

# **Appendix D**

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## Energy Calculations

# Buena Vista Project

## Draft EIR

### Appendix D

### Energy Analysis Spreadsheets

- Appendix D: Energy Analysis
  - Energy Consumption Summary
  - Construction Energy Usage
    - Construction Electricity Consumption
    - Off-Road Equipment
    - On-Road Fuel Usage Rates
    - On-Road Vehicles
    - Construction Water Usage
  - Operational Energy Usage
    - Buildout No PDF
    - Buildout with PDF
    - EMFAC Operations
    - All Electric Calculations
    - Peak Electricity Demand Calculations
    - Total County Fuel Consumption

## Buena Vista

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	36,161 kWh
Temporary Power (lighting, tools)	76,860 kWh
Electric Equipment	18,438 kWh
<b>Total:</b>	<b>131,460 kWh</b>
<b>Gasoline</b>	
On Road	351,644 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>351,644 Gallons</b>
<b>Diesel</b>	
On Road	397,001 Gallons
Off Road	146,956 Gallons
<b>Total:</b>	<b>543,957 Gallons</b>
<b>Total Mobile</b>	<b>895,601</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout (No MXD or PDF)	Buildout	Percent Change	Units
<b>Electricity</b>					
Electricity (building)	0	6,516,089	10,341,433	59%	kWh/year
Electricity (water)	0	258,614	258,614	0%	kWh/year
EV Charging	0	212,814	212,814	0%	kWh/year
Miscellaneous	0	51,294	51,294	0%	kWh/year
<b>Electricity Total</b>	<b>0</b>	<b>7,038,811</b>	<b>10,864,155</b>	<b>54%</b>	<b>kWh/year</b>
<b>Natural Gas</b>	<b>0</b>	<b>20,760,954</b>	<b>2,370,903</b>	<b>-89%</b>	<b>cu ft/year</b>
<b>Mobile</b>					
Gasoline	0	547,576	465,427	-15%	Gallons/year
Diesel	0	100,684	85,579	-15%	Gallons/year
<b>Mobile Total</b>	<b>0</b>	<b>648,260</b>	<b>551,006</b>	<b>-15%</b>	<b>Gallons/year</b>

## Construction Electricity Usage

### Construction Electricity Usage

#### Caterpillar 40-C4.4 Generator<sup>a</sup>

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Peak Power Rating - Prime (kW)	36
Typical Load	70%
Average Output (kW)	25.2
Hours per Day	2
Average Daily Output (kWh)	50.4
Building Construction Phase Duration (days)	1,525
Total Construction (kWh)	76,860
Total Construction (MWh)	76.9

<sup>a</sup><https://www.albancat.com/content/uploads/2014/06/40-C4.4-Spec-Sheet.pdf>

Calculation of Diesel Usage During Construction (Offroad Equipment):

