.9	0.9	0.0	-0.3%	46	46	-0.2	-0.3%
2030	2	2	0	0%	2,335	2,336	1	0%	0.8	0.8	0.0	-0.4%	45	45	-0.2	-0.4%
2031	2	2	0	0%	2,413	2,413	0	0%	0.8	0.8	0.0	-0.5%	44	44	-0.2	-0.5%
2032	2	2	0	-1%	2,384	2,384	0	0%	0.8	0.8	0.0	-0.6%	44	44	-0.3	-0.6%

**Table 0-767 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Tesla) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Tesla) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.5	0.5	0.0	0.0%	59	59	0.0	0.0%
2023	0	0	0	0%	5	5	0	0%	0.5	0.5	0.0	0.0%	59	59	0.0	0.0%
2024	0	0	0	0%	9	9	0	0%	0.5	0.5	0.0	0.0%	56	56	0.0	0.0%
2025	0	0	0	0%	14	14	0	0%	0.5	0.5	0.0	0.0%	54	54	0.0	0.0%
2026	0	0	0	0%	15	15	0	0%	0.5	0.5	0.0	0.0%	54	54	0.0	0.0%
2027	0	0	0	0%	15	15	0	0%	0.5	0.5	0.0	-0.6%	55	54	-0.3	-0.6%
2028	0	0	0	0%	14	15	0	0%	0.5	0.5	0.0	-0.7%	55	54	-0.4	-0.7%
2029	0	0	0	0%	14	14	0	1%	0.5	0.5	0.0	-1.0%	54	53	-0.5	-1.0%
2030	0	0	0	0%	14	14	0	0%	0.5	0.5	0.0	-0.8%	53	52	-0.4	-0.8%
2031	0	0	0	0%	14	14	0	0%	0.5	0.5	0.0	-0.6%	52	52	-0.3	-0.6%
2032	0	0	0	0%	13	13	0	0%	0.5	0.5	0.0	-0.4%	52	52	-0.2	-0.4%



**Table 0-768 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Toyota) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Toyota) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	2.4	2.4	0.0	0.0%	144	144	0.0	0.0%
2023	0	0	0	0%	211	211	0	0%	2.5	2.5	0.0	0.0%	151	151	0.0	0.0%
2024	1	1	0	0%	416	416	0	0%	2.4	2.4	0.0	0.0%	148	148	0.0	0.0%
2025	1	1	0	0%	482	482	0	0%	2.4	2.4	0.0	0.0%	147	147	0.0	0.0%
2026	3	3	0	0%	1,390	1,390	0	0%	2.5	2.5	0.0	0.0%	157	157	0.0	0.0%
2027	3	3	0	0%	1,462	1,466	4	0%	2.6	2.5	0.0	-0.3%	162	161	-0.5	-0.3%
2028	3	3	0	0%	1,602	1,606	4	0%	2.6	2.6	0.0	-0.4%	165	165	-0.7	-0.4%
2029	4	4	0	0%	1,671	1,677	6	0%	2.5	2.5	0.0	-0.5%	164	163	-0.9	-0.5%
2030	4	4	0	0%	1,754	1,762	8	0%	2.5	2.5	0.0	-0.5%	162	162	-0.8	-0.5%
2031	4	4	0	0%	1,818	1,827	9	0%	2.4	2.4	0.0	-0.5%	161	160	-0.8	-0.5%
2032	4	4	0	4%	1,794	1,867	73	4%	2.4	2.4	0.0	-0.5%	161	161	-0.5	-0.3%

**Table 0-769 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Volvo) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (Volvo) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4																
Model Year	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	0	0	0	0%	0.1	0.1	0.0	0.0%	3	3	0.0	0.0%
2023	0	0	0	0%	131	131	0	0%	0.1	0.1	0.0	0.0%	3	3	0.0	0.0%
2024	0	0	0	0%	167	167	0	0%	0.1	0.1	0.0	0.0%	3	3	0.0	0.0%
2025	0	0	0	0%	1,051	1,051	0	0%	0.1	0.1	0.0	0.0%	3	3	0.0	0.0%
2026	0	0	0	0%	1,020	1,020	0	0%	0.1	0.1	0.0	0.0%	3	3	0.0	0.0%
2027	0	0	0	13%	926	1,160	234	25%	0.1	0.1	0.0	-0.2%	3	3	0.0	-0.3%
2028	0	0	0	15%	852	1,330	478	56%	0.1	0.1	0.0	-0.4%	3	3	0.0	-0.5%
2029	0	0	0	30%	717	1,429	712	99%	0.1	0.1	0.0	-0.4%	3	3	0.0	-0.6%
2030	0	0	0	66%	942	1,471	529	56%	0.1	0.1	0.0	-0.5%	3	3	0.0	-0.3%
2031	0	0	0	45%	1,181	1,689	508	43%	0.1	0.1	0.0	-0.5%	3	3	0.0	-0.3%
2032	0	0	0	53%	1,202	1,768	566	47%	0.1	0.1	0.0	-0.6%	3	3	0.0	-0.3%

**Table 0-770 - Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (VWA) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4**

<b>Comparison of Technology Costs, Average Price Increase, Sales, and Labor Utilization for Manufacturer (VWA) Total Fleet Between No Action Alternative (Baseline) and Alternative PC2LT4</b>																
	Technology Costs Increase (\$b)				Avg. Vehicle Price Increase (\$)				Annual Sales (million vehicles)				Labor (person years)			
	Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative		Standards		Change from Alternative	
Model Year	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent	No Action Alternative (Baseline)	Alternative PC2LT4	Absolute	Percent
2022	0	0	0	0%	295	295	0	0%	0.6	0.6	0.0	0.0%	8	8	0.0	0.0%
2023	1	1	0	0%	1,242	1,242	0	0%	0.6	0.6	0.0	0.0%	8	8	0.0	0.0%
2024	1	1	0	0%	1,483	1,483	0	0%	0.6	0.6	0.0	0.0%	8	8	0.0	0.0%
2025	1	1	0	0%	1,790	1,790	0	0%	0.6	0.6	0.0	0.0%	8	8	0.0	0.0%
2026	1	1	0	0%	1,972	1,972	0	0%	0.6	0.6	0.0	0.0%	8	8	0.0	0.0%
2027	1	1	0	2%	2,157	2,404	246	11%	0.7	0.7	0.0	-0.3%	8	8	0.0	0.2%
2028	1	1	0	6%	2,066	2,482	416	20%	0.7	0.7	0.0	-0.4%	8	8	0.0	0.1%
2029	1	1	0	4%	2,196	2,640	444	20%	0.7	0.7	0.0	-0.5%	8	8	0.0	0.1%
2030	1	2	0	28%	2,261	2,972	711	31%	0.6	0.6	0.0	-0.5%	8	9	0.4	5.2%
2031	1	2	0	30%	2,303	2,946	643	28%	0.6	0.6	0.0	-0.5%	8	9	0.4	4.7%
2032	1	2	0	31%	2,249	2,913	665	30%	0.6	0.6	0.0	-0.5%	8	9	0.4	4.9%

## CAFE Compliance Credits

**Table 771 - CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for No Action Alternative (Baseline)**

<b>CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for No Action Alternative (Baseline)</b>											
Manufacturer	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
BMW	-11	-1	11	15	19	0	8	16	23	29	35
Ford	-6	14	72	38	12	5	7	24	24	33	42
GM	-35	-42	45	68	30	0	0	0	1	14	15
Honda	14	66	18	-1	10	0	35	58	86	111	132
Hyundai KiH	15	488	511	585	690	37	45	55	68	80	89
Hyundai KiK	10	24	47	23	24	3	3	7	15	22	27
JLR	-3	4	5	2	1	-1	-2	-1	1	2	3
Karma	0	0	0	0	1	0	0	0	0	0	0
Lucid	27	27	25	24	24	3	3	3	3	3	3
Mazda	-2	11	8	3	7	6	9	13	17	21	23
Mercedes-Benz	-12	6	0	-6	5	-5	1	6	11	16	20
Mitsubishi	-2	-3	3	2	5	1	1	1	1	6	7
Nissan	-3	46	37	34	24	-5	11	24	45	55	63
Stellantis	-52	-30	-9	70	9	-3	-2	31	50	64	76
Subaru	7	42	35	29	59	57	76	94	116	134	150
Tesla	3,401	3,472	3,292	3,180	3,170	344	345	339	333	330	329
Toyota	48	84	89	43	112	85	124	164	205	252	290
Volvo	15	19	15	18	13	1	1	1	4	6	8
VWA	-13	-2	20	21	18	-7	5	14	24	37	44
Total	3,397	4,225	4,226	4,147	4,232	520	670	850	1,025	1,213	1,358

**Table 772 - CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC1LT3**

<b>CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC1LT3</b>											
Manufacturer	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
BMW	-11	-1	11	15	19	-4	1	5	9	12	17
Ford	-6	14	72	38	12	19	33	52	27	14	3
GM	-35	-42	45	68	30	-17	-34	-43	-61	-28	-41
Honda	14	66	18	-1	10	8	26	34	45	55	60
Hyundai KiH	15	488	511	585	690	29	39	40	43	45	48
Hyundai KiK	10	24	47	23	24	-4	-10	2	3	8	9
JLR	-3	4	5	2	1	-3	-4	-4	-4	-2	-1
Karma	0	0	0	0	1	0	0	0	0	0	0
Lucid	27	27	25	24	24	3	3	3	3	2	3
Mazda	-2	11	8	3	7	3	4	5	6	7	7
Mercedes-Benz	-12	6	0	-6	5	-7	-4	-1	5	7	8
Mitsubishi	-2	-3	3	2	5	-1	-2	-3	-5	5	5
Nissan	-3	46	37	34	24	-15	5	8	20	20	18
Stellantis	-52	-30	-9	70	9	-6	-26	-1	2	-5	0
Subaru	7	42	35	29	59	46	51	57	67	73	76
Tesla	3,401	3,472	3,292	3,180	3,170	340	338	329	320	315	312
Toyota	48	84	89	43	112	58	68	78	91	111	120
Volvo	15	19	15	18	13	0	-2	-2	1	2	2
VWA	-13	-2	20	21	18	-13	-5	-3	9	13	13
<b>Total</b>	<b>3,397</b>	<b>4,225</b>	<b>4,226</b>	<b>4,147</b>	<b>4,232</b>	<b>436</b>	<b>480</b>	<b>555</b>	<b>581</b>	<b>654</b>	<b>658</b>

**Table 773 - CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC2LT4**

<b>CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC2LT4</b>											
Manufacturer	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
BMW	-11	-1	11	15	19	-6	-3	0	1	1	5
Ford	-6	14	72	38	12	24	30	41	7	-14	-38
GM	-35	-42	45	68	30	-26	-54	-67	-93	-73	-95
Honda	14	66	18	-1	10	1	13	18	29	30	31
Hyundai KiH	15	488	511	585	690	24	45	41	38	38	37
Hyundai KiK	10	24	47	23	24	-7	-18	-5	-7	1	2
JLR	-3	4	5	2	1	-3	-5	-6	-6	-4	-4
Karma	0	0	0	0	1	0	0	0	0	0	0
Lucid	27	27	25	24	24	3	3	3	2	2	2
Mazda	-2	11	8	3	7	3	2	3	3	2	1
Mercedes-Benz	-12	6	0	-6	5	-9	-7	-6	0	0	0
Mitsubishi	-2	-3	3	2	5	-1	-3	-6	-8	3	1
Nissan	-3	46	37	34	24	-20	1	1	22	16	11
Stellantis	-52	-30	-9	70	9	-16	-45	-23	-29	-44	-46
Subaru	7	42	35	29	59	41	42	43	47	48	46
Tesla	3,401	3,472	3,292	3,180	3,170	337	332	320	309	301	295
Toyota	48	84	89	43	112	46	41	38	37	44	45
Volvo	15	19	15	18	13	-1	-3	-5	1	1	2
VWA	-13	-2	20	21	18	-17	-10	-12	0	7	6
<b>Total</b>	<b>3,397</b>	<b>4,225</b>	<b>4,226</b>	<b>4,147</b>	<b>4,232</b>	<b>374</b>	<b>360</b>	<b>378</b>	<b>353</b>	<b>357</b>	<b>300</b>

**Table 774 - CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC3LT5**

<b>CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC3LT5</b>											
Manufacturer	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
BMW	-11	-1	11	15	19	-8	-7	-7	-8	-9	-8
Ford	-6	14	72	38	12	15	12	13	-31	-63	-97
GM	-35	-42	45	68	30	-37	-75	-97	-135	-118	-151
Honda	14	66	18	-1	10	0	15	11	26	17	10
Hyundai KiH	15	488	511	585	690	19	51	41	33	26	26
Hyundai KiK	10	24	47	23	24	-11	-25	-10	-11	-6	-1
JLR	-3	4	5	2	1	-3	-6	-7	-7	-7	-7
Karma	0	0	0	0	1	0	0	0	0	0	0
Lucid	27	27	25	24	24	3	3	2	2	2	2
Mazda	-2	11	8	3	7	3	1	6	6	4	2
Mercedes-Benz	-12	6	0	-6	5	-10	-10	-10	-5	-5	-8
Mitsubishi	-2	-3	3	2	5	-2	-5	-8	-11	3	1
Nissan	-3	46	37	34	24	-26	-11	-17	19	8	-3
Stellantis	-52	-30	-9	70	9	-23	-62	-50	-67	-87	-97
Subaru	7	42	35	29	59	36	32	28	26	22	13
Tesla	3,401	3,472	3,292	3,180	3,170	334	326	310	297	285	277
Toyota	48	84	89	43	112	32	31	21	16	17	12
Volvo	15	19	15	18	13	-1	-5	-7	-2	-3	-1
VWA	-13	-2	20	21	18	-21	-15	-21	-13	-7	-9
<b>Total</b>	<b>3,397</b>	<b>4,225</b>	<b>4,226</b>	<b>4,147</b>	<b>4,232</b>	<b>298</b>	<b>251</b>	<b>199</b>	<b>136</b>	<b>78</b>	<b>-37</b>

**Table 775 - CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC6LT8**

<b>CAFE Compliance Credits (in millions) Earned by Manufacturers, Total Fleet by Model Year for Alternative PC6LT8</b>											
Manufacturer	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
BMW	-11	-1	11	15	19	-14	-18	-25	-31	-41	-46
Ford	-6	14	72	38	12	-9	-44	-78	-155	-225	-301
GM	-35	-42	45	68	30	-66	-138	-199	-274	-299	-378
Honda	14	66	18	-1	10	-26	12	13	-1	-45	-86
Hyundai KiH	15	488	511	585	690	3	18	-11	-39	-62	-50
Hyundai KiK	10	24	47	23	24	-22	-48	-29	-42	-41	-36
JLR	-3	4	5	2	1	-5	-8	-11	-13	-15	-17
Karma	0	0	0	0	1	0	0	0	0	0	0
Lucid	27	27	25	24	24	3	2	2	2	2	2
Mazda	-2	11	8	3	7	4	-1	13	10	3	-5
Mercedes-Benz	-12	6	0	-6	5	-15	-20	-26	-26	-33	-41
Mitsubishi	-2	-3	3	2	5	-4	-10	-15	-20	-6	-12
Nissan	-3	46	37	34	24	-44	-37	-64	-47	-66	-64
Stellantis	-52	-30	-9	70	9	-50	-119	-140	-191	-247	-295
Subaru	7	42	35	29	59	22	8	37	60	32	0
Tesla	3,401	3,472	3,292	3,180	3,170	325	307	280	256	233	212
Toyota	48	84	89	43	112	-9	-45	-97	-109	-113	-52
Volvo	15	19	15	18	13	-4	-10	-15	-13	-17	-17
VWA	-13	-2	20	21	18	-32	-31	-51	-57	-65	-85
<b>Total</b>	<b>3,397</b>	<b>4,225</b>	<b>4,226</b>	<b>4,147</b>	<b>4,232</b>	<b>57</b>	<b>-182</b>	<b>-413</b>	<b>-690</b>	<b>-1,006</b>	<b>-1,272</b>



