

# Preliminary 2007 California Transportation Fuel Demand Forecast

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# Fuels

Staff included the following fuels in the transportation energy demand forecast:

- Gasoline
- Diesel
- Ethanol (low blends)
- Jet Fuel

Electricity, 85 percent Ethanol blend, and natural gas were not evaluated in preliminary forecast



# Transportation Sectors

The transportation energy demand forecast evaluated the following transportation sectors:

- Light-duty vehicles, both private and commercial
- Public Transportation
- Freight movement
- Commercial Aviation



# Transportation Energy Demand Forecast

The forecast combines the outputs from four models:

1. CALCARS
2. Transit
3. Freight
4. Aviation



# Model Inputs

Inputs to the models include:

- Forecast transportation fuel prices
- Demographic data
- Economic data
- Partial survey results
- Vehicle characteristics
- Industrial sector activity



# Summary of Fuel Demand Cases Selected for Infrastructure Evaluation

No GHG Standard			GHG Standard		
Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
<b>High Demand Case</b>	<i>Demand case not selected as representative</i>	<i>Demand case not selected as representative</i>	<i>Demand case not selected as representative</i>	<b>Base Demand Case</b>	<b>Low Demand Case</b>

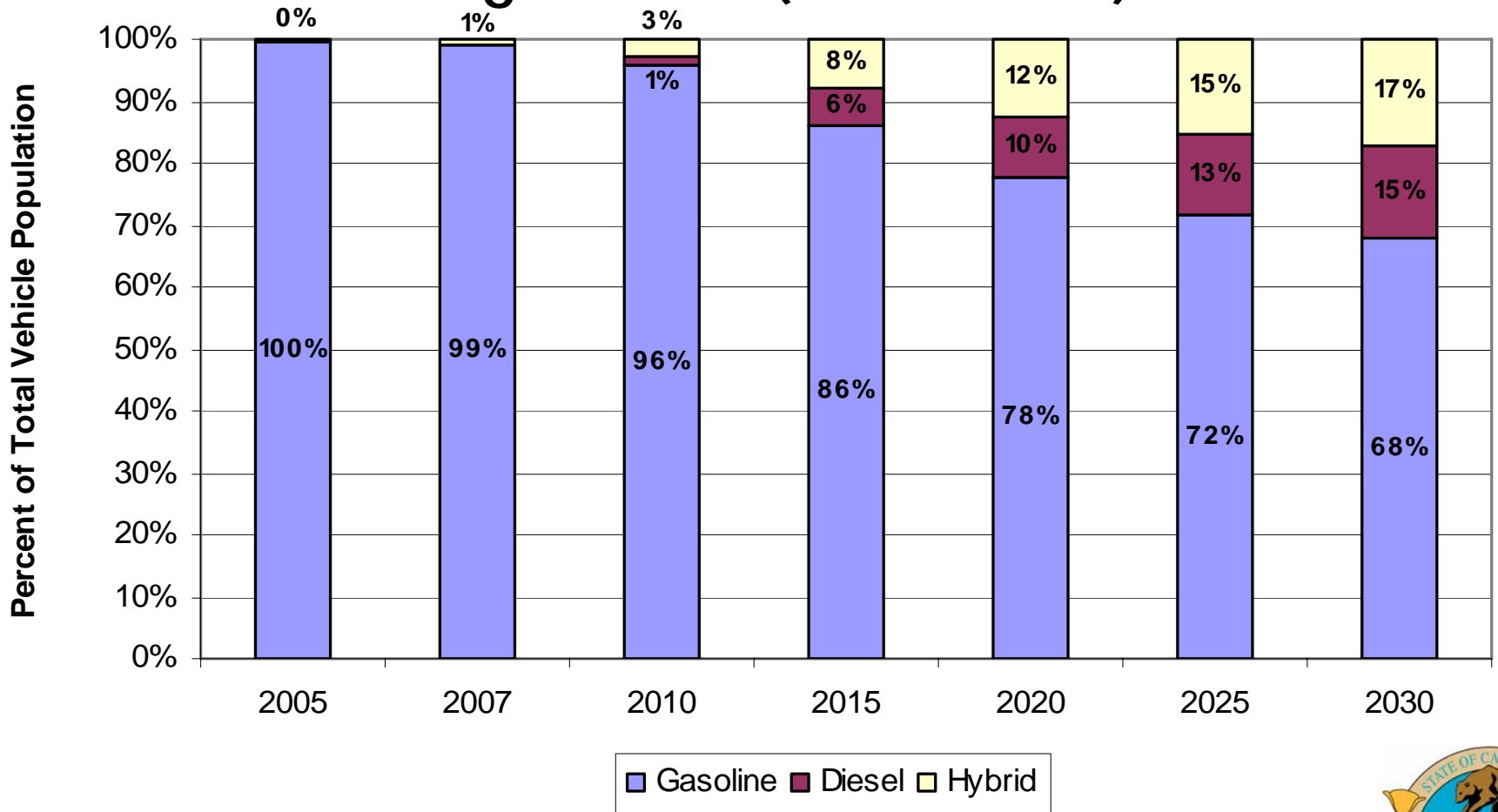


# California Vehicle Ownership Trends

California On-road Registered Vehicles								
	Gasoline		Diesel		Hybrid		Flex Fuel	
<b>2001</b>	22,779,246		316,872		6,609		97,611	
<b>2002</b>	23,384,639	2.7%	334,313	5.5%	15,159	129.4%	129,734	32.9%
<b>2003</b>	24,516,071	4.8%	364,411	9.0%	24,182	59.5%	183,546	41.5%
<b>2004</b>	24,785,578	1.1%	391,950	7.6%	45,263	87.2%	195,752	6.7%
<b>2005</b>	25,440,904	2.6%	424,137	8.2%	91,438	102.0%	269,857	37.9%
<b>Average Rate</b>		<b>2.8%</b>		<b>7.6%</b>		<b>94.5%</b>		<b>29.7%</b>