Phase Name	Off Road Equipment Type	Units	Hours	HP	Load Factor	Avg. Daily Factor	Number of Days	Diesel Fuel Usage	
Demolition	Concrete/Industrial Saws	1	8	33	0.73	0.6	39	225	
Demolition	Excavators	3	8	158	0.38	0.6	39	1,686	
Demolition	Rubber Tired Dozers	2	8	367	0.4	0.6	39	2,748	
Site Preparation	Excavators	1	8	158	0.38	0.6	13	187	
Site Preparation	Rubber Tired Loaders	1	8	150	0.36	0.6	13	168	
Site Preparation	Tractors/Loaders/Backhoes	2	8	84	0.37	0.6	13	194	
Grading	Bore/Drill Rigs	1	8	83	0.5	0.6	121	1,205	
Grading	Excavators	2	8	36	0.38	0.6	121	795	
Grading	Pumps	2	8	11	0.74	0.6	121	473	
Grading	Rubber Tired Loaders	1	8	150	0.36	0.6	121	1,568	
Grading	Tractors/Loaders/Backhoes	2	8	84	0.37	0.6	121	1,805	
Mat Foundation	Cement and Mortar Mixers	6	8	10	0.56	0.6	2	16	
Mat Foundation	Pumps	8	8	11	0.74	0.6	2	31	
Building Construction	Cement and Mortar Mixers	2	8	10	0.56	0.6	753	2,024	
Building Construction	Cranes	1	8	367	0.29	0.6	753	19,234	
Building Construction	Forklifts	3	8	82	0.2	0.6	753	8,891	
Building Construction	Generator Sets	1	8	14	0.74	0.6	753	1,872	
Building Construction	Pumps	2	8	11	0.74	0.6	753	2,942	
Building Construction	Tractors/Loaders/Backhoes	3	8	84	0.37	0.6	753	16,850	
Building Construction	Welders	1	8	46	0.45	0.6	753	3,741	
Paving	Pavers	1	8	81	0.42	1.6	53	1,154	
Paving	Paving Equipment	2	8	89	0.36	0.6	53	815	
Paving	Pumps	1	8	11	0.74	0.6	53	104	
Trenching	Excavators	1	8	158	0.38	0.6	52	749	
Trenching	Graders	1	8	148	0.41	0.6	52	757	
Trenching	Rubber Tired Loaders	1	8	150	0.36	0.6	52	674	
Trenching	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	52	388	
Site Preparation	Excavators	1	8	158	0.38	0.6	13	187	
Site Preparation	Rubber Tired Loaders	1	8	150	0.36	0.6	13	168	
Site Preparation	Tractors/Loaders/Backhoes	2	8	84	0.37	0.6	13	194	
Grading	Bore/Drill Rigs	1	8	83	0.5	0.6	121	1,205	
Grading	Excavators	2	8	158	0.38	0.6	121	3,487	
Grading	Pumps	2	8	11	0.74	0.6	121	473	
Grading	Rubber Tired Loaders	1	8	150	0.36	0.6	121	1,568	
Grading	Tractors/Loaders/Backhoes	2	8	84	0.37	0.6	121	1,805	
Well Re-abandonment	Bore/Drill Rigs	1	8	83	0.5	0.6	30	299	
Well Re-abandonment	Generator Sets	2	8	14	0.74	0.6	30	149	
Well Re-abandonment	Off-Highway Tractors	1	8	38	0.44	0.6	30	120	
Well Re-abandonment	Pumps	2	8	11	0.74	0.6	30	117	
Well Re-abandonment	Other Construction Equipment	1	8	82	0.42	0.6	30	248	
Mat Foundation	Cement and Mortar Mixers	6	8	10	0.56	0.6	2	16	
Mat Foundation	Pumps	8	8	11	0.74	0.6	2	31	
Building Construction	Cement and Mortar Mixers	2	8	10	0.56	0.6	753	2,024	
Building Construction	Cranes	1	8	367	0.29	0.6	753	19,234	
Building Construction	Forklifts	3	8	82	0.2	0.6	753	8,891	
Building Construction	Generator Sets	1	8	14	0.74	0.6	753	1,872	
Building Construction	Pumps	2	8	11	0.74	0.6	753	2,942	
Building Construction	Tractors/Loaders/Backhoes	3	8	84	0.37	0.6	753	16,850	
Building Construction	Welders	1	8	46	0.45	0.6	753	3,741	
Paving	Pavers	1	8	81	0.42	0.6	53	433	
Paving	Paving Equipment	2	8	89	0.36	0.6	53	815	
Paving	Pumps	1	8	11	0.74	0.6	53	104	
Trenching	Excavators	1	8	158	0.38	0.6	52	749	
Trenching	Graders	1	8	148	0.41	0.6	52	757	
Trenching	Rubber Tired Loaders	1	8	150	0.36	0.6	52	674	
Trenching	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	52	388	
Linear, Grading & Excavation	Excavators	1	8	158	0.38	0.6	43	620	
Linear, Grading & Excavation	Other Construction Equipment	1	8	82	0.42	0.6	43	355	
Linear, Grading & Excavation	Rubber Tired Loaders	1	8	150	0.36	0.6	43	557	
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	43	321	
Linear, Drainage, Utilities, & Sub-Grade	Excavators	1	8	158	0.38	0.6	66	951	
Linear, Drainage, Utilities, & Sub-Grade	Other Construction Equipment	1	8	82	0.42	0.6	66	546	
Linear, Drainage, Utilities, & Sub-Grade	Rubber Tired Loaders	1	8	150	0.36	0.6	66	855	
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	66	492	
Linear, Paving	Cement and Mortar Mixers	1	8	10	0.56	0.6	42	56	
Linear, Paving	Concrete/Industrial Saws	1	8	33	0.73	0.6	42	243	
Linear, Paving	Pavers	1	8	81	0.42	0.6	42	343	
Linear, Paving	Paving Equipment	1	8	89	0.36	0.6	42	323	
Linear, Paving	Rollers	1	8	36	0.38	0.6	42	138	
Linear, Paving	Tractors/Loaders/Backhoes	1	8	84	0.37	0.6	42	313	
<b>Total Diesel Usage for Construction (Offr</b>								<b>146,956.0</b>	<b>gallons of diesel fuel</b>