## Consumer Impacts

**Table 776 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year**

Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 777 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 778 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, No Action Alternative (Baseline) at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 779 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 780 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 781 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, No Action Alternative (Baseline) at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	0	0	0	0	0	0
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Taxes/Fees	0	0	0	0	0	0	0	0	0	0	0
Lost Consumer Surplus	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Cost	0	0	0	0	0	0	0	0	0	0	0
Fuel Savings	0	0	0	0	0	0	0	0	0	0	0
Mobility Benefit	0	0	0	0	0	0	0	0	0	0	0
Reallocated Benefit	0	0	0	0	0	0	0	0	0	0	0
Refueling Benefit	0	0	0	0	0	0	0	0	0	0	0
Total Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Net Consumer Benefit	0	0	0	0	0	0	0	0	0	0	0
Payback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 782 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	311	455	518	546	544	601
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	30	44	50	52	52	57
Increase in Taxes/Fees	0	0	0	0	0	17	25	29	30	30	33
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	359	525	597	628	626	691
Fuel Savings	10	10	10	10	10	-240	-385	-524	-585	-683	-784
Mobility Benefit	0	0	0	0	0	20	32	43	49	58	65
Reallocated Benefit	7	8	8	9	10	11	11	13	14	16	17
Refueling Benefit	1	1	1	1	1	-12	-19	-26	-28	-31	-38
Total Consumer Benefit	-4	-3	-2	-1	-1	315	493	671	747	854	993
Net Consumer Benefit	-4	-3	-2	-1	-1	-44	-32	74	118	228	302
Payback	0.0	0.0	0.0	0.0	0.0	0.3	1.3	0.3	1.0	1.0	1.0

**Table 783 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	319	449	477	460	434	419
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	30	42	45	43	41	39
Increase in Taxes/Fees	0	0	0	0	0	17	25	26	25	24	23
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	367	516	549	530	500	482
Fuel Savings	8	8	7	7	7	-35	-54	-126	-125	-154	-153
Mobility Benefit	0	0	0	0	0	3	5	10	10	13	13
Reallocated Benefit	4	5	5	6	6	7	8	9	10	11	12
Refueling Benefit	1	1	1	1	1	-1	-2	-6	-5	-7	-7
Total Consumer Benefit	-4	-3	-2	-2	-1	47	70	151	151	185	185
Net Consumer Benefit	-4	-3	-2	-2	-1	-321	-447	-397	-379	-315	-296
Payback	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	1.0	1.0	1.0



**Table 784 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC1LT3 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	306	457	535	584	595	687
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	29	43	50	55	56	65
Increase in Taxes/Fees	0	0	0	0	0	17	25	29	32	32	38
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	352	525	615	672	684	790
Fuel Savings	11	11	11	11	12	-345	-549	-717	-804	-935	-1,083
Mobility Benefit	0	0	0	0	0	27	45	59	66	80	89
Reallocated Benefit	8	9	10	10	11	12	13	15	16	17	19
Refueling Benefit	0	1	1	1	1	-17	-26	-35	-39	-43	-53
Total Consumer Benefit	-3	-2	-2	-1	-1	449	700	920	1,029	1,172	1,374
Net Consumer Benefit	-3	-2	-2	-1	-1	96	175	305	357	488	584
Payback	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0

**Table 785 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	311	455	518	546	544	601
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	25	36	41	43	43	47
Increase in Taxes/Fees	0	0	0	0	0	17	25	29	30	30	33
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	354	517	589	620	618	682
Fuel Savings	6	6	6	6	7	-185	-297	-405	-452	-528	-608
Mobility Benefit	0	0	0	0	0	15	25	33	38	45	50
Reallocated Benefit	4	4	5	5	6	7	7	9	10	11	12
Refueling Benefit	0	0	0	0	1	-9	-15	-20	-22	-25	-30
Total Consumer Benefit	-3	-2	-2	-1	-1	249	390	533	593	675	789
Net Consumer Benefit	-3	-2	-2	-1	-1	-105	-128	-56	-27	58	107
Payback	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.0	0.3

**Table 786 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	319	449	477	460	434	419
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	25	35	37	36	34	33
Increase in Taxes/Fees	0	0	0	0	0	17	25	26	25	24	23
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	362	509	541	522	493	475
Fuel Savings	5	5	5	5	5	-27	-43	-98	-97	-120	-119
Mobility Benefit	0	0	0	0	0	3	4	8	8	10	10
Reallocated Benefit	2	3	3	4	4	5	5	6	7	8	9
Refueling Benefit	0	0	0	1	1	-1	-2	-5	-4	-5	-5
Total Consumer Benefit	-3	-3	-2	-1	-1	36	54	117	117	144	144
Net Consumer Benefit	-3	-3	-2	-1	-1	-326	-456	-424	-405	-349	-331
Payback	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	1.0	1.0

**Table 787 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC1LT3 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	306	457	535	584	595	687
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	24	36	42	46	47	54
Increase in Taxes/Fees	0	0	0	0	0	17	25	29	32	32	38
Lost Consumer Surplus	0	0	0	0	0	0	1	1	1	1	1
Total Consumer Cost	0	0	0	0	0	348	518	607	662	674	779
Fuel Savings	6	7	7	7	8	-266	-423	-553	-622	-723	-839
Mobility Benefit	0	0	0	0	0	21	34	45	51	62	69
Reallocated Benefit	4	5	5	6	7	8	8	10	12	13	14
Refueling Benefit	0	0	0	0	1	-13	-21	-27	-30	-34	-41
Total Consumer Benefit	-2	-2	-2	-1	-1	355	554	731	818	928	1,094
Net Consumer Benefit	-2	-2	-2	-1	-1	7	36	124	156	254	315
Payback	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0

**Table 788 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	369	578	716	777	810	932
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	36	55	69	74	77	87
Increase in Taxes/Fees	0	0	0	0	0	21	32	40	43	44	51
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	425	666	826	896	933	1,072
Fuel Savings	14	14	14	14	14	-263	-461	-652	-765	-890	-1,043
Mobility Benefit	0	0	0	0	0	21	37	51	61	73	83
Reallocated Benefit	9	11	11	13	14	15	16	18	20	21	23
Refueling Benefit	1	1	1	1	1	-13	-23	-34	-38	-43	-52
Total Consumer Benefit	-5	-4	-3	-2	-1	347	597	850	987	1,126	1,326
Net Consumer Benefit	-5	-4	-3	-2	-1	-78	-69	25	91	193	254
Payback	0.0	0.0	0.0	0.0	0.0	0.3	1.3	1.3	1.0	1.3	1.0

**Table 789 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	384	554	697	683	650	654
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	36	52	66	64	61	61
Increase in Taxes/Fees	0	0	0	0	0	21	30	38	37	35	36
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	442	638	802	786	749	753
Fuel Savings	12	11	10	10	9	-69	-129	-237	-251	-282	-302
Mobility Benefit	0	0	0	0	0	6	10	18	20	23	25
Reallocated Benefit	6	7	8	8	9	10	11	13	14	16	17
Refueling Benefit	1	1	1	1	1	-3	-6	-11	-12	-13	-14
Total Consumer Benefit	-6	-5	-3	-2	-1	88	157	280	297	334	358
Net Consumer Benefit	-6	-5	-3	-2	-1	-353	-481	-522	-489	-415	-395
Payback	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	1.0	2.0	1.0

**Table 790 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC2LT4 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	360	587	722	819	885	1,064
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	34	55	68	77	83	100
Increase in Taxes/Fees	0	0	0	0	0	20	32	39	45	48	58
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	414	675	830	943	1,018	1,224
Fuel Savings	15	15	15	16	16	-364	-625	-859	-1,012	-1,178	-1,389
Mobility Benefit	0	0	0	0	0	28	49	66	80	96	111
Reallocated Benefit	11	13	14	15	16	17	18	20	23	24	26
Refueling Benefit	1	1	1	1	1	-18	-31	-44	-51	-57	-69
Total Consumer Benefit	-4	-3	-3	-2	-1	478	812	1,128	1,316	1,501	1,779
Net Consumer Benefit	-4	-3	-3	-2	-1	64	137	298	373	483	555
Payback	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0

**Table 791 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	369	578	716	777	810	932
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	30	46	57	62	64	73
Increase in Taxes/Fees	0	0	0	0	0	21	32	40	43	44	51
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	419	657	814	884	920	1,057
Fuel Savings	8	8	8	9	9	-203	-356	-504	-592	-689	-809
Mobility Benefit	0	0	0	0	0	16	28	40	47	56	65
Reallocated Benefit	5	6	7	7	8	9	10	12	14	16	17
Refueling Benefit	0	1	1	1	1	-10	-18	-27	-30	-33	-40
Total Consumer Benefit	-4	-3	-2	-2	-2	274	473	678	786	893	1,056
Net Consumer Benefit	-4	-3	-2	-2	-2	-145	-183	-136	-98	-27	-1
Payback	0.0	0.0	0.0	0.0	0.0	1.3	2.3	1.6	2.3	1.3	1.3



**Table 792 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	384	554	697	683	650	654
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	30	43	55	53	51	51
Increase in Taxes/Fees	0	0	0	0	0	21	30	38	37	35	36
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	436	629	791	775	738	743
Fuel Savings	7	7	7	6	6	-54	-100	-184	-196	-220	-236
Mobility Benefit	0	0	0	0	0	5	8	14	15	18	20
Reallocated Benefit	3	4	4	5	6	6	7	9	10	12	13
Refueling Benefit	0	1	1	1	1	-2	-5	-9	-9	-10	-11
Total Consumer Benefit	-4	-4	-3	-2	-1	68	121	217	231	260	279
Net Consumer Benefit	-4	-4	-3	-2	-1	-368	-508	-574	-544	-478	-463
Payback	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	3.0	2.0	2.0

**Table 793 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC2LT4 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	360	587	722	819	885	1,064
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	28	46	57	64	69	83
Increase in Taxes/Fees	0	0	0	0	0	20	32	39	45	48	58
Lost Consumer Surplus	0	0	0	0	0	0	1	1	2	2	2
Total Consumer Cost	0	0	0	0	0	409	666	819	930	1,004	1,207
Fuel Savings	9	9	9	10	11	-280	-483	-663	-782	-911	-1,076
Mobility Benefit	0	0	0	0	0	22	38	51	62	74	86
Reallocated Benefit	6	7	8	9	10	11	12	14	16	18	19
Refueling Benefit	0	0	1	1	1	-14	-25	-34	-40	-44	-54
Total Consumer Benefit	-3	-3	-2	-2	-2	378	644	901	1,050	1,194	1,420
Net Consumer Benefit	-3	-3	-2	-2	-2	-31	-22	83	120	189	212
Payback	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.0	2.0	1.0	1.0

**Table 794 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	490	743	957	1,097	1,194	1,602
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	47	71	92	104	113	150
Increase in Taxes/Fees	0	0	0	0	0	27	41	53	60	65	87
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	565	857	1,105	1,265	1,376	1,846
Fuel Savings	26	27	26	27	27	-264	-514	-732	-910	-1,072	-1,296
Mobility Benefit	0	0	0	1	1	23	44	61	76	91	106
Reallocated Benefit	17	19	21	23	25	27	30	33	36	39	41
Refueling Benefit	1	2	2	2	2	-13	-25	-37	-44	-50	-61
Total Consumer Benefit	-11	-9	-7	-5	-4	361	656	947	1,160	1,348	1,638
Net Consumer Benefit	-11	-9	-7	-5	-4	-204	-200	-158	-106	-28	-207
Payback	0.0	0.0	0.0	0.0	0.0	1.3	1.6	1.6	2.0	2.3	2.3

**Table 795 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	501	725	984	1,004	1,058	1,205
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	47	68	93	95	100	113
Increase in Taxes/Fees	0	0	0	0	0	27	40	54	55	58	66
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	577	834	1,133	1,157	1,219	1,392
Fuel Savings	23	22	20	19	19	-69	-190	-315	-396	-480	-529
Mobility Benefit	0	0	1	1	1	7	16	25	32	41	46
Reallocated Benefit	11	12	14	15	16	19	20	23	26	28	30
Refueling Benefit	2	2	2	2	3	-2	-8	-14	-18	-21	-24
Total Consumer Benefit	-13	-11	-8	-6	-4	96	234	378	474	571	628
Net Consumer Benefit	-13	-11	-8	-6	-4	-480	-600	-755	-683	-648	-764
Payback	0.0	0.0	0.0	0.0	0.0	2.0	3.0	3.0	2.0	3.0	3.0

**Table 796 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC3LT5 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	483	750	942	1,139	1,257	1,795
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	46	71	89	107	119	169
Increase in Taxes/Fees	0	0	0	0	0	26	41	51	62	69	98
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	556	864	1,085	1,312	1,448	2,069
Fuel Savings	28	30	30	30	32	-364	-673	-943	-1,156	-1,355	-1,643
Mobility Benefit	0	0	0	1	1	30	57	77	96	115	135
Reallocated Benefit	21	23	25	27	29	31	34	37	41	44	47
Refueling Benefit	1	1	2	2	2	-17	-32	-46	-55	-63	-80
Total Consumer Benefit	-9	-8	-6	-5	-4	494	861	1,229	1,485	1,718	2,102
Net Consumer Benefit	-9	-8	-6	-5	-4	-62	-3	144	173	270	33
Payback	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0	2.0

**Table 797 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	490	743	957	1,097	1,194	1,602
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	39	59	77	87	94	124
Increase in Taxes/Fees	0	0	0	0	0	27	41	53	60	65	87
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	557	845	1,090	1,248	1,357	1,820
Fuel Savings	15	16	16	17	17	-206	-399	-568	-706	-832	-1,006
Mobility Benefit	0	0	0	0	1	17	34	47	59	71	82
Reallocated Benefit	9	10	12	13	15	17	19	22	25	28	30
Refueling Benefit	1	1	1	1	2	-10	-20	-29	-34	-39	-48
Total Consumer Benefit	-7	-6	-5	-4	-4	285	515	750	917	1,065	1,300
Net Consumer Benefit	-7	-6	-5	-4	-4	-272	-330	-339	-330	-292	-520
Payback	0.0	0.0	0.0	0.0	0.0	2.3	2.6	2.6	2.6	2.3	3.3

**Table 798 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	501	725	984	1,004	1,058	1,205
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	39	57	77	79	83	94
Increase in Taxes/Fees	0	0	0	0	0	27	40	54	55	58	66
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	569	823	1,117	1,141	1,203	1,373
Fuel Savings	14	14	13	13	12	-55	-149	-246	-310	-376	-415
Mobility Benefit	0	0	0	0	1	5	13	20	25	32	36
Reallocated Benefit	6	7	8	9	10	12	13	15	18	20	23
Refueling Benefit	1	1	1	1	2	-2	-7	-12	-14	-17	-19
Total Consumer Benefit	-9	-8	-6	-5	-4	74	180	292	369	446	490
Net Consumer Benefit	-9	-8	-6	-5	-4	-495	-643	-825	-773	-757	-882
Payback	0.0	0.0	0.0	0.0	0.0	3.0	4.0	4.0	4.0	3.0	4.0

**Table 799 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC3LT5 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	483	750	942	1,139	1,257	1,795
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	38	59	74	89	99	141
Increase in Taxes/Fees	0	0	0	0	0	26	41	51	62	69	98
Lost Consumer Surplus	0	0	0	0	0	1	2	3	3	4	7
Total Consumer Cost	0	0	0	0	0	548	852	1,070	1,294	1,428	2,041
Fuel Savings	16	17	18	19	20	-283	-522	-730	-895	-1,049	-1,274
Mobility Benefit	0	0	0	0	1	23	44	59	74	89	105
Reallocated Benefit	11	12	14	15	17	19	21	25	28	31	34
Refueling Benefit	1	1	1	1	2	-14	-25	-37	-44	-49	-62
Total Consumer Benefit	-6	-6	-5	-4	-4	390	677	976	1,178	1,360	1,673
Net Consumer Benefit	-6	-6	-5	-4	-4	-158	-175	-94	-116	-68	-368
Payback	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	3.0