# Fleet Composition, Base Fuel Price Case with GHG Regulations (2005 - 2030)



# Average Fleet Fuel Economy

Year	No GHG Standard			GHG Standard		
	Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
<b>2005</b>	20.35	20.35	20.35	20.35	20.35	20.35
<b>2010</b>	19.45	20.18	20.95	20.72	20.95	20.97
<b>2015</b>	19.95	20.79	22.65	22.55	22.74	22.80
<b>2020</b>	20.95	21.75	24.50	24.85	24.93	25.53
<b>2025</b>	21.83	22.75	26.21	26.47	26.74	27.95
<b>2030</b>	22.50	23.58	27.64	27.72	28.17	29.82



# Total Light-Duty Vehicle Miles Traveled (VMT) (billions of miles)

Year	No GHG Standards			GHG Standards		
	Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
<b>2005</b>	319.6	319.6	319.6	319.6	319.6	319.6
<b>2010</b>	341.7	355.9	358.1	345.9	358.1	358.2
<b>2015</b>	374.6	387.2	391.9	381.3	392.2	392.3
<b>2020</b>	407.1	417.9	424.8	416.5	425.9	427.2
<b>2025</b>	439.2	447.6	456.6	451.4	458.1	460.7
<b>2030</b>	468.4	473.7	484.1	481.9	485.4	489.1

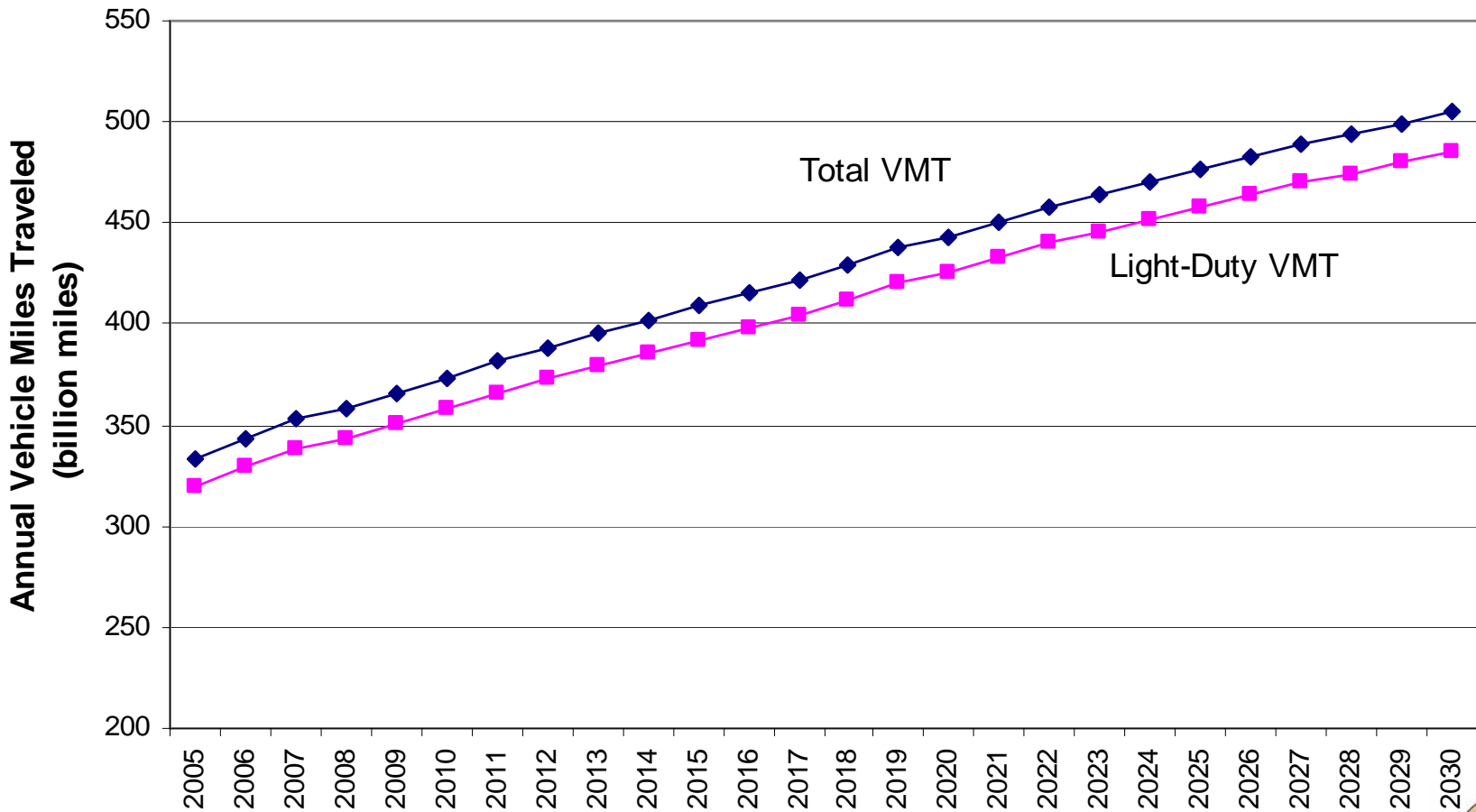


# Preliminary Total On-Road VMT (billions of miles)

Year	No GHG Standards			GHG Standards		
	Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
<b>2005</b>	334.4	334.4	334.4	334.4	334.4	334.4
<b>2010</b>	358.4	372.5	374.7	374.7	374.7	374.8
<b>2015</b>	392.4	405.1	409.8	410.0	410.0	410.2
<b>2020</b>	426.1	436.8	443.7	444.8	444.8	446.1
<b>2025</b>	459.0	467.4	476.4	477.9	477.9	480.5
<b>2030</b>	489.4	494.7	505.1	506.4	506.4	510.1
<b>Annual Average Growth</b>	1.535%	1.579%	1.664%	1.674%	1.674%	1.704%