gallons of diesel fuel per horsepower-hour=

0.05

Notes: Equipment assumptions are provide in the CalEEMod output files and fuel usage estimate of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

EMFAC2021 Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: 2028

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	Veh_Class	Fuel	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)	Miles per Gallon
South Coast	LDA	Gasoline	Aggregate	3,213,384	125,421,546	14,894,855	4,082	0	30.7
South Coast	LDT1	Gasoline	Aggregate	301,279	10,938,459	1,329,539	427	0	25.6
South Coast	LDT2	Gasoline	Aggregate	1,722,542	70,095,593	8,098,768	2,789	0	25.1
<b>Construction Worker Trip (Composite LDA/LDT1/LDT2):</b>									<b>28.1</b>
South Coast	HHDT	Diesel	Aggregate	58,802	7,268,319	923,761	0	1133.5	<b>6.4</b>

Notes: Consistent with CalEEMod, a construction worker trip is assumed to be a composite of 50% LDA , 25% for LDT1, and 25% for LDT2. Used EMFAC 2011 Categories for construction as EMFAC2011 has specific categories for vehicle class T7.

Calculation of Gasoline and Diesel Usage During Construction (Onroad Vehicles):

Phase Name	Daily Worker Trips	Daily Vendor Trips	Daily Haul Trips	Days	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Trip Length (miles)			Total Length (miles)			Avg. Daily Factor (worker and vendor)	Gallons of Fuel	
								Worker	Vendor	Haul	Worker	Vendor	Haul		Gasoline	Diesel
Demolition	16	2	10	39	624	78	390	18.5	10.29	24.09	11544	802.62	9395.1	0.6	246.9	1,540.3
Site Preparation	14	4	50	13	182	52	650	18.5	10.29	24.09	3367	535.08	15658.5	0.6	72.0	2,492.1
Grading	14	4	140	121	1694	484	16940	18.5	10.29	32.09	31339	4980.36	543604.6	0.6	670.2	85,243.6
Mat Foundation	60	426	0	2	120	852	0	18.5	10.29	0	2220	8767.08	0	0.6	47.5	820.4
Building Construction	612	130	0	753	460836	97890	0	18.5	10.29	0	8525466	1007288	0	0.6	182,332.3	94,254.6
Methane Safety Design	12	2	0	295	3540	590	0	18.5	10.29	0	65490	6071.1	0	0.6	1,400.6	568.1
Paving	10	8	0	53	530	424	0	18.5	10.29	0	9805	4362.96	0	0.6	209.7	408.3
Architectural Coating	122	2	0	277	33794	554	0	18.5	10.29	0	625189	5700.66	0	0.6	13,370.8	533.4
Trenching	10	2	4	52	520	104	208	18.5	10.29	32.09	9620	1070.16	6674.72	1.6	548.6	1,308.0
Site Preparation	14	4	56	12	168	48	672	18.5	10.3	24.1	3108	494.4	16195.2	0.6	66.5	2,572.0
Grading	14	4	180	144	2016	576	25920	18.5	10.3	32.1	37296	5932.8	832032	0.6	797.6	130,314.2
Well Re-abandonment	18	2	4	30	540	60	120	18.5	10.3	24.1	9990	618	2692	0.6	213.7	508.8
Mat Foundation	60	479	0	1	60	479	0	18.5	10.3	0	1110	4933.7	0	0.6	23.7	461.7
