

Appendix 5.6-1 General Plan Update Energy Consumption Calculations

Appendices

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Vehicle Type	Percent of Vehicle Trips ¹	Annual Trips ²	Annual Vehicle Miles Traveled	Average Fuel Economy (miles per gallon) ³	Total Annual Fuel Consumption (gallon) ⁴
Gasoline Vehicles	0.89	70,943,495	455,442,678	24.08722587	18,908,059
Diesel Vehicles	0.11	8,964,285	56,618,008	7.798398133	7,260,210
Total	1.00	79,907,780	512,060,686	--	26,168,269

Total Operations On-Road Gasoline Consumption (gallon)	Total Operations On-Road Diesel Consumption (gallon)
18,908,059	7,260,210
Countywide On-Road Gasoline Consumption (2023)	Countywide On-Road Diesel Consumption (2023)
170,084,056	47,393,420
Percentage Increase Countywide	
Gasoline Consumption ⁵	Diesel Consumption ⁵
11.1169%	15.3190%

Notes:

1. Percent of Vehicle Trip distribution based on default trip characteristics within the CalEEMod model.
2. Annual Trips taken from Traffic Study and CalEEMod outputs.
3. Average fuel economy derived from EMFAC countywide fuel consumption divided by miles traveled.
4. Total Annual Fuel Consumption calculated by dividing the annual VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).
5. Countywide on-road gasoline and diesel consumption are from CARB's EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

**Energy Consumption Analysis
Operational On-Road Fuel Consumption
Proposed General Plan Buildout**

Vehicle Type	Percent of Vehicle Trips ¹	Annual Trips ²	Annual Vehicle Miles Traveled	Average Fuel Economy (miles per gallon) ³	Total Annual Fuel Consumption (gallon) ⁴
Gasoline Vehicles	0.92	123,530,912	791,327,824	24.08722587	32,852,593
Diesel Vehicles	0.08	11,463,212	72,945,796	7.798398133	9,353,946
Total	1.00	134,994,124	864,273,620	--	42,206,539

Total Operations On-Road Gasoline Consumption (gallon)	Total Operations On-Road Diesel Consumption (gallon)
32,852,593	9,353,946
Countywide On-Road Gasoline Consumption (2023)	Countywide On-Road Diesel Consumption (2023)
170,084,056	47,393,420
Percentage Increase Countywide	
Gasoline Consumption⁵	Diesel Consumption⁵
19.3155%	19.7368%

Notes:

- Percent of Vehicle Trip distribution based on default trip characteristics within the CalEEMod model.
- Annual Trips taken from Traffic Study and CalEEMod outputs.
- Average fuel economy derived from EMFAC countywide fuel consumption divided by miles traveled.
- Total Annual Fuel Consumption calculated by dividing the annual VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).
- Countywide on-road gasoline and diesel consumption are from CARB's EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.