# Projected On-Road Vehicle Miles Traveled (2005 – 2030) Base Fuel Price Case with GHG Regulations

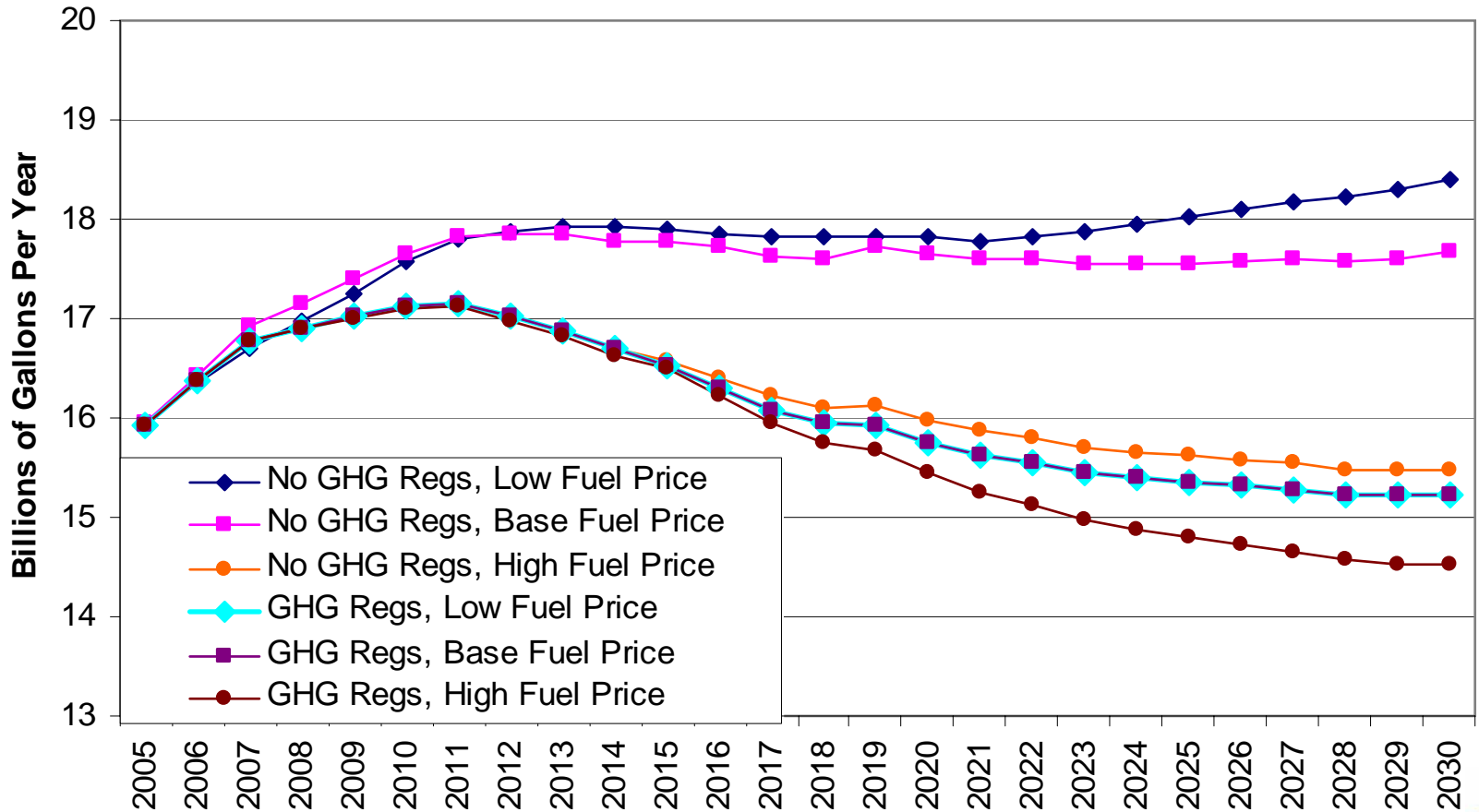


# Total Light-Duty Gasoline Demand (billions of gallons)

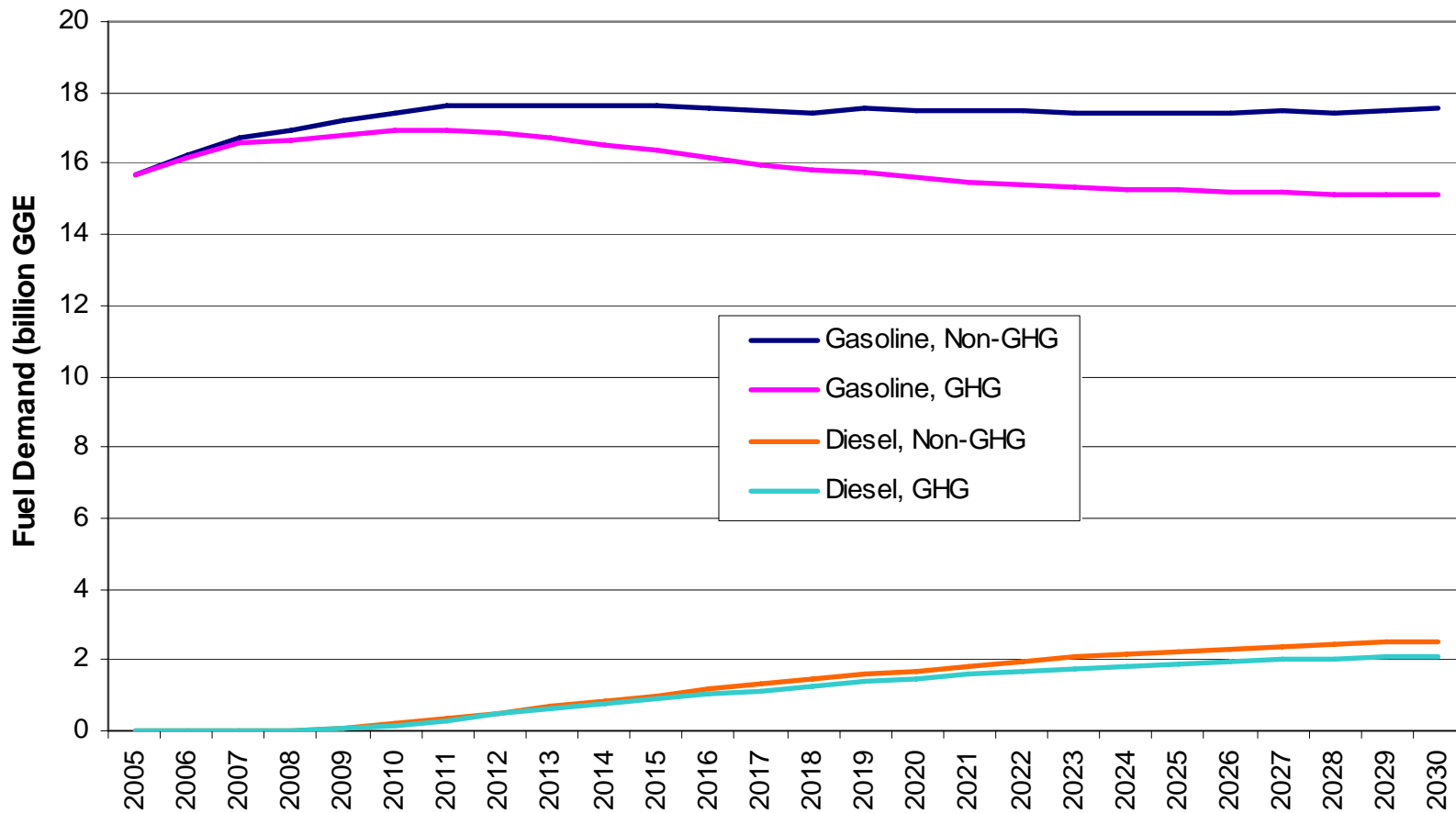
Year	No GHG Standard			GHG Standard		
	Low Fuel Price	Base Fuel Price	High Fuel Price	Low Fuel Price	Base Fuel Price	High Fuel Price
<b>2005</b>	15.95	15.94	15.93	15.93	15.93	15.93
<b>2010</b>	17.57	17.64	17.11	17.11	17.11	17.10
<b>2015</b>	17.91	17.78	16.58	16.52	16.52	16.49
<b>2020</b>	17.81	17.66	15.98	15.76	15.76	15.45
<b>2025</b>	18.03	17.56	15.61	15.36	15.36	14.79
<b>2030</b>	18.39	17.68	15.48	15.23	15.23	14.52