Building Construction	372	84	0	772	287184	64848	0	18.5	10.3	0	5312904	667934.4	0	0.6	113,625.9	62,500.4
Methane Safety Design	8	2	0	312	2496	624	0	18.5	10.3	0	46176	6427.2	0	0.6	987.6	601.4
Paving	10	4	0	50	500	200	0	18.5	10.3	0	9250	2060	0	1.6	527.5	514.0
Architectural Coating	74	2	0	190	14060	380	0	18.5	10.3	0	260110	3914	0	2.6	24,106.0	1,587.1
Trenching	10	2	4	53	530	106	212	18.5	10.3	32.1	9805	1091.8	6805.2	3.6	1,258.2	1,674.3
Linear, Grading & Excavation	20	6	6	43	860	258	258	18.5	10.29	24	15910	2654.82	6192	4.6	2,608.7	2,870.2
Linear, Drainage, Utilities, & Sub-Grade	20	6	0	66	1320	396	0	18.5	10.29	0	24420	4074.84	0	5.6	4,874.5	3,558.7
Linear, Paving	20	6	0	42	840	252	0	18.5	10.29	0	15540	2593.08	0	6.6	3,655.9	2,669.1
<b>Total:</b>															<b>351,644.4</b>	<b>397,000.6</b>

Worker Miles per gallon= 28.05 gasoline  
 Vendor/Haul miles per gallon= 6.41 diesel

Notes: Consistent with CalEEMod worker vehicles are assumed to be gasoline and 50% LDA, 25%LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy Duty Trucks (T7)

**Water Usage for Control of Fugitive Dust during Construction:**

Phase	Days	Average Daily Acreage Disturbed	Gallons Per Year	Electricity (kWhr)
<b>Phase 1</b>				
Demolition	39	3	353,340	3,437
Site Preparation	13	3	117,780	1,146
Grading	121	3	1,096,260	10,663
Mat Foundation	2	0	0	0
Building Construction	753	0	0	0
Methane Safety Design	295	0	0	0
Paving	53	0	0	0
Architectural Coating	277	0	0	0
Trenching	52	1	157,040	1,528
<b>Phase 2</b>				
Site Preparation	12	3	108,720	1,058
Grading	144	3	1,304,640	12,690
Well Re-abandonment	30	1	90,600	881
Mat Foundation	1	0	0	0
Building Construction	772	0	0	0
Methane Safety Design	312	0	0	0
Paving	50	0	0	0
Architectural Coating	190	0	0	0
Trenching	53	1	160,060	1,557
<b>Off-Site Improvements</b>				
Linear, Grading & Excavation	43	1	129,860	1,263
Linear, Drainage, Utilities, & Sub-Grade	66	1	199,320	1,939
Linear, Paving	42	0	0	0
<b>Total:</b>			<b>3,717,620</b>	<b>36,161</b>

Water application rate= 3020 gal/acre/day  
 kWhr equivalent= 0.01 kWhr

Notes: 1) Gallons per year of water usage for dust control is calculated based on a minimum control efficiency of 66% (three times daily) with an application rate of 3,020 gal/acre/day (Air & Waste Management Association Air Pollution Engineering Manual (1992 Edition)) and average of 26 construction days per month.  
 2) CalEEMod Default: Each gallon of delivered potable water in Southern California is associated with 0.009727 kWhr of electricity).