**Table 800 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	666	1,149	1,696	2,315	2,754	3,485
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	64	110	162	220	261	327
Increase in Taxes/Fees	0	0	0	0	0	37	63	94	128	151	190
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	769	1,326	1,962	2,681	3,192	4,043
Fuel Savings	49	49	48	49	50	-248	-586	-931	-1,296	-1,554	-2,002
Mobility Benefit	0	1	1	1	1	24	53	78	97	119	149
Reallocated Benefit	33	38	41	45	49	53	58	63	68	72	75
Refueling Benefit	3	3	3	4	4	-11	-28	-47	-63	-73	-95
Total Consumer Benefit	-18	-14	-9	-6	-4	371	770	1,229	1,706	2,002	2,555
Net Consumer Benefit	-18	-14	-9	-6	-4	-398	-557	-733	-976	-1,190	-1,489
Payback	0.0	0.0	0.0	0.0	0.0	1.6	2.6	3.6	4.6	5.0	5.6

**Table 801 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	704	1,204	1,785	2,285	2,656	3,080
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	66	114	168	216	250	290
Increase in Taxes/Fees	0	0	0	0	0	38	66	98	125	145	168
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	810	1,388	2,061	2,644	3,077	3,580
Fuel Savings	43	39	35	34	32	-62	-408	-677	-901	-1,123	-1,426
Mobility Benefit	1	1	1	1	1	8	35	56	73	92	115
Reallocated Benefit	22	25	27	30	32	36	39	43	47	50	53
Refueling Benefit	3	3	4	4	4	0	-19	-32	-43	-52	-68
Total Consumer Benefit	-23	-17	-11	-6	-3	107	501	814	1,081	1,333	1,683
Net Consumer Benefit	-23	-17	-11	-6	-3	-703	-887	-1,247	-1,562	-1,744	-1,897
Payback	0.0	0.0	0.0	0.0	0.0	3.0	4.0	5.0	6.0	7.0	7.0

**Table 802 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC6LT8 at a 3% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	647	1,121	1,652	2,326	2,797	3,680
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	61	106	156	219	264	347
Increase in Taxes/Fees	0	0	0	0	0	35	61	90	127	153	201
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	745	1,293	1,908	2,690	3,239	4,270
Fuel Savings	53	55	55	56	59	-347	-683	-1,075	-1,501	-1,770	-2,263
Mobility Benefit	0	0	1	1	2	32	61	87	108	131	165
Reallocated Benefit	40	45	49	53	57	61	66	72	77	82	85
Refueling Benefit	2	3	3	4	5	-16	-31	-53	-72	-83	-108
Total Consumer Benefit	-15	-12	-9	-6	-5	507	910	1,447	2,016	2,331	2,955
Net Consumer Benefit	-15	-12	-9	-6	-5	-238	-383	-460	-675	-909	-1,315
Payback	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	4.0	4.0	5.0

**Table 803 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Total Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	666	1,149	1,696	2,315	2,754	3,485
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	53	91	135	183	217	272
Increase in Taxes/Fees	0	0	0	0	0	37	63	94	128	151	190
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	758	1,308	1,935	2,644	3,148	3,988
Fuel Savings	29	30	30	31	33	-196	-457	-725	-1,006	-1,206	-1,555
Mobility Benefit	0	0	1	1	1	18	41	60	76	92	116
Reallocated Benefit	18	21	23	26	30	33	37	42	47	52	56
Refueling Benefit	2	2	2	2	3	-9	-22	-37	-50	-57	-74
Total Consumer Benefit	-13	-11	-8	-6	-5	291	602	974	1,359	1,592	2,034
Net Consumer Benefit	-13	-11	-8	-6	-5	-467	-706	-961	-1,285	-1,556	-1,954
Payback	0.0	0.0	0.0	0.0	0.0	4.0	6.6	33.8	36.3	38.0	95.6

**Table 804 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Passenger Car Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	704	1,204	1,785	2,285	2,656	3,080
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	55	94	140	179	208	241
Increase in Taxes/Fees	0	0	0	0	0	38	66	98	125	145	168
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	799	1,369	2,033	2,607	3,035	3,531
Fuel Savings	27	25	23	23	22	-50	-320	-530	-706	-881	-1,120
Mobility Benefit	0	0	1	1	1	6	27	43	57	72	91
Reallocated Benefit	12	14	15	18	20	23	25	29	33	37	40
Refueling Benefit	2	2	2	2	3	-1	-15	-26	-34	-41	-53
Total Consumer Benefit	-16	-13	-10	-7	-4	80	387	634	848	1,046	1,326
Net Consumer Benefit	-16	-13	-10	-7	-4	-719	-982	-1,399	-1,760	-1,988	-2,206
Payback	0.0	0.0	0.0	0.0	0.0	6.0	10.0	95.0	96.0	96.0	97.0

**Table 805 - Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year**

<b>Average Impacts to Consumers Relative to Alternative 0 (Baseline) for the Light Truck Fleet, Alternative PC6LT8 at a 7% Discount Rate (dollars), per Vehicle Model Year</b>											
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Price Increase	0	0	0	0	0	647	1,121	1,652	2,326	2,797	3,680
Implicit Opportunity Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Financing Cost	0	0	0	0	0	0	0	0	0	0	0
Increase in Insurance Cost	0	0	0	0	0	51	88	130	182	219	289
Increase in Taxes/Fees	0	0	0	0	0	35	61	90	127	153	201
Lost Consumer Surplus	0	0	0	0	0	2	5	10	18	26	41
Total Consumer Cost	0	0	0	0	0	735	1,275	1,881	2,653	3,195	4,211
Fuel Savings	31	33	34	35	38	-273	-532	-834	-1,161	-1,369	-1,751
Mobility Benefit	0	0	1	1	1	24	47	67	84	101	128
Reallocated Benefit	21	25	27	31	34	38	42	48	54	59	63
Refueling Benefit	1	2	2	2	3	-13	-25	-42	-57	-65	-85
Total Consumer Benefit	-11	-10	-8	-6	-5	399	714	1,151	1,612	1,859	2,361
Net Consumer Benefit	-11	-10	-8	-6	-5	-336	-561	-730	-1,042	-1,336	-1,850
Payback	0.0	0.0	0.0	0.0	0.0	3.0	5.0	6.0	9.0	11.0	95.0

## Environmental Impacts

**Table 806 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)**

Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fleetwide Change in Upstream Emissions				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	0.0	0.0	0.0	0.0
NOx Upstream	0.0	0.0	0.0	0.0
SO2 Upstream	0.0	0.0	0.0	0.0
PM Upstream	0.0	0.0	0.0	0.0
Fleetwide Change in Tailpipe Emissions				
CO Tailpipe	0.0	0.0	0.0	0.0
VOC Tailpipe	0.0	0.0	0.0	0.0
NOx Tailpipe	0.0	0.0	0.0	0.0
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
Fleetwide Change in Total Emissions				
CO Total	0.0	0.0	0.0	0.0
VOC Total	0.0	0.0	0.0	0.0
NOx Total	0.0	0.0	0.0	0.0
SO2 Total	0	0	0	0
PM Total	0	0	0	0

**Table 807 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	0.0	0.0	0.0	0.0
NOx Upstream	0.0	0.0	0.0	0.0
SO2 Upstream	0.0	0.0	0.0	0.0
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	0.0	0.0	0.0	0.0
VOC Tailpipe	0.0	0.0	0.0	0.0
NOx Tailpipe	0.0	0.0	0.0	0.0
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	0.0	0.0	0.0	0.0
VOC Total	0.0	0.0	0.0	0.0
NOx Total	0.0	0.0	0.0	0.0
SO2 Total	0	0	0	0
PM Total	0	0	0	0



**Table 808 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2030, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	0.0	0.0	0.0	0.0
NOx Upstream	0.0	0.0	0.0	0.0
SO2 Upstream	0.0	0.0	0.0	0.0
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	0.0	0.0	0.0	0.0
VOC Tailpipe	0.0	0.0	0.0	0.0
NOx Tailpipe	0.0	0.0	0.0	0.0
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	0.0	0.0	0.0	0.0
VOC Total	0.0	0.0	0.0	0.0
NOx Total	0.0	0.0	0.0	0.0
SO2 Total	0	0	0	0
PM Total	0	0	0	0

**Table 809 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	-1.0	-1.3	-1.6	-2.6
NOx Upstream	0.0	-0.1	-0.2	-0.3
SO2 Upstream	0.1	0.2	0.1	0.2
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-2.2	-3.2	-3.8	-7.9
VOC Tailpipe	-0.1	-0.2	-0.2	-0.5
NOx Tailpipe	0.0	-0.1	-0.1	-0.2
SO2 Tailpipe	0.0	0.0	0.0	-0.1
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-2.1	-3.2	-3.8	-7.9
VOC Total	-1.1	-1.5	-1.9	-3.1
NOx Total	-0.1	-0.1	-0.3	-0.4
SO2 Total	0.1	0.2	0.1	0.1
PM Total	0	0	0	0

**Table 810 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	-0.1
VOC Upstream	-0.1	-0.1	-0.2	-0.6
NOx Upstream	0.0	0.0	-0.1	-0.2
SO2 Upstream	0.0	0.0	0.0	-0.1
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	0.0	0.0	0.1	-0.4
VOC Tailpipe	0.0	0.0	0.0	0.0
NOx Tailpipe	0.0	0.0	0.0	0.0
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	0.0	0.0	0.1	-0.5
VOC Total	-0.1	-0.1	-0.2	-0.6
NOx Total	0.0	0.0	-0.1	-0.2
SO2 Total	0	0	0	-0.1
PM Total	0	0	0	0

**Table 811 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.1
VOC Upstream	-0.9	-1.2	-1.4	-2.1
NOx Upstream	0.0	0.0	-0.1	-0.1
SO2 Upstream	0.1	0.2	0.2	0.3
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-2.1	-3.2	-3.9	-7.5
VOC Tailpipe	-0.1	-0.2	-0.2	-0.5
NOx Tailpipe	0.0	-0.1	-0.1	-0.2
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-2.1	-3.2	-3.9	-7.4
VOC Total	-1.0	-1.4	-1.7	-2.5
NOx Total	-0.1	-0.1	-0.2	-0.2
SO2 Total	0	-0.1	-0.2	-0.3
PM Total	0.1	0.2	0.2	0.3

**Table 812 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Total Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	-0.7	-1.0	-1.3	-2.0
NOx Upstream	0.0	-0.1	-0.1	-0.2
SO2 Upstream	0.1	0.1	0.1	0.2
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-2.6	-3.9	-4.5	-9.2
VOC Tailpipe	-0.1	-0.2	-0.2	-0.5
NOx Tailpipe	-0.1	-0.1	-0.1	-0.2
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-2.6	-3.8	-4.5	-9.3
VOC Total	-0.9	-1.2	-1.5	-2.5
NOx Total	-0.1	-0.1	-0.2	-0.4
SO2 Total	0.1	0.1	0.1	0.2
PM Total	0	0	0	0

**Table 813 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Passenger Car Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	-0.1
VOC Upstream	0.0	-0.1	-0.2	-0.4
NOx Upstream	0.0	0.0	-0.1	-0.1
SO2 Upstream	0.0	0.0	0.0	0.0
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	0.0	0.0	0.1	-0.5
VOC Tailpipe	0.0	0.0	0.0	0.0
NOx Tailpipe	0.0	0.0	0.0	0.0
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	0.0	0.0	0.1	-0.5
VOC Total	-0.1	-0.1	-0.1	-0.5
NOx Total	0.0	0.0	-0.1	-0.2
SO2 Total	0	0	0	0
PM Total	0	0	0	0

**Table 814 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) from the MY 2032 Light Truck Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	0.0	0.0	0.0	0.0
VOC Upstream	-0.7	-0.9	-1.1	-1.6
NOx Upstream	0.0	0.0	-0.1	-0.1
SO2 Upstream	0.1	0.1	0.1	0.2
PM Upstream	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-2.6	-3.9	-4.6	-8.8
VOC Tailpipe	-0.1	-0.2	-0.2	-0.5
NOx Tailpipe	-0.1	-0.1	-0.1	-0.2
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.0	0.0	0.0	0.0
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-2.6	-3.9	-4.6	-8.7
VOC Total	-0.8	-1.1	-1.3	-2.0
NOx Total	-0.1	-0.1	-0.2	-0.2
SO2 Total	0.1	0.1	0.1	0.2
PM Total	0.0	0.0	0.0	0.0

**Table 815 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Total Fleet, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Total Fleet, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	2.6	3.1	0.6	2.5
VOC Upstream	-58.0	-73.5	-83.8	-117.0
NOx Upstream	-0.2	-0.5	-5.4	-4.7
SO2 Upstream	9.0	11.2	9.0	14.7
PM Upstream	0.3	0.3	0.0	0.2
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-61.4	-92.2	82.7	151.2
VOC Tailpipe	-3.8	-5.8	10.4	15.5
NOx Tailpipe	-0.6	-0.9	2.4	4.5
SO2 Tailpipe	-1.3	-1.6	-1.8	-2.5
PM Tailpipe	-0.4	-0.5	-0.3	-0.6
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-58.8	-89.1	83.4	153.8
VOC Total	-61.8	-79.3	-73.4	-101.5
NOx Total	-0.8	-1.4	-3.0	-0.2
SO2 Total	7.7	9.6	7.2	12.2
PM Total	-0.1	-0.2	-0.3	-0.4



**Table 816 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Light Truck Fleet, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Light Truck Fleet, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	3.4	4.6	2.5	6.3
VOC Upstream	-54.8	-67.3	-75.3	-96.3
NOx Upstream	1.4	2.3	-1.7	2.9
SO2 Upstream	9.7	12.4	10.5	17.4
PM Upstream	0.4	0.5	0.3	0.7
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	-129.5	-192.8	-109.3	-203.3
VOC Tailpipe	-10.0	-14.8	-7.2	-16.5
NOx Tailpipe	-1.8	-2.7	-0.9	-1.5
SO2 Tailpipe	-1.2	-1.5	-1.6	-2.1
PM Tailpipe	-0.4	-0.6	-0.5	-0.9
<b>Fleetwide Change in Total Emissions</b>				
CO Total	-126.1	-188.2	-106.8	-197.1
VOC Total	-64.7	-82.2	-82.5	-112.9
NOx Total	-0.4	-0.4	-2.6	1.5
SO2 Total	8.5	10.9	8.9	15.3
PM Total	0	-0.1	-0.2	-0.2

**Table 817 - Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Passenger Car Fleet, by Alternative (1,000 metric tons)**

<b>Incremental Change in Criteria Emissions Relative to Alternative 0 (Baseline) Over Lifetimes of Vehicles Through 2032 for the Passenger Car Fleet, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	-0.8	-1.4	-1.8	-3.7
VOC Upstream	-3.2	-6.2	-8.5	-20.7
NOx Upstream	-1.6	-2.8	-3.7	-7.7
SO2 Upstream	-0.7	-1.2	-1.5	-2.7
PM Upstream	-0.1	-0.2	-0.3	-0.5
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	68.1	100.5	192.0	354.6
VOC Tailpipe	6.2	9.0	17.6	32.0
NOx Tailpipe	1.2	1.8	3.2	6.0
SO2 Tailpipe	-0.1	-0.1	-0.2	-0.4
PM Tailpipe	0.1	0.1	0.2	0.4
<b>Fleetwide Change in Total Emissions</b>				
CO Total	67.3	99.1	190.1	350.8
VOC Total	3.0	2.8	9.1	11.3
NOx Total	-0.4	-1.0	-0.4	-1.7
SO2 Total	-0.8	-1.3	-1.7	-3.1
PM Total	0	-0.1	-0.1	-0.1