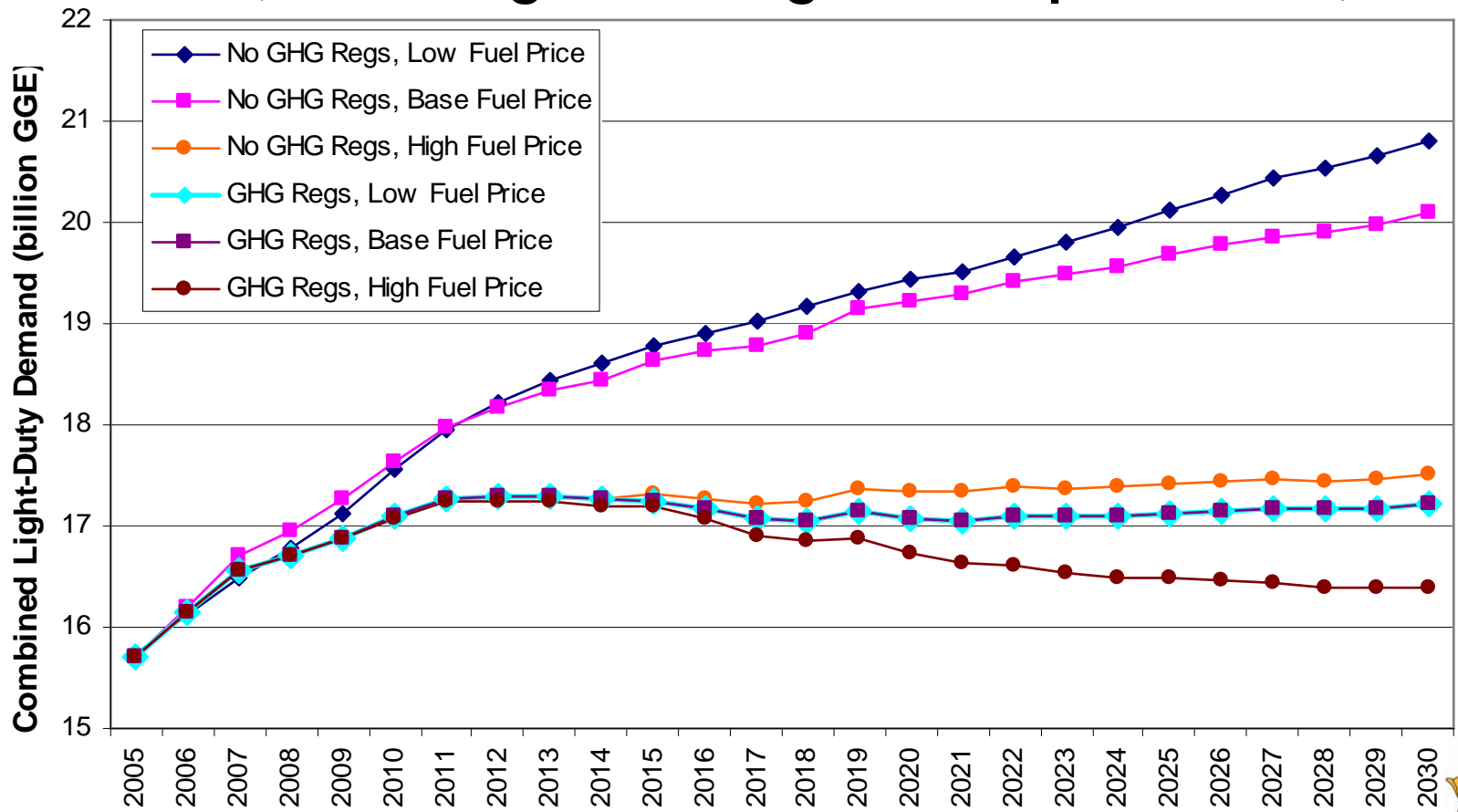
# California On-Road Gasoline Demand (billion gasoline gallons)



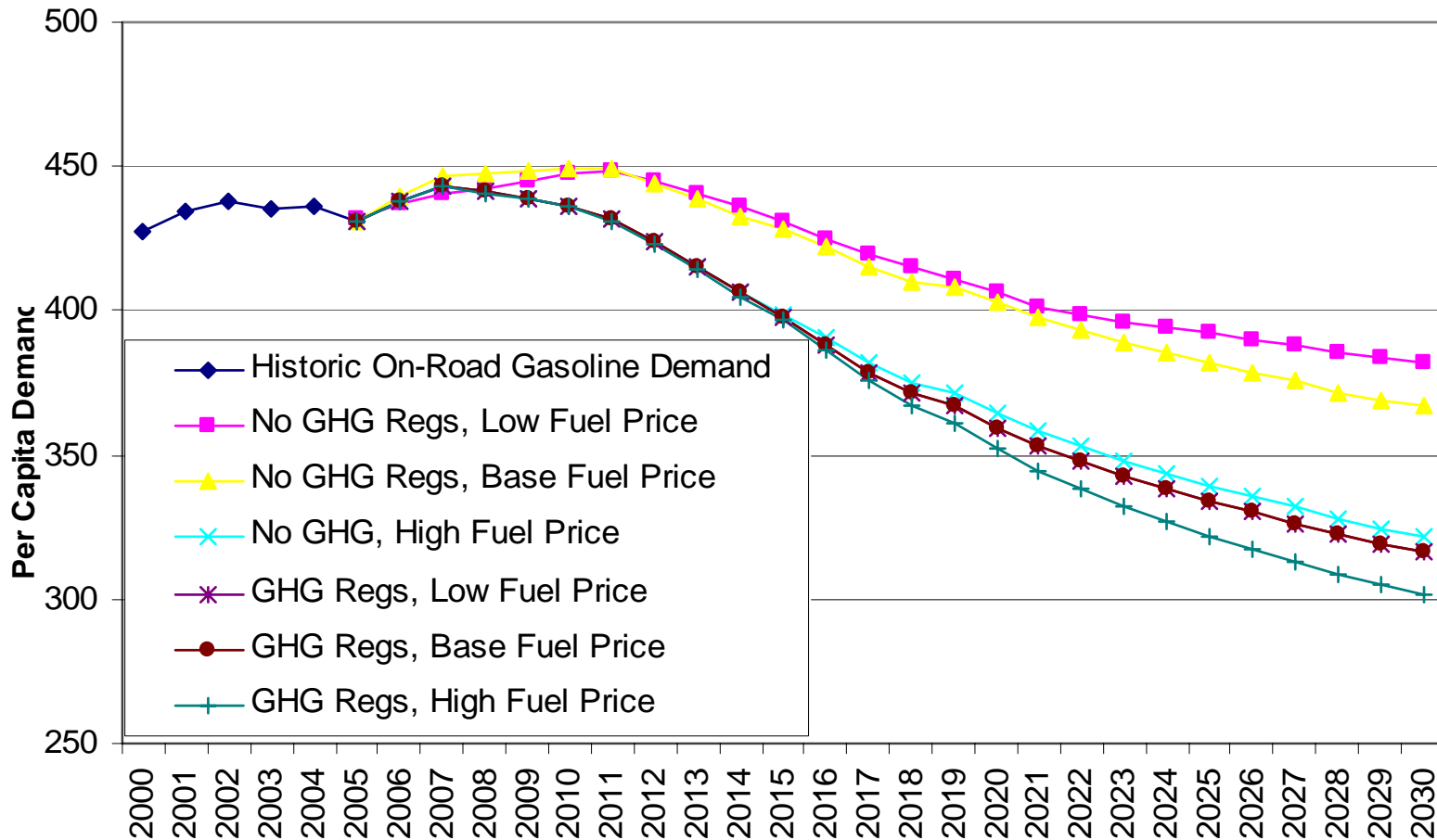
# Light-Duty Demand for Base Fuel Price Case (billion gasoline gallon equivalents)



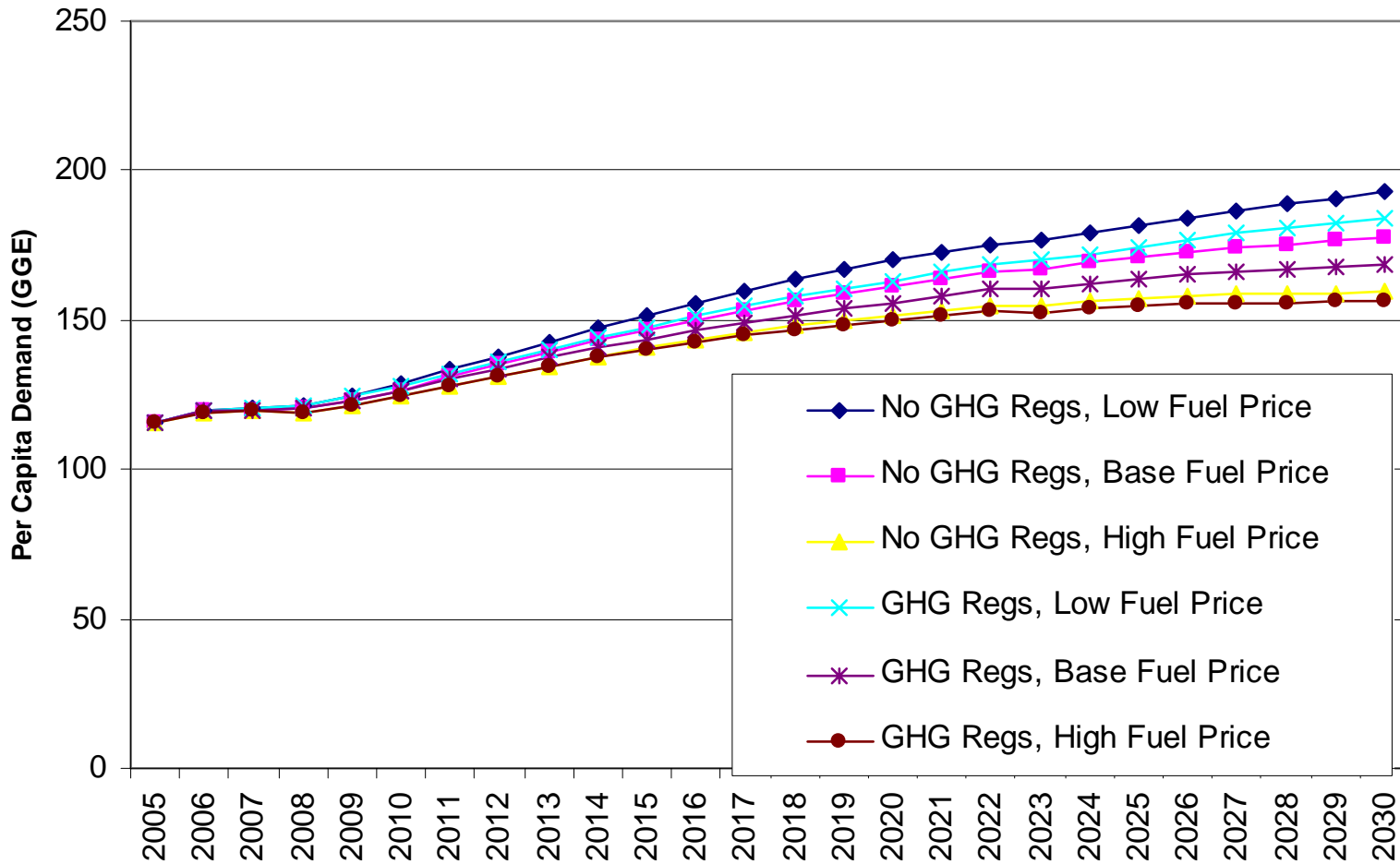
# Combined Gasoline and Diesel Light-Duty Transportation Fuel Demand, All Fuel Price Cases (billions gasoline gallon equivalents)