**Table 818 - Total Criteria Emissions from the MY 2032 Total Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Total Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	4.8	4.8	4.8	4.8
VOC Upstream	12.9	12.6	12.3	11.3
NOx Upstream	9.0	9.0	8.9	8.8
SO2 Upstream	5.2	5.2	5.2	5.3
PM Upstream	0.7	0.7	0.7	0.7
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	117.1	116.1	115.5	111.4
VOC Tailpipe	7.5	7.4	7.4	7.1
NOx Tailpipe	2.6	2.5	2.5	2.4
SO2 Tailpipe	0.2	0.2	0.2	0.2
PM Tailpipe	0.3	0.3	0.3	0.3
<b>Fleetwide Change in Total Emissions</b>				
CO Total	122.0	120.9	120.3	116.2
VOC Total	20.4	20.0	19.6	18.4
NOx Total	11.6	11.5	11.4	11.2
SO2 Total	5.4	5.4	5.4	5.5
PM Total	1	1	1	1

**Table 819 - Total Criteria Emissions from the MY 2032 Passenger Car Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Passenger Car Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	1.4	1.4	1.4	1.3
VOC Upstream	3.1	3.0	2.9	2.6
NOx Upstream	2.6	2.5	2.5	2.4
SO2 Upstream	1.6	1.5	1.5	1.5
PM Upstream	0.2	0.2	0.2	0.2
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	31.7	31.8	31.9	31.4
VOC Tailpipe	2.1	2.1	2.1	2.1
NOx Tailpipe	0.7	0.7	0.7	0.7
SO2 Tailpipe	0.1	0.1	0.1	0.0
PM Tailpipe	0.1	0.1	0.1	0.1
<b>Fleetwide Change in Total Emissions</b>				
CO Total	33.1	33.2	33.2	32.7
VOC Total	5.2	5.1	5.0	4.6
NOx Total	3.3	3.3	3.2	3.1
SO2 Total	1.7	1.6	1.6	1.5
PM Total	0.3	0.3	0.3	0.3

**Table 820 - Total Criteria Emissions from the MY 2032 Light Truck Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Light Truck Fleet in Calendar Year 2035, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	3.4	3.4	3.4	3.5
VOC Upstream	9.9	9.6	9.3	8.7
NOx Upstream	6.5	6.5	6.4	6.4
SO2 Upstream	3.6	3.6	3.6	3.8
PM Upstream	0.5	0.5	0.5	0.5
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	85.4	84.3	83.6	80.0
VOC Tailpipe	5.4	5.3	5.3	5.1
NOx Tailpipe	1.8	1.8	1.8	1.7
SO2 Tailpipe	0.2	0.2	0.2	0.2
PM Tailpipe	0.2	0.2	0.2	0.2
<b>Fleetwide Change in Total Emissions</b>				
CO Total	88.8	87.8	87.0	83.5
VOC Total	15.2	14.9	14.6	13.7
NOx Total	8.3	8.3	8.2	8.1
SO2 Total	3.8	3.8	3.8	4
PM Total	0.7	0.7	0.7	0.7

**Table 821 - Total Criteria Emissions from the MY 2032 Total Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Total Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	3.6	3.6	3.6	3.6
VOC Upstream	9.9	9.7	9.4	8.6
NOx Upstream	6.7	6.7	6.6	6.5
SO2 Upstream	3.7	3.7	3.7	3.7
PM Upstream	0.5	0.5	0.5	0.5
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	139.1	137.8	137.2	132.4
VOC Tailpipe	7.2	7.1	7.1	6.9
NOx Tailpipe	2.6	2.6	2.6	2.5
SO2 Tailpipe	0.2	0.2	0.2	0.2
PM Tailpipe	0.4	0.4	0.4	0.4
<b>Fleetwide Change in Total Emissions</b>				
CO Total	142.7	141.5	140.8	136.0
VOC Total	17.1	16.8	16.5	15.5
NOx Total	9.3	9.3	9.2	9.0
SO2 Total	3.9	3.9	3.9	3.9
PM Total	0.9	0.9	0.9	0.9

**Table 822 - Total Criteria Emissions from the MY 2032 Passenger Car Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Passenger Car Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	1.0	1.0	1.0	1.0
VOC Upstream	2.4	2.3	2.3	2.0
NOx Upstream	1.9	1.9	1.9	1.8
SO2 Upstream	1.1	1.1	1.1	1.1
PM Upstream	0.1	0.1	0.1	0.1
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	38.4	38.5	38.6	38.0
VOC Tailpipe	2.0	2.0	2.0	2.0
NOx Tailpipe	0.7	0.7	0.7	0.7
SO2 Tailpipe	0.0	0.0	0.0	0.0
PM Tailpipe	0.1	0.1	0.1	0.1
<b>Fleetwide Change in Total Emissions</b>				
CO Total	39.5	39.5	39.6	39.0
VOC Total	4.4	4.3	4.3	4.0
NOx Total	2.6	2.6	2.5	2.4
SO2 Total	1.1	1.1	1.1	1.1
PM Total	0.2	0.2	0.2	0.2

**Table 823 - Total Criteria Emissions from the MY 2032 Light Truck Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)**

<b>Total Criteria Emissions from the MY 2032 Light Truck Fleet in Calendar Year 2040, by Alternative (1,000 metric tons)</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fleetwide Change in Upstream Emissions</b>				
CO Upstream	2.6	2.6	2.6	2.6
VOC Upstream	7.5	7.3	7.1	6.6
NOx Upstream	4.8	4.8	4.8	4.8
SO2 Upstream	2.6	2.6	2.6	2.7
PM Upstream	0.3	0.4	0.3	0.4
<b>Fleetwide Change in Tailpipe Emissions</b>				
CO Tailpipe	100.6	99.3	98.6	94.4
VOC Tailpipe	5.2	5.1	5.1	4.9
NOx Tailpipe	1.9	1.9	1.9	1.8
SO2 Tailpipe	0.1	0.1	0.1	0.1
PM Tailpipe	0.3	0.3	0.3	0.3
<b>Fleetwide Change in Total Emissions</b>				
CO Total	103.2	101.9	101.2	97.0
VOC Total	12.7	12.5	12.2	11.5
NOx Total	6.8	6.7	6.7	6.6
SO2 Total	2.7	2.7	2.7	2.8
PM Total	0.6	0.7	0.6	0.7



## Electrification Costs

Table 824 - Total Electrification Costs for Manufacturer (Total), MY 2032 Total Fleet

Total Electrification Costs for Manufacturer (Total), MY 2032 Total Fleet				
	Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Retrievable Electrification Costs (\$b)	26.2	35.7	42.5	65.9
Electrification Tax Credits (\$b)	1.1	1.5	1.6	2.6
Irretrievable Electrification Costs (\$b)	4.9	6.7	8.0	12.4
Total Electrification Costs (\$b)	20.1	27.3	32.8	50.5

**Table 825 - Total Electrification Costs for Manufacturer (Total), MY 2032 Passenger Car Fleet**

<b>Total Electrification Costs for Manufacturer (Total), MY 2032 Passenger Car Fleet</b>				
	Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Retrievable Electrification Costs (\$b)	1.7	4.1	6.5	19.6
Electrification Tax Credits (\$b)	0.0	0.0	0.0	0.0
Irretrievable Electrification Costs (\$b)	0.3	0.8	1.3	4.0
<b>Total Electrification Costs (\$b)</b>	<b>1.4</b>	<b>3.2</b>	<b>5.2</b>	<b>15.6</b>

**Table 826 - Total Electrification Costs for Manufacturer (Total), MY 2032 Light Truck Fleet**

<b>Total Electrification Costs for Manufacturer (Total), MY 2032 Light Truck Fleet</b>				
	Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Retrievable Electrification Costs (\$b)	24.5	31.6	36.0	46.3
Electrification Tax Credits (\$b)	1.1	1.5	1.6	2.6
Irretrievable Electrification Costs (\$b)	4.5	5.8	6.6	8.4
<b>Total Electrification Costs (\$b)</b>	<b>18.7</b>	<b>24.0</b>	<b>27.6</b>	<b>35.0</b>

## Fleet Characteristics

**Table 827 - Changes in Fleet Characteristics for Model Years 2022-2032 for No Action Alternative (Baseline)**

Changes in Fleet Characteristics for Model Years 2022-2032 for No Action Alternative (Baseline)													
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Avg.
Changes in Fleet Size, Usage and Fuel Consumption													
Changes in Fleet Size (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Truck Share (%)	64%	66%	68%	69%	70%	70%	70%	71%	70%	70%	70%	N/A	69%
Pass. Car Share (%)	36%	34%	32%	31%	30%	30%	30%	29%	30%	30%	30%	N/A	31%
VMT from Rebound (b)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Volume - Total (b gallons)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Volume - Lt. Truck (b gallons)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Volume - Pass. Car (b gallons)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Changes in Fatalities by Source													
Fatalities from Rebound Miles	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatalities from Curb Weight Change	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Changes in Fatalities	0	0	0	0	0	0	0	0	0	0	0	0	0
Changes in Non-Fatal Safety Impacts													
Injuries from Rebound Miles (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
Injuries from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Change in Injuries (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property Damage from Rebound Miles (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property Damage from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Property Damaged Vehicles (thousands)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 828 - Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC1LT3**

Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC1LT3													
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Avg.
Changes in Fleet Size, Usage and Fuel Consumption													
Changes in Fleet Size (m)	0.0	0.0	0.0	0.0	0.0	-0.6	-0.9	-0.9	-0.9	-0.9	-0.9	-5.0	-0.5
Light Truck Share (%)	64%	66%	68%	69%	70%	70%	71%	71%	71%	70%	70%	N/A	69%
Pass. Car Share (%)	36%	34%	32%	31%	30%	30%	29%	29%	29%	30%	30%	N/A	31%
VMT from Rebound (b)	0.0	0.0	0.0	0.0	0.1	3.2	5.4	7.3	7.9	9.3	10.4	43.5	4.0
Fuel Volume - Total (b gallons)	0.1	0.1	0.1	0.1	0.1	-1.9	-3.0	-3.9	-4.1	-4.6	-5.2	-22.3	-2.0
Fuel Volume - Lt. Truck (b gallons)	0.0	0.1	0.1	0.1	0.1	-1.7	-2.7	-3.5	-3.8	-4.2	-4.8	-20.5	-1.9
Fuel Volume - Pass. Car (b gallons)	0.0	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.4	-0.4	-0.4	-0.4	-1.9	-0.2
Changes in Fatalities by Source													
Fatalities from Rebound Miles	0	0	0	0	0	15	25	33	36	42	47	198	18
Fatalities from Curb Weight Change	0	0	0	0	0	2	2	1	-2	-1	-2	-1	0
Total Changes in Fatalities	11	11	12	12	13	1	-4	3	3	14	18	94	9
Changes in Non-Fatal Safety Impacts													
Injuries from Rebound Miles (thousands)	0.0	0.0	0.0	0.0	0.0	2.3	3.8	5.2	5.6	6.5	7.3	31	3
Injuries from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	-0.3	-0.2	-0.3	-0.1	0.0
Total Change in Injuries (thousands)	1.6	1.7	1.8	1.8	2.0	0.1	-0.7	0.5	0.5	2.2	2.8	14.4	1.3
Property Damage from Rebound Miles (thousands)	0.0	0.0	0.1	0.1	0.1	6.9	11.7	15.8	17.2	20.0	22.4	94.4	8.6
Property Damage from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.6	-0.8	-0.6	-0.9	-0.2	0.0
Total Property Damaged Vehicles (thousands)	3.8	4.2	4.4	4.7	5.2	-0.6	-2.8	1.0	1.4	6.7	8.9	36.8	3.3

**Table 829 - Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC3LT5**

Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC3LT5													
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Avg.
Changes in Fleet Size, Usage and Fuel Consumption													
Changes in Fleet Size (m)	0.1	0.1	0.1	0.0	0.0	-1.0	-1.6	-1.9	-2.1	-2.2	-3.1	-11.6	-1.1
Light Truck Share (%)	64%	66%	68%	69%	70%	70%	71%	71%	71%	70%	70%	N/A	69%
Pass. Car Share (%)	36%	34%	32%	31%	30%	30%	29%	29%	29%	30%	30%	N/A	31%
VMT from Rebound (b)	0.0	0.1	0.1	0.1	0.2	3.8	7.7	10.5	12.7	14.9	17.1	67.1	6.1
Fuel Volume - Total (b gallons)	0.2	0.2	0.2	0.2	0.2	-2.2	-4.1	-5.5	-6.6	-7.4	-9.0	-33.8	-3.1
Fuel Volume - Lt. Truck (b gallons)	0.1	0.1	0.1	0.1	0.2	-1.9	-3.5	-4.6	-5.6	-6.3	-7.8	-29.0	-2.6
Fuel Volume - Pass. Car (b gallons)	0.1	0.1	0.0	0.0	0.0	-0.3	-0.6	-0.9	-1.0	-1.1	-1.1	-4.8	-0.4
Changes in Fatalities by Source													
Fatalities from Rebound Miles	0	0	1	1	1	17	35	48	58	67	77	305	28
Fatalities from Curb Weight Change	0	0	0	0	0	-1	0	0	-2	0	1	-2	0
Total Changes in Fatalities	29	31	32	34	36	2	-8	-7	-10	-3	-37	99	9
Changes in Non-Fatal Safety Impacts													
Injuries from Rebound Miles (thousands)	0.0	0.1	0.1	0.1	0.1	2.7	5.4	7.5	9.0	10.4	12.0	47	4
Injuries from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.2	0.0	0.2	-0.2	0.0
Total Change in Injuries (thousands)	4.3	4.7	4.8	5.0	5.5	0.2	-1.4	-1.2	-1.6	-0.5	-5.6	14.3	1.3
Property Damage from Rebound Miles (thousands)	0.1	0.1	0.2	0.3	0.3	8.1	16.6	22.8	27.6	32.1	36.9	145.1	13.2
Property Damage from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	-0.3	-0.2	0.1	-0.7	0.0	0.7	-0.5	0.0
Total Property Damaged Vehicles (thousands)	10.1	11.2	11.7	12.6	14.0	-2.0	-6.7	-5.6	-6.3	-2.2	-16.7	20.0	1.8

**Table 830 - Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC2LT4**

Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC2LT4													
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Average
Changes in Fleet Size, Usage and Fuel Consumption													
Changes in Fleet Size (m)	0.1	0.0	0.0	0.0	0.0	-0.7	-1.1	-1.3	-1.4	-1.4	-1.5	-7.3	-0.7
Light Truck Share (%)	64%	66%	68%	69%	70%	70%	71%	71%	71%	70%	70%	N/A	69%
Pass. Car Share (%)	36%	34%	32%	31%	30%	30%	29%	29%	29%	30%	30%	N/A	31%
VMT from Rebound (b)	0.0	0.0	0.0	0.1	0.1	3.5	6.4	8.9	10.2	11.8	13.6	54.7	5.0
Fuel Volume - Total (b gallons)	0.1	0.1	0.1	0.1	0.1	-2.1	-3.6	-4.8	-5.4	-6.1	-7.0	-28.5	-2.6
Fuel Volume - Lt. Truck (b gallons)	0.1	0.1	0.1	0.1	0.1	-1.8	-3.2	-4.1	-4.8	-5.4	-6.3	-25.2	-2.3
Fuel Volume - Pass. Car (b gallons)	0.0	0.0	0.0	0.0	0.0	-0.3	-0.4	-0.7	-0.7	-0.7	-0.7	-3.3	-0.3
Changes in Fatalities by Source													
Fatalities from Rebound Miles	0	0	0	0	0	16	29	40	46	54	61	249	23
Fatalities from Curb Weight Change	0	0	0	0	0	1	-1	-1	-4	-3	-1	-10	-1
Total Changes in Fatalities	15	16	16	17	18	1	-10	-4	-4	5	7	78	7
Changes in Non-Fatal Safety Impacts													
Injuries from Rebound Miles (thousands)	0.0	0.0	0.0	0.1	0.1	2.5	4.5	6.3	7.2	8.3	9.5	39	4
Injuries from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	-0.2	-0.7	-0.5	-0.1	-1.5	-0.1
Total Change in Injuries (thousands)	2.2	2.4	2.5	2.6	2.8	0.1	-1.5	-0.6	-0.6	0.8	1.2	11.8	1.1
Property Damage from Rebound Miles (thousands)	0.0	0.1	0.1	0.1	0.2	7.7	13.9	19.3	22.1	25.5	29.4	118.4	10.8
Property Damage from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	0.3	-0.5	-0.6	-2.0	-1.5	-0.2	-4.5	-0.4
Total Property Damaged Vehicles (thousands)	5.3	5.9	6.1	6.6	7.3	-1.1	-5.7	-2.7	-2.2	2.4	4.4	26.2	2.4