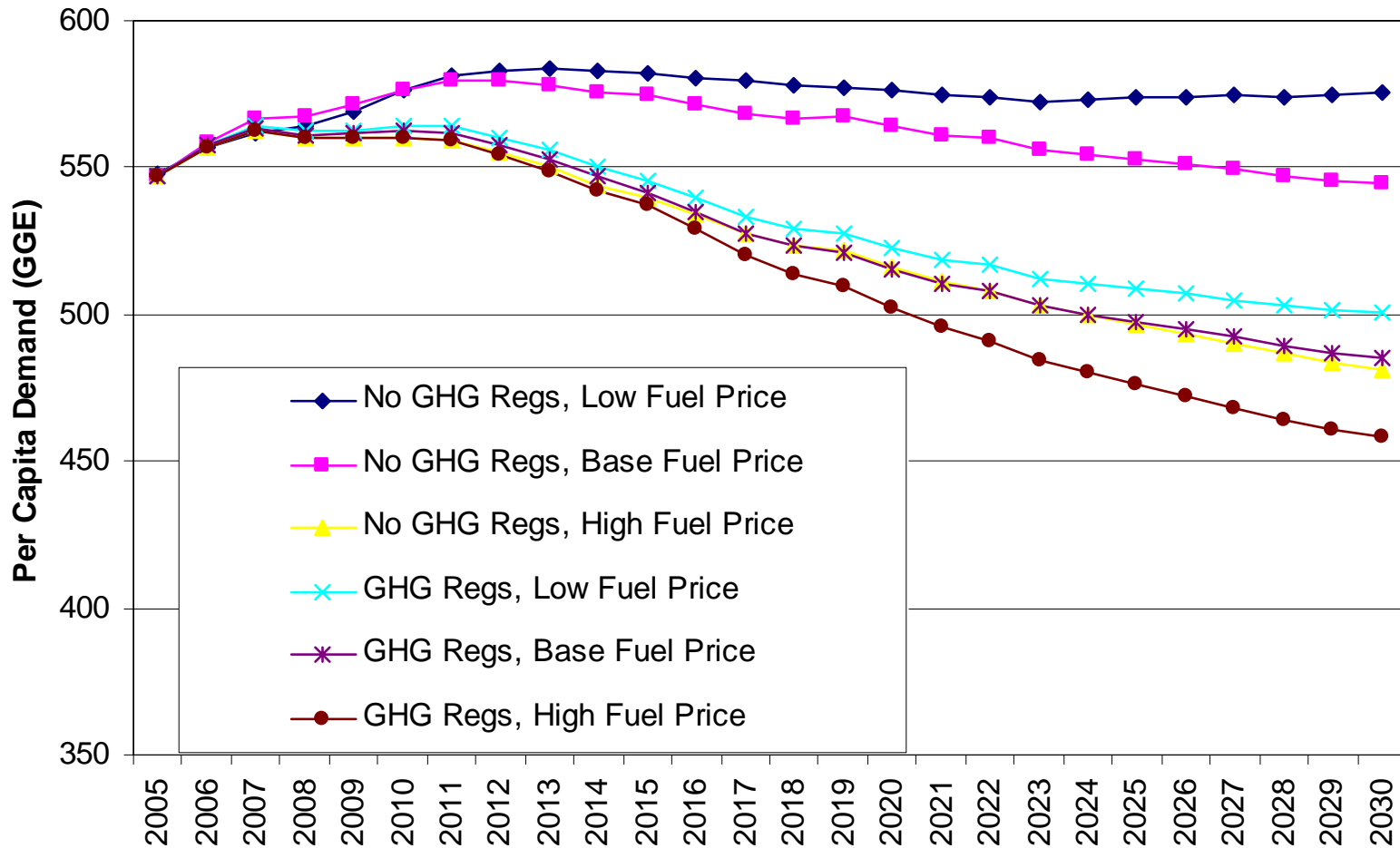
# Per Capita Gasoline Consumption (gallons per year)



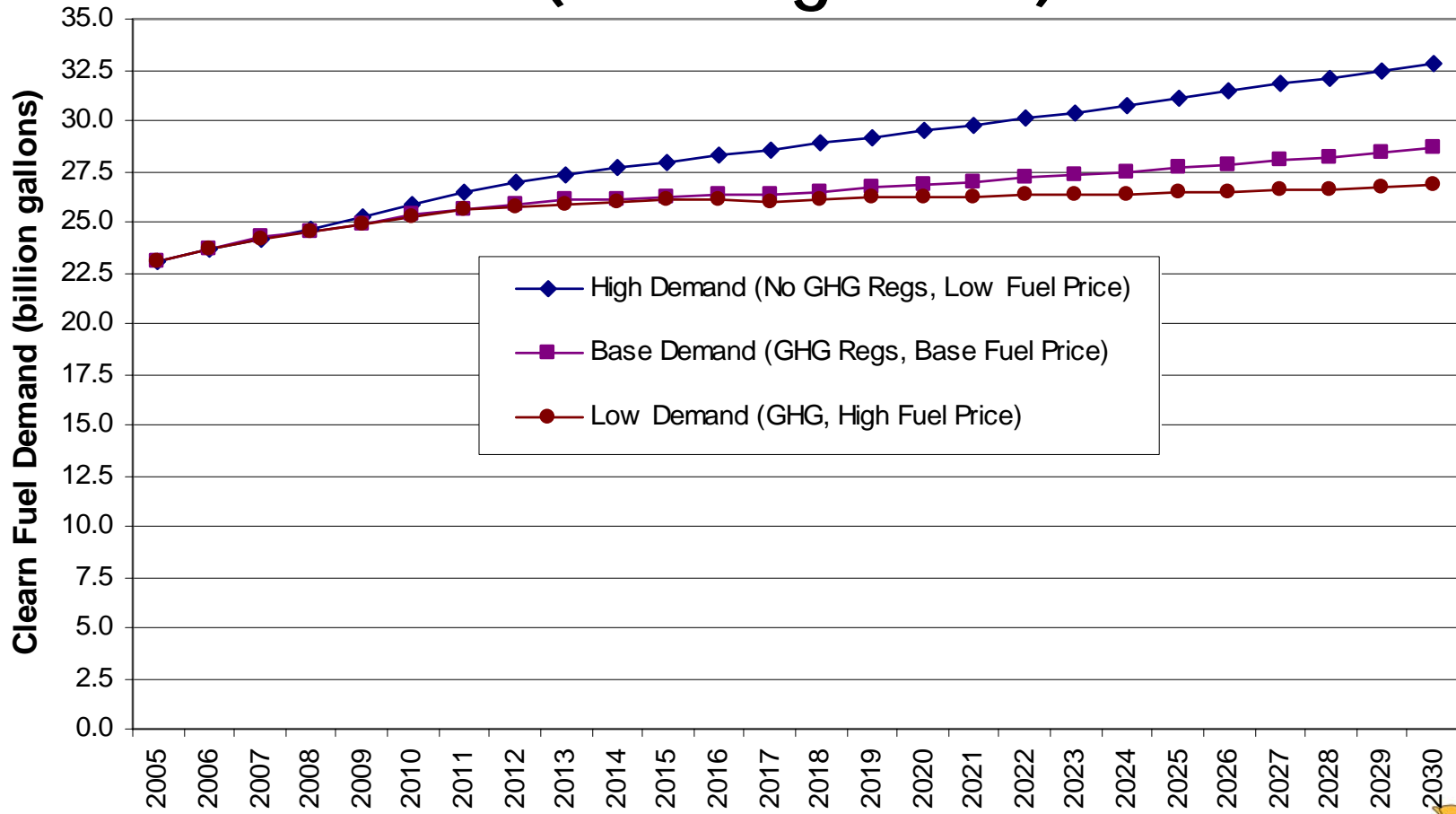
# Per Capita Diesel Demand (gasoline gallon equivalents per year)