**Table 831 - Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC6LT8**

Changes in Fleet Characteristics for Model Years 2022-2032 for Alternative PC6LT8													
Model Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Avg.
Changes in Fleet Size, Usage and Fuel Consumption													
Changes in Fleet Size (m)	0.2	0.1	0.0	-0.1	-0.1	-1.6	-2.7	-3.7	-4.9	-5.7	-7.2	-25.7	-2.3
Light Truck Share (%)	64%	66%	68%	69%	70%	70%	71%	71%	71%	70%	70%	N/A	69%
Pass. Car Share (%)	36%	34%	32%	31%	30%	30%	29%	29%	29%	30%	30%	N/A	31%
VMT from Rebound (b)	0.1	0.1	0.2	0.2	0.3	3.9	9.2	13.6	16.6	19.6	24.7	88.5	8.0
Fuel Volume - Total (b gallons)	0.4	0.4	0.4	0.3	0.4	-2.3	-4.9	-7.4	-9.9	-11.5	-14.4	-48.6	-4.4
Fuel Volume - Lt. Truck (b gallons)	0.2	0.3	0.3	0.3	0.3	-1.9	-3.7	-5.6	-7.7	-8.8	-11.3	-37.6	-3.4
Fuel Volume - Pass. Car (b gallons)	0.1	0.1	0.1	0.1	0.1	-0.3	-1.2	-1.8	-2.3	-2.7	-3.1	-10.9	-1.0
Changes in Fatalities by Source													
Fatalities from Rebound Miles	0	1	1	1	2	18	42	62	75	88	111	402	37
Fatalities from Curb Weight Change	0	0	0	0	0	-1	-1	0	-3	-3	4	-3	0
Total Changes in Fatalities	54	57	58	60	65	9	-24	-53	102	135	183	195	-18
Changes in Non-Fatal Safety Impacts													
Injuries from Rebound Miles (thousands)	0.1	0.1	0.1	0.2	0.2	2.8	6.5	9.7	11.7	13.8	17.3	63	6
Injuries from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.4	-0.5	0.7	-0.4	0.0
Total Change in Injuries (thousands)	8.0	8.6	8.7	9.1	9.9	1.3	-3.8	-8.3	15.8	20.8	28.2	31.2	-2.8
Property Damage from Rebound Miles (thousands)	0.2	0.2	0.4	0.5	0.6	8.5	20.0	29.7	36.2	42.5	53.6	192.3	17.5
Property Damage from Curb Weight (thousands)	0.0	0.0	0.0	0.0	0.0	-0.3	-0.3	0.0	-1.1	-1.4	2.2	-0.9	-0.1
Total Property Damaged Vehicles (thousands)	19.2	21.0	21.8	23.2	25.7	-0.2	-15.1	-28.1	-49.8	-63.7	-84.3	-130.4	-11.9





## Liquid Fuel and Electricity Consumption

**Table 832 - Change in Liquid Fuel Consumed (b Gallons), Total Fleet, Undiscounted Over the Lifetime of the Model Year**

Change in Liquid Fuel Consumed (b Gallons), Total Fleet, Undiscounted Over the Lifetime of the Model Year												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	1263.4	0.1	0.1	0.1	0.1	-1.9	-3.0	-3.9	-4.1	-4.6	-5.2	1241.0
Alternative PC2LT4	1263.8	0.1	0.1	0.1	0.1	-2.1	-3.6	-4.8	-5.4	-6.1	-7.0	1235.2
Alternative PC3LT5	1265.1	0.2	0.2	0.2	0.2	-2.2	-4.1	-5.5	-6.6	-7.4	-9.0	1231.1
Alternative PC6LT8	1267.9	0.4	0.4	0.3	0.4	-2.3	-4.9	-7.4	-9.9	-11.5	-14.4	1219.0

**Table 833 - Change in Liquid Fuel Consumed (b Gallons), Passenger Car Fleet, Undiscounted Over the Lifetime of the Model Year**

Change in Liquid Fuel Consumed (b Gallons), Passenger Car Fleet, Undiscounted Over the Lifetime of the Model Year												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	479.3	0.0	0.0	0.0	0.0	-0.2	-0.3	-0.4	-0.4	-0.4	-0.4	477.4
Alternative PC2LT4	479.5	0.0	0.0	0.0	0.0	-0.3	-0.4	-0.7	-0.7	-0.7	-0.7	476.2
Alternative PC3LT5	480.1	0.1	0.0	0.0	0.0	-0.3	-0.6	-0.9	-1.0	-1.1	-1.1	475.3
Alternative PC6LT8	481.6	0.1	0.1	0.1	0.1	-0.3	-1.2	-1.8	-2.3	-2.7	-3.1	470.5

**Table 834 - Change in Liquid Fuel Consumed (b Gallons), Light Truck Fleet, Undiscounted Over the Lifetime of the Model Year**

Change in Liquid Fuel Consumed (b Gallons), Light Truck Fleet, Undiscounted Over the Lifetime of the Model Year												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	784.1	0.1	0.1	0.1	0.1	-1.7	-2.7	-3.5	-3.8	-4.2	-4.8	763.6
Alternative PC2LT4	784.3	0.1	0.1	0.1	0.1	-1.8	-3.2	-4.1	-4.8	-5.4	-6.3	759.0
Alternative PC3LT5	785.0	0.1	0.1	0.1	0.2	-1.9	-3.5	-4.6	-5.6	-6.3	-7.8	755.9
Alternative PC6LT8	786.3	0.3	0.3	0.3	0.3	-1.9	-3.7	-5.6	-7.7	-8.8	-11.3	748.5

**Table 835 - Change in Electricity (G-Wh) Consumed, Total Fleet, Undiscounted Over the Lifetime of the Model Year**

Change in Electricity (G-Wh) Consumed, Total Fleet, Undiscounted Over the Lifetime of the Model Year												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	90.1	0.1	0.1	0.1	0.1	10.5	11.2	13.6	14.5	12.9	16.2	169.4
Alternative PC2LT4	90.2	0.1	0.1	0.1	0.2	11.1	13.2	17.6	18.4	17.2	21.1	189.3
Alternative PC3LT5	90.3	0.2	0.2	0.3	0.4	11.0	10.6	15.7	16.3	15.7	20.4	180.9
Alternative PC6LT8	90.5	0.3	0.4	0.5	0.7	11.0	10.7	18.8	30.9	29.8	35.5	229.0

**Table 836 - Change in Electricity (G-Wh) Consumed, Passenger Car Fleet, Undiscounted Over the Lifetime of the Model Year**

<b>Change in Electricity (G-Wh) Consumed, Passenger Car Fleet, Undiscounted Over the Lifetime of the Model Year</b>												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	66.9	0.0	0.0	0.0	0.1	-0.4	-0.6	-0.6	-0.6	-0.5	-0.4	64.0
Alternative PC2LT4	67.0	0.0	0.1	0.1	0.1	-0.5	-0.6	-1.0	-1.0	-0.9	-0.7	62.4
Alternative PC3LT5	67.0	0.1	0.1	0.1	0.1	-0.5	-0.7	-1.3	-1.2	-1.3	-0.9	61.6
Alternative PC6LT8	67.2	0.2	0.2	0.2	0.2	-0.6	-1.1	-1.7	-1.6	-1.9	-1.4	59.6

**Table 837 - Change in Electricity (G-Wh) Consumed, Light Truck Fleet, Undiscounted Over the Lifetime of the Model Year**

Change in Electricity (G-Wh) Consumed, Light Truck Fleet, Undiscounted Over the Lifetime of the Model Year												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Alternative PC1LT3	23.2	0.0	0.0	0.1	0.1	10.9	11.8	14.2	15.1	13.5	16.6	105.4
Alternative PC2LT4	23.2	0.0	0.1	0.1	0.1	11.6	13.8	18.6	19.4	18.1	21.8	126.8
Alternative PC3LT5	23.2	0.1	0.1	0.1	0.2	11.5	11.3	17.0	17.5	17.0	21.4	119.4
Alternative PC6LT8	23.3	0.1	0.2	0.3	0.4	11.6	11.8	20.5	32.5	31.6	37.0	169.3

## Sales Impacts

**Table 838 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Total)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	14,381,000	0	0	0	0
2023	15,201,000	0	0	0	0
2024	14,945,000	0	0	0	0
2025	14,892,000	0	0	0	0
2026	15,245,000	0	0	0	0
2027	15,663,000	-33,000	-40,000	-57,000	-82,000
2028	15,823,000	-48,000	-62,000	-87,000	-142,000
2029	15,606,000	-50,000	-71,000	-104,000	-200,000
2030	15,260,000	-51,000	-74,000	-116,000	-263,000
2031	14,988,000	-47,000	-73,000	-121,000	-310,000
2032	14,912,000	-48,000	-82,000	-165,000	-390,000



**Table 839 - Estimated Sales Impacts by Alternative, Passenger Car Fleet for Manufacturer (Total)**

<b>Estimated Sales Impacts by Alternative, Passenger Car Fleet for Manufacturer (Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	5,476,000	0	0	0	0
2023	5,474,000	0	0	0	0
2024	5,148,000	0	0	0	0
2025	4,918,000	0	0	0	0
2026	4,926,000	0	0	0	0
2027	4,995,000	-25,000	-30,000	-34,000	-48,000
2028	5,011,000	-34,000	-38,000	-43,000	-72,000
2029	4,920,000	-33,000	-51,000	-69,000	-112,000
2030	4,830,000	-27,000	-41,000	-52,000	-122,000
2031	4,794,000	-23,000	-30,000	-49,000	-126,000
2032	4,784,000	-16,000	-18,000	-23,000	-102,000

**Table 840 - Estimated Sales Impacts by Alternative, Light Truck Fleet for Manufacturer (Total)**

<b>Estimated Sales Impacts by Alternative, Light Truck Fleet for Manufacturer (Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	8,905,000	0	0	0	0
2023	9,727,000	0	0	0	0
2024	9,797,000	0	0	0	0
2025	9,975,000	0	0	0	0
2026	10,319,000	0	0	0	0
2027	10,668,000	-8,000	-11,000	-23,000	-34,000
2028	10,812,000	-14,000	-24,000	-43,000	-70,000
2029	10,685,000	-17,000	-20,000	-35,000	-88,000
2030	10,430,000	-23,000	-33,000	-64,000	-141,000
2031	10,194,000	-24,000	-44,000	-72,000	-185,000
2032	10,128,000	-32,000	-64,000	-142,000	-288,000

**Table 841 - Estimated Sales Impacts by Alternative, Domestic Car Fleet for Manufacturer (Total)**

<b>Estimated Sales Impacts by Alternative, Domestic Car Fleet for Manufacturer (Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2,704,000	0	0	0	0
2023	2,703,000	0	0	0	0
2024	2,542,000	0	0	0	0
2025	2,428,000	0	0	0	0
2026	2,433,000	0	0	0	0
2027	2,466,000	-13,000	-15,000	-17,000	-24,000
2028	2,475,000	-17,000	-19,000	-21,000	-36,000
2029	2,430,000	-16,000	-25,000	-34,000	-55,000
2030	2,385,000	-13,000	-20,000	-26,000	-60,000
2031	2,367,000	-11,000	-15,000	-24,000	-62,000
2032	2,362,000	-8,000	-9,000	-11,000	-50,000

**Table 842 - Estimated Sales Impacts by Alternative, Imported Car Fleet for Manufacturer (Total)**

<b>Estimated Sales Impacts by Alternative, Imported Car Fleet for Manufacturer (Total)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2,772,000	0	0	0	0
2023	2,771,000	0	0	0	0
2024	2,606,000	0	0	0	0
2025	2,489,000	0	0	0	0
2026	2,493,000	0	0	0	0
2027	2,528,000	-13,000	-15,000	-17,000	-24,000
2028	2,537,000	-17,000	-19,000	-22,000	-37,000
2029	2,491,000	-17,000	-26,000	-35,000	-56,000
2030	2,445,000	-14,000	-21,000	-26,000	-62,000
2031	2,426,000	-11,000	-15,000	-25,000	-64,000
2032	2,421,000	-8,000	-9,000	-12,000	-52,000

**Table 843 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (BMW)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (BMW)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	361,000	0	0	0	0
2023	376,000	0	0	0	0
2024	365,000	0	0	0	0
2025	360,000	0	0	0	0
2026	367,000	0	0	0	0
2027	376,000	-1,000	-1,000	-2,000	-2,000
2028	379,000	-1,000	-2,000	-2,000	-4,000
2029	374,000	-2,000	-2,000	-3,000	-6,000
2030	366,000	-1,000	-2,000	-3,000	-7,000
2031	360,000	-1,000	-2,000	-3,000	-8,000
2032	358,000	-1,000	-2,000	-4,000	-9,000

**Table 844 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Ford)**

Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Ford)					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,629,000	0	0	0	0
2023	1,762,000	0	0	0	0
2024	1,762,000	0	0	0	0
2025	1,782,000	0	0	0	0
2026	1,838,000	0	0	0	0
2027	1,897,000	-2,000	-3,000	-5,000	-7,000
2028	1,921,000	-3,000	-5,000	-8,000	-14,000
2029	1,897,000	-4,000	-5,000	-8,000	-18,000
2030	1,853,000	-5,000	-7,000	-12,000	-27,000
2031	1,814,000	-5,000	-8,000	-13,000	-34,000
2032	1,803,000	-6,000	-11,000	-24,000	-50,000

**Table 845 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (GM)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (GM)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,826,000	0	0	0	0
2023	1,952,000	0	0	0	0
2024	1,936,000	0	0	0	0
2025	1,944,000	0	0	0	0
2026	1,998,000	0	0	0	0
2027	2,057,000	-3,000	-4,000	-6,000	-9,000
2028	2,081,000	-5,000	-7,000	-10,000	-17,000
2029	2,054,000	-5,000	-7,000	-11,000	-23,000
2030	2,007,000	-6,000	-8,000	-14,000	-32,000
2031	1,967,000	-6,000	-9,000	-15,000	-39,000
2032	1,956,000	-6,000	-11,000	-24,000	-53,000

**Table 846 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Honda)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Honda)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,454,000	0	0	0	0
2023	1,515,000	0	0	0	0
2024	1,474,000	0	0	0	0
2025	1,454,000	0	0	0	0
2026	1,481,000	0	0	0	0
2027	1,517,000	-4,000	-5,000	-7,000	-9,000
2028	1,530,000	-6,000	-7,000	-9,000	-16,000
2029	1,508,000	-6,000	-9,000	-13,000	-23,000
2030	1,476,000	-6,000	-8,000	-12,000	-28,000
2031	1,453,000	-5,000	-8,000	-12,000	-32,000
2032	1,446,000	-5,000	-7,000	-14,000	-36,000



**Table 847 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Hyundai KiH)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Hyundai KiH)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	902,000	0	0	0	0
2023	934,000	0	0	0	0
2024	904,000	0	0	0	0
2025	887,000	0	0	0	0
2026	902,000	0	0	0	0
2027	923,000	-3,000	-3,000	-4,000	-6,000
2028	930,000	-4,000	-5,000	-6,000	-10,000
2029	916,000	-4,000	-6,000	-8,000	-15,000
2030	897,000	-4,000	-5,000	-8,000	-18,000
2031	884,000	-3,000	-5,000	-8,000	-20,000
2032	880,000	-3,000	-4,000	-8,000	-22,000

**Table 848 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Hyundai KiK)**

Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Hyundai KiK)					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	617,000	0	0	0	0
2023	640,000	0	0	0	0
2024	621,000	0	0	0	0
2025	611,000	0	0	0	0
2026	622,000	0	0	0	0
2027	636,000	-2,000	-2,000	-3,000	-4,000
2028	642,000	-3,000	-3,000	-4,000	-7,000
2029	632,000	-3,000	-4,000	-6,000	-10,000
2030	619,000	-2,000	-4,000	-5,000	-12,000
2031	610,000	-2,000	-3,000	-5,000	-14,000
2032	607,000	-2,000	-3,000	-6,000	-15,000

**Table 849 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (JLR)**

Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (JLR)					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	73,000	0	0	0	0
2023	80,000	0	0	0	0
2024	80,000	0	0	0	0
2025	81,000	0	0	0	0
2026	84,000	0	0	0	0
2027	87,000	0	0	0	0
2028	88,000	0	0	0	-1,000
2029	87,000	0	0	0	-1,000
2030	85,000	0	0	-1,000	-1,000
2031	83,000	0	0	-1,000	-2,000
2032	82,000	0	-1,000	-1,000	-2,000

**Table 850 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Karma)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Karma)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0
2025	0	0	0	0	0
2026	0	0	0	0	0
2027	0	0	0	0	0
2028	0	0	0	0	0
2029	0	0	0	0	0
2030	0	0	0	0	0
2031	0	0	0	0	0
2032	0	0	0	0	0

**Table 851 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Lucid)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Lucid)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	4,000	0	0	0	0
2023	4,000	0	0	0	0
2024	4,000	0	0	0	0
2025	3,000	0	0	0	0
2026	3,000	0	0	0	0
2027	4,000	0	0	0	0
2028	4,000	0	0	0	0
2029	3,000	0	0	0	0
2030	3,000	0	0	0	0
2031	3,000	0	0	0	0
2032	3,000	0	0	0	0

**Table 852 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mazda)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mazda)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	174,000	0	0	0	0
2023	188,000	0	0	0	0
2024	187,000	0	0	0	0
2025	189,000	0	0	0	0
2026	195,000	0	0	0	0
2027	201,000	0	0	-1,000	-1,000
2028	204,000	0	-1,000	-1,000	-2,000
2029	201,000	0	-1,000	-1,000	-2,000
2030	196,000	-1,000	-1,000	-1,000	-3,000
2031	192,000	-1,000	-1,000	-1,000	-4,000
2032	191,000	-1,000	-1,000	-2,000	-5,000

**Table 853 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mercedes-Benz)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mercedes-Benz)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	269,000	0	0	0	0
2023	281,000	0	0	0	0
2024	274,000	0	0	0	0
2025	271,000	0	0	0	0
2026	277,000	0	0	0	0
2027	284,000	-1,000	-1,000	-1,000	-2,000
2028	286,000	-1,000	-1,000	-2,000	-3,000
2029	282,000	-1,000	-2,000	-2,000	-4,000
2030	276,000	-1,000	-1,000	-2,000	-5,000
2031	271,000	-1,000	-1,000	-2,000	-6,000
2032	270,000	-1,000	-1,000	-3,000	-7,000

**Table 854 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mitsubishi)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Mitsubishi)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	115,000	0	0	0	0
2023	119,000	0	0	0	0
2024	116,000	0	0	0	0
2025	114,000	0	0	0	0
2026	116,000	0	0	0	0
2027	119,000	0	0	-1,000	-1,000
2028	120,000	0	-1,000	-1,000	-1,000
2029	118,000	0	-1,000	-1,000	-2,000
2030	116,000	0	-1,000	-1,000	-2,000
2031	114,000	0	-1,000	-1,000	-3,000
2032	113,000	0	-1,000	-1,000	-3,000



**Table 855 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Nissan)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Nissan)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,003,000	0	0	0	0
2023	1,041,000	0	0	0	0
2024	1,009,000	0	0	0	0
2025	993,000	0	0	0	0
2026	1,010,000	0	0	0	0
2027	1,033,000	-3,000	-4,000	-5,000	-7,000
2028	1,042,000	-4,000	-5,000	-7,000	-11,000
2029	1,026,000	-4,000	-6,000	-9,000	-16,000
2030	1,005,000	-4,000	-6,000	-9,000	-20,000
2031	990,000	-4,000	-5,000	-9,000	-22,000
2032	986,000	-3,000	-5,000	-9,000	-24,000

**Table 856 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Stellantis)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Stellantis)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	1,582,000	0	0	0	0
2023	1,708,000	0	0	0	0
2024	1,706,000	0	0	0	0
2025	1,723,000	0	0	0	0
2026	1,776,000	0	0	0	0
2027	1,832,000	-2,000	-3,000	-5,000	-7,000
2028	1,855,000	-4,000	-5,000	-8,000	-14,000
2029	1,832,000	-4,000	-5,000	-8,000	-18,000
2030	1,789,000	-5,000	-7,000	-12,000	-27,000
2031	1,752,000	-5,000	-8,000	-13,000	-33,000
2032	1,741,000	-6,000	-10,000	-23,000	-48,000

**Table 857 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Subaru)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Subaru)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	747,000	0	0	0	0
2023	805,000	0	0	0	0
2024	802,000	0	0	0	0
2025	810,000	0	0	0	0
2026	834,000	0	0	0	0
2027	860,000	-1,000	-1,000	-2,000	-3,000
2028	871,000	-2,000	-3,000	-4,000	-7,000
2029	860,000	-2,000	-3,000	-4,000	-9,000
2030	840,000	-2,000	-3,000	-6,000	-13,000
2031	823,000	-2,000	-4,000	-6,000	-16,000
2032	818,000	-3,000	-5,000	-11,000	-23,000

**Table 858 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Tesla)**

Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Tesla)					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	513,000	0	0	0	0
2023	515,000	0	0	0	0
2024	486,000	0	0	0	0
2025	466,000	0	0	0	0
2026	467,000	0	0	0	0
2027	474,000	-2,000	-3,000	-3,000	-4,000
2028	476,000	-3,000	-3,000	-4,000	-7,000
2029	468,000	-3,000	-5,000	-6,000	-10,000
2030	459,000	-2,000	-4,000	-5,000	-11,000
2031	455,000	-2,000	-3,000	-5,000	-12,000
2032	454,000	-2,000	-2,000	-2,000	-10,000

**Table 859 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Toyota)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Toyota)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	2,367,000	0	0	0	0
2023	2,494,000	0	0	0	0
2024	2,446,000	0	0	0	0
2025	2,432,000	0	0	0	0
2026	2,486,000	0	0	0	0
2027	2,553,000	-6,000	-7,000	-10,000	-14,000
2028	2,578,000	-8,000	-11,000	-15,000	-24,000
2029	2,542,000	-9,000	-12,000	-18,000	-34,000
2030	2,486,000	-9,000	-12,000	-19,000	-44,000
2031	2,443,000	-8,000	-12,000	-20,000	-51,000
2032	2,431,000	-8,000	-13,000	-26,000	-63,000

**Table 860 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Volvo)**

<b>Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (Volvo)</b>					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	131,000	0	0	0	0
2023	140,000	0	0	0	0
2024	138,000	0	0	0	0
2025	138,000	0	0	0	0
2026	141,000	0	0	0	0
2027	145,000	0	0	-1,000	-1,000
2028	147,000	0	-1,000	-1,000	-1,000
2029	145,000	0	-1,000	-1,000	-2,000
2030	142,000	0	-1,000	-1,000	-2,000
2031	139,000	0	-1,000	-1,000	-3,000
2032	138,000	0	-1,000	-2,000	-4,000

**Table 861 - Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (VWA)**

Estimated Sales Impacts by Alternative, Total Fleet for Manufacturer (VWA)					
Model Year	Regulatory Alternative				
	No Action (Baseline)	PC1LT3	PC2LT4	PC3LT5	PC6LT8
2022	615,000	0	0	0	0
2023	648,000	0	0	0	0
2024	636,000	0	0	0	0
2025	632,000	0	0	0	0
2026	646,000	0	0	0	0
2027	664,000	-1,000	-2,000	-3,000	-4,000
2028	670,000	-2,000	-3,000	-4,000	-6,000
2029	661,000	-2,000	-3,000	-5,000	-9,000
2030	646,000	-2,000	-3,000	-5,000	-11,000
2031	635,000	-2,000	-3,000	-5,000	-13,000
2032	632,000	-2,000	-3,000	-7,000	-16,000

## Regulatory Costs per Vehicle, by Vehicle Type

**Table 862 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Total)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Total)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,312	2,438	2,077
Alternative PC1LT3	1,731	3,125	2,678
Alternative PC2LT4	1,966	3,502	3,008
Alternative PC3LT5	2,517	4,232	3,679
Alternative PC6LT8	4,393	6,118	5,562



**Table 863 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (BMW)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (BMW)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,722	2,380	2,066
Alternative PC1LT3	1,722	2,540	2,150
Alternative PC2LT4	1,871	2,802	2,357
Alternative PC3LT5	2,150	3,103	2,646
Alternative PC6LT8	3,918	5,091	4,529

**Table 864 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Ford)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Ford)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	878	2,536	2,384
Alternative PC1LT3	1,043	3,380	3,165
Alternative PC2LT4	1,937	3,901	3,720
Alternative PC3LT5	2,379	4,367	4,183
Alternative PC6LT8	7,277	6,230	6,327

**Table 865 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (GM)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (GM)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,368	2,690	2,422
Alternative PC1LT3	3,342	4,286	4,095
Alternative PC2LT4	3,613	4,688	4,469
Alternative PC3LT5	6,720	5,222	5,528
Alternative PC6LT8	8,688	7,067	7,398

**Table 866 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Honda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Honda)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	955	1,929	1,467
Alternative PC1LT3	1,013	2,064	1,565
Alternative PC2LT4	1,013	2,324	1,701
Alternative PC3LT5	1,430	2,652	2,069
Alternative PC6LT8	3,157	4,705	3,967

**Table 867 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Hyundai KiH)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Hyundai KiH)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,802	1,767	1,786
Alternative PC1LT3	3,507	3,076	3,312
Alternative PC2LT4	3,642	3,776	3,703
Alternative PC3LT5	3,940	7,165	5,390
Alternative PC6LT8	6,645	8,839	7,632

**Table 868 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Hyundai KiK)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Hyundai KiK)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	851	1,471	1,151
Alternative PC1LT3	1,712	2,646	2,165
Alternative PC2LT4	3,337	3,440	3,387
Alternative PC3LT5	3,756	8,179	5,888
Alternative PC6LT8	6,094	9,746	7,856

**Table 869 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (JLR)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (JLR)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	2,715	1,800	1,819
Alternative PC1LT3	2,890	2,652	2,657
Alternative PC2LT4	3,273	3,187	3,189
Alternative PC3LT5	3,821	3,739	3,741
Alternative PC6LT8	5,393	5,704	5,697

**Table 870 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Karma)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Karma)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	-3,543	0	-3,543
Alternative PC1LT3	-3,543	0	-3,543
Alternative PC2LT4	-3,543	0	-3,543
Alternative PC3LT5	-3,543	0	-3,543
Alternative PC6LT8	-3,543	0	-3,543



**Table 871 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Lucid)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Lucid)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	-62	0	-62
Alternative PC1LT3	-62	0	-62
Alternative PC2LT4	-62	0	-62
Alternative PC3LT5	-62	0	-62
Alternative PC6LT8	-62	0	-62

**Table 872 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mazda)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mazda)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,629	2,398	2,303
Alternative PC1LT3	1,694	2,420	2,330
Alternative PC2LT4	1,694	2,461	2,366
Alternative PC3LT5	11,032	6,730	7,266
Alternative PC6LT8	13,340	11,579	11,798

**Table 873 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mercedes-Benz)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mercedes-Benz)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	2,129	2,733	2,470
Alternative PC1LT3	2,169	3,026	2,653
Alternative PC2LT4	2,326	3,229	2,836
Alternative PC3LT5	2,816	3,583	3,247
Alternative PC6LT8	4,675	5,718	5,262

**Table 874 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mitsubishi)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Mitsubishi)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,475	1,368	1,421
Alternative PC1LT3	1,702	2,233	1,969
Alternative PC2LT4	1,695	2,414	2,057
Alternative PC3LT5	2,016	4,380	3,201
Alternative PC6LT8	4,256	5,913	5,088

**Table 875 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Nissan)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Nissan)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,498	3,306	2,363
Alternative PC1LT3	1,499	3,714	2,558
Alternative PC2LT4	1,689	4,229	2,902
Alternative PC3LT5	1,975	4,555	3,203
Alternative PC6LT8	4,288	5,803	5,010

**Table 876 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Stellantis)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Stellantis)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	3,217	2,924	2,956
Alternative PC1LT3	3,372	3,861	3,807
Alternative PC2LT4	4,031	4,433	4,388
Alternative PC3LT5	4,687	4,918	4,892
Alternative PC6LT8	6,465	7,583	7,459

**Table 877 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Subaru)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Subaru)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,500	2,516	2,384
Alternative PC1LT3	1,500	2,516	2,384
Alternative PC2LT4	1,500	2,516	2,384
Alternative PC3LT5	1,550	2,515	2,389
Alternative PC6LT8	2,563	3,401	3,292

**Table 878 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Tesla)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Tesla)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	0	226	13
Alternative PC1LT3	0	226	13
Alternative PC2LT4	0	226	13
Alternative PC3LT5	0	226	13
Alternative PC6LT8	0	226	13



**Table 879 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Toyota)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Toyota)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	1,285	2,075	1,794
Alternative PC1LT3	1,285	2,074	1,794
Alternative PC2LT4	1,285	2,188	1,867
Alternative PC3LT5	1,335	2,628	2,166
Alternative PC6LT8	2,847	4,141	3,679

**Table 880 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Volvo)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (Volvo)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	484	1,466	1,202
Alternative PC1LT3	557	1,871	1,517
Alternative PC2LT4	699	2,163	1,768
Alternative PC3LT5	909	2,641	2,172
Alternative PC6LT8	2,594	4,616	4,068

**Table 881 - Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (VWA)**

<b>Estimated Average Per Vehicle Regulatory Costs (\$) for MY 2032, by Alternative for Manufacturer (VWA)</b>			
	Passenger Cars	Light Trucks	Total Fleet
No Action Alternative (Baseline)	2,004	2,383	2,249
Alternative PC1LT3	2,045	2,959	2,635
Alternative PC2LT4	2,136	3,341	2,913
Alternative PC3LT5	2,566	3,800	3,360
Alternative PC6LT8	4,539	5,792	5,346

**Table 882 - Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Total Fleet, by Alternative**

<b>Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Total Fleet, by Alternative</b>				
	Lifetime Fuel Expenditures		Lifetime Increase	
	7% Discount Rate	3% Discount Rate	7% Discount Rate	3% Discount Rate
No Action Alternative (Baseline)	10,678	13,727	0	0
Alternative PC1LT3	10,070	12,943	-608	-784
Alternative PC2LT4	9,869	12,684	-809	-1,043
Alternative PC3LT5	9,672	12,432	-1,006	-1,296
Alternative PC6LT8	9,123	11,725	-1,555	-2,002