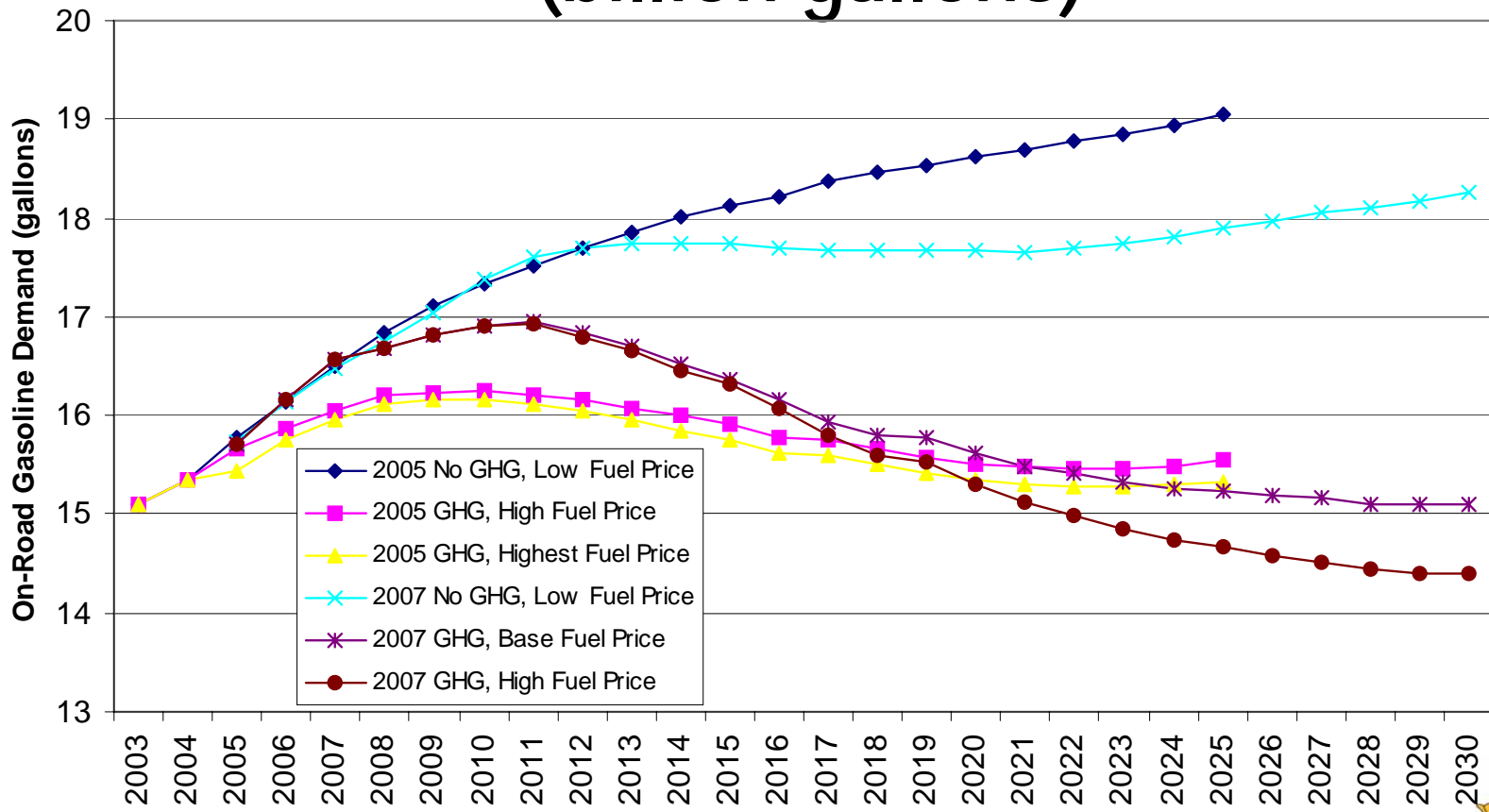
# Combined Per Capita Demand (gge per year)



# California Clean Fuel Demand (billion gallons)



# Comparison of 2005 and 2007 Gasoline Demand Forecasts (billion gallons)



# Summary

- Fleet fuel economy rises
- Advanced light-duty diesel and hybrid vehicles become a significant portion of fleet by 2030
- VMT increases
- Diesel demand increases
- Volume of transportation fuel increases
- Per capita transportation fuel demand decreases