**Table 883 - Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Passenger Car Fleet, by Alternative**

<b>Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Passenger Car Fleet, by Alternative</b>				
	Lifetime Fuel Expenditures		Lifetime Increase	
	7% Discount Rate	3% Discount Rate	7% Discount Rate	3% Discount Rate
No Action Alternative (Baseline)	7,646	9,705	0	0
Alternative PC1LT3	7,526	9,552	-119	-153
Alternative PC2LT4	7,410	9,403	-236	-302
Alternative PC3LT5	7,231	9,176	-415	-529
Alternative PC6LT8	6,525	8,279	-1,120	-1,426

**Table 884 - Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Light Truck Fleet, by Alternative**

<b>Estimated Average Per Vehicle Fuel Costs (\$) for MY 2032 Light Truck Fleet, by Alternative</b>				
	Lifetime Fuel Expenditures		Lifetime Increase	
	7% Discount Rate	3% Discount Rate	7% Discount Rate	3% Discount Rate
No Action Alternative (Baseline)	12,109	15,627	0	0
Alternative PC1LT3	11,271	14,544	-839	-1,083
Alternative PC2LT4	11,033	14,238	-1,076	-1,389
Alternative PC3LT5	10,836	13,984	-1,274	-1,643
Alternative PC6LT8	10,358	13,365	-1,751	-2,263

### Vehicle-Mass-Related Fatality Impacts

**Table 885 - Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Total Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Total Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	251	298	480	559
Fatality Costs (\$ Billion, 3% Discount Rate)	2.0	2.4	3.9	5.1
Fatality Costs (\$ Billion, 7% Discount Rate)	1.2	1.5	2.3	3.3
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	3.5	4.2	6.6	8.1
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	2.1	2.5	4.0	5.4
Total Crash Costs (\$ Billion, 3% Discount Rate)	5.6	6.7	10.5	13.2
Total Crash Costs (\$ Billion, 7% Discount Rate)	3.3	4.0	6.3	8.7

**Table 886 - Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Passenger Car Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Passenger Car Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	-4	17	141	210
Fatality Costs (\$ Billion, 3% Discount Rate)	0.1	0.3	1.3	2.1
Fatality Costs (\$ Billion, 7% Discount Rate)	0.1	0.3	0.8	1.5
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	-0.1	0.3	2.0	3.2
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	0.1	0.3	1.3	2.4
Total Crash Costs (\$ Billion, 3% Discount Rate)	0.0	0.5	3.3	5.3
Total Crash Costs (\$ Billion, 7% Discount Rate)	0.2	0.5	2.2	3.8



**Table 887 - Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Light Truck Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts over the Lifetime of MY 1983-2032 for Light Truck Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	255	280	339	349
Fatality Costs (\$ Billion, 3% Discount Rate)	1.9	2.2	2.6	3.0
Fatality Costs (\$ Billion, 7% Discount Rate)	1.1	1.2	1.5	1.8
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	3.6	4.0	4.6	4.9
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	2.0	2.3	2.6	3.0
Total Crash Costs (\$ Billion, 3% Discount Rate)	5.5	6.1	7.3	7.9
Total Crash Costs (\$ Billion, 7% Discount Rate)	3.1	3.5	4.1	4.8

**Table 888 - Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Total Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Total Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	249	349	488	717
Fatality Costs (\$ Billion, 3% Discount Rate)	1.6	2.2	3.1	4.5
Fatality Costs (\$ Billion, 7% Discount Rate)	0.7	1.0	1.3	2.0
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	3.1	4.4	6.0	9.0
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	1.3	1.9	2.6	3.9
Total Crash Costs (\$ Billion, 3% Discount Rate)	4.7	6.6	9.1	13.5
Total Crash Costs (\$ Billion, 7% Discount Rate)	2.0	2.8	3.9	5.8

**Table 889 - Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Passenger Car Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Passenger Car Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	-73	-126	-34	42
Fatality Costs (\$ Billion, 3% Discount Rate)	-0.4	-0.8	-0.2	0.3
Fatality Costs (\$ Billion, 7% Discount Rate)	-0.2	-0.3	-0.1	0.1
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	-0.9	-1.5	-0.4	0.6
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	-0.4	-0.6	-0.1	0.3
Total Crash Costs (\$ Billion, 3% Discount Rate)	-1.3	-2.3	-0.6	0.9
Total Crash Costs (\$ Billion, 7% Discount Rate)	-0.5	-0.9	-0.2	0.4

**Table 890 - Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Light Truck Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%**

<b>Vehicle-Mass-Related Fatality Impacts for CY 2039-2048 for Light Truck Fleet, Compared to Alternative 0 (Baseline) - Fatalities Undiscounted, Dollars Discounted at 3% and 7%</b>				
Category	Regulatory Alternative			
	PC1LT3	PC2LT4	PC3LT5	PC6LT8
Fatalities	322	475	522	674
Fatality Costs (\$ Billion, 3% Discount Rate)	2.0	3.0	3.3	4.2
Fatality Costs (\$ Billion, 7% Discount Rate)	0.9	1.3	1.4	1.8
Non-Fatal Crash Costs (\$ Billion, 3% Discount Rate)	4.0	5.9	6.4	8.4
Non-Fatal Crash Costs (\$ Billion, 7% Discount Rate)	1.7	2.5	2.7	3.6
Total Crash Costs (\$ Billion, 3% Discount Rate)	6.0	8.9	9.7	12.6
Total Crash Costs (\$ Billion, 7% Discount Rate)	2.6	3.8	4.1	5.4

**Table 891 - Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), Undiscounted**

Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), Undiscounted												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0	0	0	0	0	0	0	0	0	0	0	0
Light Trucks	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0

**Table 892 - Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), Undiscounted**

Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), Undiscounted												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	124	6	5	5	5	-21	-28	-39	-27	-15	1	17
Light Trucks	110	10	11	12	13	22	19	35	23	19	6	280
Total	235	16	16	17	18	1	-10	-4	-4	5	7	298

**Table 893 - Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), Undiscounted**

Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), Undiscounted												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	213	12	11	10	10	-20	-24	-45	-25	-17	15	141
Light Trucks	197	20	21	23	26	22	15	38	14	13	-51	339
Total	410	31	32	34	36	2	-8	-7	-10	-3	-37	480

**Table 894 - Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), Undiscounted**

Incremental Vehicle-Mass-Related Fatality Impacts by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), Undiscounted												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	422	21	19	17	17	-25	-38	-67	-69	-64	-22	210
Light Trucks	386	37	39	43	48	35	14	14	-33	-71	-161	349
Total	808	57	58	60	65	9	-24	-53	-102	-135	-183	559



**Table 895 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), 3% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), 3% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 896 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC1LT3 Compared to Alternative 0 (Baseline), 3% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC1LT3 Compared to Alternative 0 (Baseline), 3% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0.8	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.1
Light Trucks	0.6	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	1.9
Total	1.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	2.0

**Table 897 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), 3% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), 3% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	1.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.3	-0.2	-0.1	0.0	0.3
Light Trucks	0.9	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.1	0.0	2.2
Total	2.0	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	0.0	0.0	0.1	2.4

**Table 898 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), 3% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), 3% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	1.8	0.1	0.1	0.1	0.1	-0.2	-0.2	-0.3	-0.2	-0.1	0.1	1.3
Light Trucks	1.6	0.1	0.2	0.2	0.2	0.2	0.1	0.3	0.1	0.1	-0.3	2.6
Total	3.4	0.2	0.2	0.2	0.3	0.0	-0.1	-0.1	-0.1	0.0	-0.2	3.9

**Table 899 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), 3% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), 3% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	3.6	0.2	0.1	0.1	0.1	-0.2	-0.3	-0.5	-0.5	-0.4	-0.1	2.1
Light Trucks	3.1	0.3	0.3	0.3	0.3	0.2	0.1	0.1	-0.2	-0.5	-1.1	3.0
Total	6.8	0.4	0.4	0.5	0.5	0.0	-0.2	-0.4	-0.7	-0.9	-1.2	5.1

**Table 900 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), 7% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, No Action Alternative (Baseline) Compared to Alternative 0 (Baseline), 7% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Light Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 901 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC1LT3 Compared to Alternative 0 (Baseline), 7% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC1LT3 Compared to Alternative 0 (Baseline), 7% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0.5	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1
Light Trucks	0.4	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Total	0.9	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	1.2

**Table 902 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), 7% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC2LT4 Compared to Alternative 0 (Baseline), 7% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	0.7	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.1	-0.1	0.0	0.3
Light Trucks	0.6	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	1.2
Total	1.3	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	1.5



**Table 903 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), 7% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC3LT5 Compared to Alternative 0 (Baseline), 7% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	1.2	0.1	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.1	-0.1	0.1	0.8
Light Trucks	1.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	-0.2	1.5
Total	2.1	0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.1	2.3

**Table 904 - Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), 7% Discount Rate**

Incremental Vehicle-Mass-Related Fatality Costs (\$ billion) by Model Year and Fleet, Alternative PC6LT8 Compared to Alternative 0 (Baseline), 7% Discount Rate												
Model Year	1983-2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Passenger Cars	2.3	0.1	0.1	0.1	0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	1.5
Light Trucks	1.9	0.2	0.2	0.2	0.2	0.1	0.0	0.0	-0.1	-0.3	-0.5	1.8
Total	4.2	0.3	0.2	0.2	0.3	0.0	-0.2	-0.3	-0.4	-0.5	-0.6	3.3

## Change in Safety Parameters

**Table 905 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-1	-10	-2	-3
Fatalities from Rebound Effect	199	249	306	404
Fatalities from Sales/Scrappage	53	59	176	158
Total Changes in Fatalities	251	298	480	559
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	-0.1	0.0	0.0
Fatality Costs From Rebound Effect	1.4	1.8	2.2	2.9
Fatality Costs from Sales/Scrappage	0.6	0.7	1.7	2.1
Total - Fatality Costs (\$b)	2.0	2.4	3.9	5.1
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	-0.1	0.0	0.0
Non-Fatal Crash Costs From Rebound Effect	2.8	3.6	4.4	5.8
Non-Fatal Crash Costs from Sales/Scrappage	0.7	0.8	2.3	2.4
Total - Non-Fatal Crash Costs (\$b)	3.5	4.2	6.6	8.1
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.0	0.0
Property Damage Costs From Rebound Effect	0.5	0.6	0.7	0.9
Property Damage Costs From Sales/Scrappage	-0.1	-0.1	-0.1	-0.5
Total - Property Damage Costs (\$b)	0.4	0.4	0.6	0.5
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.0	-0.2	0.0	-0.1
Crash Costs from Rebound Effect	4.7	5.9	7.3	9.6
Crash Costs from Sales/Scrappage	1.2	1.4	3.9	4.1
Total - Societal Crash Costs (\$b)	6.0	7.1	11.1	13.6

**Table 906 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	2	4	23	32
Fatalities from Rebound Effect	12	26	46	107
Fatalities from Sales/Scrappage	-19	-13	73	71
Total Changes in Fatalities	-4	17	141	210
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.0	0.2	0.2
Fatality Costs From Rebound Effect	0.1	0.2	0.3	0.8
Fatality Costs from Sales/Scrappage	0.0	0.1	0.8	1.1
Total - Fatality Costs (\$b)	0.1	0.3	1.3	2.1
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	0.1	0.3	0.5
Non-Fatal Crash Costs From Rebound Effect	0.2	0.4	0.7	1.5
Non-Fatal Crash Costs from Sales/Scrappage	-0.3	-0.2	1.0	1.2
Total - Non-Fatal Crash Costs (\$b)	-0.1	0.3	2.0	3.2
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.1	0.1
Property Damage Costs From Rebound Effect	0.0	0.1	0.1	0.3
Property Damage Costs From Sales/Scrappage	-0.1	-0.1	0.0	-0.2
Total - Property Damage Costs (\$b)	-0.1	-0.1	0.1	0.1
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.1	0.1	0.5	0.8
Crash Costs from Rebound Effect	0.3	0.6	1.1	2.6
Crash Costs from Sales/Scrappage	-0.4	-0.3	1.8	2.1
Total - Societal Crash Costs (\$b)	-0.1	0.5	3.4	5.4

**Table 907 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-3	-14	-24	-35
Fatalities from Rebound Effect	186	223	260	297
Fatalities from Sales/Scrappage	72	71	103	87
Total Changes in Fatalities	255	280	339	349
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	-0.1	-0.2	-0.2
Fatality Costs From Rebound Effect	1.4	1.6	1.9	2.1
Fatality Costs from Sales/Scrappage	0.6	0.6	0.9	1.1
Total - Fatality Costs (\$b)	1.9	2.2	2.6	3.0
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	-0.2	-0.3	-0.5
Non-Fatal Crash Costs From Rebound Effect	2.7	3.2	3.7	4.2
Non-Fatal Crash Costs from Sales/Scrappage	1.0	1.0	1.3	1.2
Total - Non-Fatal Crash Costs (\$b)	3.6	4.0	4.6	4.9
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	-0.1	-0.1
Property Damage Costs From Rebound Effect	0.4	0.5	0.6	0.7
Property Damage Costs From Sales/Scrappage	0.1	0.0	0.0	-0.3
Total - Property Damage Costs (\$b)	0.5	0.5	0.5	0.3
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	-0.1	-0.3	-0.6	-0.8
Crash Costs from Rebound Effect	4.5	5.3	6.2	7.1
Crash Costs from Sales/Scrappage	1.6	1.6	2.1	2.0
Total - Societal Crash Costs (\$b)	6.0	6.6	7.8	8.2

**Table 908 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-1	-10	-2	-3
Fatalities from Rebound Effect	199	249	306	404
Fatalities from Sales/Scrappage	53	59	176	158
Total Changes in Fatalities	251	298	480	559
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.0	0.0	0.0
Fatality Costs From Rebound Effect	0.8	1.0	1.2	1.6
Fatality Costs from Sales/Scrappage	0.4	0.5	1.1	1.8
Total - Fatality Costs (\$b)	1.2	1.5	2.3	3.3
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	-0.1	0.0	0.0
Non-Fatal Crash Costs From Rebound Effect	1.5	1.9	2.4	3.1
Non-Fatal Crash Costs from Sales/Scrappage	0.6	0.7	1.6	2.2
Total - Non-Fatal Crash Costs (\$b)	2.1	2.5	4.0	5.4
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.0	0.0
Property Damage Costs From Rebound Effect	0.3	0.3	0.4	0.5
Property Damage Costs From Sales/Scrappage	0.0	-0.1	0.0	-0.2
Total - Property Damage Costs (\$b)	0.2	0.3	0.4	0.3
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.0	-0.1	0.0	0.0
Crash Costs from Rebound Effect	2.6	3.2	4.0	5.2
Crash Costs from Sales/Scrappage	1.0	1.2	2.7	3.8
Total - Societal Crash Costs (\$b)	3.5	4.3	6.7	9.0

**Table 909 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	2	4	23	32
Fatalities from Rebound Effect	12	26	46	107
Fatalities from Sales/Scrappage	-19	-13	73	71
Total Changes in Fatalities	-4	17	141	210
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.0	0.1	0.1
Fatality Costs From Rebound Effect	0.0	0.1	0.2	0.4
Fatality Costs from Sales/Scrappage	0.1	0.1	0.6	1.0
Total - Fatality Costs (\$b)	0.1	0.3	0.8	1.5
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	0.0	0.2	0.2
Non-Fatal Crash Costs From Rebound Effect	0.1	0.2	0.4	0.8
Non-Fatal Crash Costs from Sales/Scrappage	0.0	0.1	0.8	1.3
Total - Non-Fatal Crash Costs (\$b)	0.1	0.3	1.3	2.4
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.0	0.0
Property Damage Costs From Rebound Effect	0.0	0.0	0.1	0.1
Property Damage Costs From Sales/Scrappage	-0.1	-0.1	0.0	-0.1
Total - Property Damage Costs (\$b)	0.0	0.0	0.1	0.1
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.0	0.0	0.3	0.4
Crash Costs from Rebound Effect	0.2	0.3	0.6	1.4
Crash Costs from Sales/Scrappage	0.0	0.1	1.4	2.2
Total - Societal Crash Costs (\$b)	0.1	0.5	2.3	4.0

**Table 910 - Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-3	-14	-24	-35
Fatalities from Rebound Effect	186	223	260	297
Fatalities from Sales/Scrappage	72	71	103	87
Total Changes in Fatalities	255	280	339	349
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.0	-0.1	-0.1
Fatality Costs From Rebound Effect	0.7	0.9	1.0	1.1
Fatality Costs from Sales/Scrappage	0.4	0.4	0.6	0.8
Total - Fatality Costs (\$b)	1.1	1.2	1.5	1.8
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	-0.1	-0.2	-0.3
Non-Fatal Crash Costs From Rebound Effect	1.5	1.7	2.0	2.3
Non-Fatal Crash Costs from Sales/Scrappage	0.6	0.6	0.8	1.0
Total - Non-Fatal Crash Costs (\$b)	2.0	2.3	2.6	3.0
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.0	0.0
Property Damage Costs From Rebound Effect	0.2	0.3	0.3	0.4
Property Damage Costs From Sales/Scrappage	0.0	0.0	0.0	-0.1
Total - Property Damage Costs (\$b)	0.3	0.3	0.3	0.2
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.0	-0.2	-0.3	-0.4
Crash Costs from Rebound Effect	2.4	2.9	3.4	3.8
Crash Costs from Sales/Scrappage	1.0	1.0	1.4	1.6
Total - Societal Crash Costs (\$b)	3.4	3.8	4.4	5.0



**Table 911 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-36	-30	-6	22
Fatalities from Rebound Effect	305	406	532	814
Fatalities from Sales/Scrappage	-21	-27	-38	-118
Total Changes in Fatalities	249	349	488	717
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	-0.2	-0.2	0.0	0.1
Fatality Costs From Rebound Effect	1.9	2.5	3.3	5.1
Fatality Costs from Sales/Scrappage	-0.1	-0.2	-0.2	-0.7
Total - Fatality Costs (\$b)	1.6	2.2	3.1	4.5
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	-0.4	-0.4	-0.1	0.3
Non-Fatal Crash Costs From Rebound Effect	3.8	5.1	6.6	10.2
Non-Fatal Crash Costs from Sales/Scrappage	-0.3	-0.3	-0.5	-1.5
Total - Non-Fatal Crash Costs (\$b)	3.1	4.4	6.0	9.0
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	-0.1	-0.1	0.0	0.1
Property Damage Costs From Rebound Effect	0.6	0.8	1.1	1.7
Property Damage Costs From Sales/Scrappage	0.0	0.0	-0.1	-0.1
Total - Property Damage Costs (\$b)	0.5	0.7	1.0	1.6
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	-0.7	-0.6	-0.1	0.5
Crash Costs from Rebound Effect	6.4	8.4	11.1	17.0
Crash Costs from Sales/Scrappage	-0.4	-0.5	-0.9	-2.4
Total - Societal Crash Costs (\$b)	5.2	7.3	10.1	15.1

**Table 912 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	6	33	92	152
Fatalities from Rebound Effect	9	25	63	200
Fatalities from Sales/Scrappage	-88	-184	-189	-310
Total Changes in Fatalities	-73	-126	-34	42
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.2	0.6	0.9
Fatality Costs From Rebound Effect	0.1	0.2	0.4	1.3
Fatality Costs from Sales/Scrappage	-0.5	-1.1	-1.1	-1.9
Total - Fatality Costs (\$b)	-0.4	-0.8	-0.2	0.3
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.1	0.4	1.2	1.9
Non-Fatal Crash Costs From Rebound Effect	0.1	0.3	0.8	2.5
Non-Fatal Crash Costs from Sales/Scrappage	-1.1	-2.3	-2.3	-3.8
Total - Non-Fatal Crash Costs (\$b)	-0.9	-1.5	-0.4	0.6
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.1	0.2	0.3
Property Damage Costs From Rebound Effect	0.0	0.0	0.1	0.4
Property Damage Costs From Sales/Scrappage	-0.2	-0.4	-0.4	-0.6
Total - Property Damage Costs (\$b)	-0.1	-0.3	-0.1	0.1
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.1	0.7	1.9	3.2
Crash Costs from Rebound Effect	0.2	0.5	1.3	4.2
Crash Costs from Sales/Scrappage	-1.8	-3.8	-3.9	-6.4
Total - Societal Crash Costs (\$b)	-1.5	-2.6	-0.7	1.0

**Table 913 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, 3% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, 3% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-42	-63	-99	-131
Fatalities from Rebound Effect	297	380	469	613
Fatalities from Sales/Scrappage	67	157	151	192
Total Changes in Fatalities	322	475	522	674
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	-0.3	-0.4	-0.6	-0.8
Fatality Costs From Rebound Effect	1.9	2.4	2.9	3.8
Fatality Costs from Sales/Scrappage	0.4	1.0	0.9	1.2
Total - Fatality Costs (\$b)	2.0	3.0	3.3	4.2
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	-0.5	-0.8	-1.2	-1.6
Non-Fatal Crash Costs From Rebound Effect	3.7	4.8	5.9	7.7
Non-Fatal Crash Costs from Sales/Scrappage	0.8	1.9	1.8	2.3
Total - Non-Fatal Crash Costs (\$b)	4.0	5.9	6.4	8.4
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	-0.1	-0.1	-0.2	-0.3
Property Damage Costs From Rebound Effect	0.6	0.8	1.0	1.3
Property Damage Costs From Sales/Scrappage	0.1	0.4	0.3	0.5
Total - Property Damage Costs (\$b)	0.7	1.0	1.1	1.4
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	-0.9	-1.3	-2.0	-2.7
Crash Costs from Rebound Effect	6.2	7.9	9.8	12.8
Crash Costs from Sales/Scrappage	1.4	3.2	3.0	4.0
Total - Societal Crash Costs (\$b)	6.7	9.8	10.8	14.1

**Table 914 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-36	-30	-6	22
Fatalities from Rebound Effect	305	406	532	814
Fatalities from Sales/Scrappage	-21	-27	-38	-118
Total Changes in Fatalities	249	349	488	717
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	-0.1	-0.1	0.0	0.1
Fatality Costs From Rebound Effect	0.8	1.1	1.4	2.2
Fatality Costs from Sales/Scrappage	0.0	-0.1	-0.1	-0.3
Total - Fatality Costs (\$b)	0.7	1.0	1.3	2.0
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	-0.2	-0.2	0.0	0.1
Non-Fatal Crash Costs From Rebound Effect	1.6	2.2	2.9	4.4
Non-Fatal Crash Costs from Sales/Scrappage	-0.1	-0.1	-0.2	-0.6
Total - Non-Fatal Crash Costs (\$b)	1.3	1.9	2.6	3.9
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.0	0.0
Property Damage Costs From Rebound Effect	0.3	0.4	0.5	0.7
Property Damage Costs From Sales/Scrappage	0.0	0.0	0.0	-0.1
Total - Property Damage Costs (\$b)	0.2	0.3	0.4	0.7
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	-0.3	-0.3	0.0	0.2
Crash Costs from Rebound Effect	2.7	3.6	4.8	7.3
Crash Costs from Sales/Scrappage	-0.2	-0.2	-0.3	-1.0
Total - Societal Crash Costs (\$b)	2.2	3.1	4.4	6.5

**Table 915 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	6	33	92	152
Fatalities from Rebound Effect	9	25	63	200
Fatalities from Sales/Scrappage	-88	-184	-189	-310
Total Changes in Fatalities	-73	-126	-34	42
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	0.0	0.1	0.2	0.4
Fatality Costs From Rebound Effect	0.0	0.1	0.2	0.5
Fatality Costs from Sales/Scrappage	-0.2	-0.5	-0.5	-0.8
Total - Fatality Costs (\$b)	-0.2	-0.3	-0.1	0.1
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	0.0	0.2	0.5	0.8
Non-Fatal Crash Costs From Rebound Effect	0.0	0.1	0.3	1.1
Non-Fatal Crash Costs from Sales/Scrappage	-0.4	-0.9	-1.0	-1.6
Total - Non-Fatal Crash Costs (\$b)	-0.4	-0.6	-0.1	0.3
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	0.0	0.1	0.1
Property Damage Costs From Rebound Effect	0.0	0.0	0.1	0.2
Property Damage Costs From Sales/Scrappage	-0.1	-0.2	-0.2	-0.3
Total - Property Damage Costs (\$b)	-0.1	-0.1	0.0	0.1
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	0.1	0.3	0.8	1.3
Crash Costs from Rebound Effect	0.1	0.2	0.6	1.8
Crash Costs from Sales/Scrappage	-0.7	-1.6	-1.6	-2.7
Total - Societal Crash Costs (\$b)	-0.6	-1.1	-0.2	0.4

**Table 916 - Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, 7% Percent Discount Rate, by Alternative**

<b>Change in Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, 7% Percent Discount Rate, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Fatalities</b>				
Fatalities From Mass Changes	-42	-63	-99	-131
Fatalities from Rebound Effect	297	380	469	613
Fatalities from Sales/Scrappage	67	157	151	192
Total Changes in Fatalities	322	475	522	674
<b>Fatality Costs (\$b)</b>				
Fatality Costs From Mass Changes	-0.1	-0.2	-0.3	-0.3
Fatality Costs From Rebound Effect	0.8	1.0	1.3	1.6
Fatality Costs from Sales/Scrappage	0.2	0.4	0.4	0.5
Total - Fatality Costs (\$b)	0.9	1.3	1.4	1.8
<b>Non-Fatal Crash Costs (\$b)</b>				
Non-Fatal Crash Costs From Mass Changes	-0.2	-0.3	-0.5	-0.7
Non-Fatal Crash Costs From Rebound Effect	1.6	2.0	2.5	3.3
Non-Fatal Crash Costs from Sales/Scrappage	0.3	0.8	0.7	1.0
Total - Non-Fatal Crash Costs (\$b)	1.7	2.5	2.7	3.6
<b>Property Damage Costs (\$b)</b>				
Property Damage Costs From Mass Changes	0.0	-0.1	-0.1	-0.1
Property Damage Costs From Rebound Effect	0.3	0.3	0.4	0.5
Property Damage Costs From Sales/Scrappage	0.1	0.1	0.1	0.2
Total - Property Damage Costs (\$b)	0.3	0.4	0.5	0.6
<b>Societal Crash Costs (\$b)</b>				
Crash Costs from Mass Changes	-0.4	-0.6	-0.9	-1.1
Crash Costs from Rebound Effect	2.6	3.4	4.2	5.5
Crash Costs from Sales/Scrappage	0.6	1.3	1.3	1.7
Total - Societal Crash Costs (\$b)	2.9	4.2	4.6	6.0

**Table 917 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Total Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	-91	-1,505	-227	-409
Non-Fatal Injuries from Rebound Effect	30,877	38,703	47,541	62,880
Non-Fatal Injuries from Sales/Scrappage	4,631	4,118	18,496	8,644
<b>Total Changes in Non-Fatal Injuries</b>	<b>35,417</b>	<b>41,317</b>	<b>65,810</b>	<b>71,115</b>
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	-243	-4,502	-475	-907
Property Damaged Vehicles from Rebound Effect	94,482	118,551	145,408	192,844
Property Damaged Vehicles from Sales/Scrappage	-14,874	-28,241	-22,228	-117,661
<b>Total Changes in Property Damaged Vehicles</b>	<b>79,366</b>	<b>85,808</b>	<b>122,705</b>	<b>74,275</b>

**Table 918 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Passenger Car Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	364	636	3,589	5,042
Non-Fatal Injuries from Rebound Effect	1,905	4,067	7,124	16,763
Non-Fatal Injuries from Sales/Scrappage	-4,694	-4,463	7,124	3,293
Total Changes in Non-Fatal Injuries	-2,426	240	17,837	25,098
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	1,155	2,054	11,230	15,760
Property Damaged Vehicles from Rebound Effect	5,841	12,533	21,934	52,015
Property Damaged Vehicles from Sales/Scrappage	-27,563	-32,240	-12,886	-54,675
Total Changes in Property Damaged Vehicles	-20,566	-17,653	20,278	13,100



**Table 919 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for MY 1983-2032 for Light Truck Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	-455	-2,141	-3,816	-5,451
Non-Fatal Injuries from Rebound Effect	28,973	34,636	40,417	46,117
Non-Fatal Injuries from Sales/Scrappage	9,325	8,581	11,372	5,352
<b>Total Changes in Non-Fatal Injuries</b>	<b>37,842</b>	<b>41,077</b>	<b>47,973</b>	<b>46,017</b>
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	-1,398	-6,556	-11,705	-16,667
Property Damaged Vehicles from Rebound Effect	88,641	106,018	123,474	140,828
Property Damaged Vehicles from Sales/Scrappage	12,689	3,999	-9,343	-62,986
<b>Total Changes in Property Damaged Vehicles</b>	<b>99,932</b>	<b>103,461</b>	<b>102,427</b>	<b>61,175</b>

**Table 920 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Total Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	-5,774	-4,748	-953	3,525
Non-Fatal Injuries from Rebound Effect	48,388	64,312	84,438	129,422
Non-Fatal Injuries from Sales/Scrappage	-3,433	-4,526	-7,180	-19,284
<b>Total Changes in Non-Fatal Injuries</b>	<b>39,181</b>	<b>55,037</b>	<b>76,305</b>	<b>113,663</b>
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	-19,783	-15,628	-2,846	13,028
Property Damaged Vehicles from Rebound Effect	155,370	207,030	273,355	422,766
Property Damaged Vehicles from Sales/Scrappage	-6,543	-8,550	-21,884	-32,638
<b>Total Changes in Property Damaged Vehicles</b>	<b>129,044</b>	<b>182,852</b>	<b>248,625</b>	<b>403,155</b>

**Table 921 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Passenger Car Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	983	5,353	14,813	24,448
Non-Fatal Injuries from Rebound Effect	1,350	3,913	9,882	31,837
Non-Fatal Injuries from Sales/Scrappage	-13,975	-29,474	-30,528	-49,209
Total Changes in Non-Fatal Injuries	-11,642	-20,207	-5,832	7,075
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	3,297	18,344	50,164	83,370
Property Damaged Vehicles from Rebound Effect	3,507	11,392	30,555	102,395
Property Damaged Vehicles from Sales/Scrappage	-45,645	-100,279	-106,701	-149,270
Total Changes in Property Damaged Vehicles	-38,841	-70,542	-25,982	36,495

**Table 922 - Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, by Alternative**

<b>Change in Non-Fatal Safety Parameters from Alternative 0 (Baseline) for CY 2039-2048 for Light Truck Fleet, by Alternative</b>				
Alternative	PC1LT3	PC2LT4	PC3LT5	PC6LT8
<b>Non-Fatal Injuries</b>				
Non-Fatal Injuries From Mass Changes	-6,757	-10,101	-15,767	-20,923
Non-Fatal Injuries from Rebound Effect	47,038	60,398	74,556	97,585
Non-Fatal Injuries from Sales/Scrappage	10,542	24,947	23,348	29,926
Total Changes in Non-Fatal Injuries	50,823	75,244	82,137	106,588
<b>Property Damaged Vehicles</b>				
Property Damaged Vehicles From Mass Changes	-23,080	-33,973	-53,009	-70,342
Property Damaged Vehicles from Rebound Effect	151,862	195,638	242,800	320,370
Property Damaged Vehicles from Sales/Scrappage	39,103	91,729	84,817	116,632
Total Changes in Property Damaged Vehicles	167,885	253,395	274,607	366,660