**Buena Vista - Buildout Operations Without PDF  
Los Angeles-South Coast County, Annual**

**Land Use Details**

<i>Land Uses</i>	<i>Size</i>	<i>Metric</i>	<i>Lot Acreage</i>	<i>Floor Surface Area</i>	<i>Population</i>
Apartments High Rise	986	Dwelling Unit	7.87	1090126	2399
High Turnover (Sit Down Restaurant)	23.8	1000sqft	0	23800	
Strip Mall	15	1000sqft	0	15000	
General Office Building	5.25	1000sqft	0	5250	
Enclosed Parking with Elevator	1477	Space	13.3	590800	
Recreational Swimming Pool	4.7	1000sqft	0	4700	

**Trip Summary Information**

<i>Land Uses</i>	<i>Average Daily Trip Rate</i>			<i>Annual VMT</i>
	<i>Weekday</i>	<i>Saturday</i>	<i>Sunday</i>	
<b>Total</b>	6,896	6,896	6,896	16,001,600

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	27.5	9.4
<i>% Fleet Mix</i>	94.1%	5.9%
<b>Total (Gallons):</b>	<b>547,576</b>	<b>100,684</b>

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

**Energy by Land Use - Natural Gas**

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
Apartments High Rise	9,786,404	9,320,385
High Turnover (Sit Down Restaurant)	2,254,565	2,147,205
Strip Mall	73,862	70,345
General Office Building	105,482	100,459
Enclosed Parking with Elevator	0	0
Recreational Swimming Pool	9,578,688	9,122,560
<b>Total</b>	<b>21,799,002</b>	<b>20,760,954</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
Apartments High Rise	3,237,525
High Turnover (Sit Down Restaurant)	775,168
Strip Mall	149,348
General Office Building	83,626
Enclosed Parking with Elevator	2,180,898
Recreational Swimming Pool	89,525
<b>Total</b>	<b>6,516,089</b>

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use</i>	<i>Outdoor Use</i>	<i>Electricity Use</i>
	<i>(Mgal)</i>	<i>(Mgal)</i>	<i>(kWh/yr)</i>
Apartments High Rise	29.402	1.224	206,629
High Turnover (Sit Down Restaurant)	5.779	0.000	39,340
Strip Mall	0.889	0.000	6,051
General Office Building	0.746	0.000	5,081
Enclosed Parking with Elevator	0.000	0.000	0
Recreational Swimming Pool	0.222	0.000	1,514
<b>Total</b>	<b>37.04</b>	<b>1.22</b>	<b>258,614</b>

Notes: Indoor water results in 0.00687 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**Buena Vista - Buildout Operations**  
**Los Angeles-South Coast County, Annual**

**Land Use Details**

<i>Land Uses</i>	<i>Size</i>	<i>Metric</i>	<i>Lot Acreage</i>	<i>Floor Surface Area</i>	<i>Population</i>
Apartments High Rise	986	Dwelling Unit	7.87	1090126	2399
High Turnover (Sit Down Restaurant)	23.8	1000sqft	0	23800	
Strip Mall	15	1000sqft	0	15000	
General Office Building	5.25	1000sqft	0	5250	
Enclosed Parking with Elevator	1477	Space	13.3	590800	
Recreational Swimming Pool	4.7	1000sqft	0	4700	

**Trip Summary Information**

<i>Land Uses</i>	<i>Average Daily Trip Rate</i>			<i>Mitigated</i>
	<i>Weekday</i>	<i>Saturday</i>	<i>Sunday</i>	
Total	5,861	5,861	5,861	13,600,995

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	27.5	9.4
<i>% Fleet Mix</i>	94.1%	5.9%
<b>Total (Gallons):</b>	<b>465,427</b>	<b>85,579</b>

Note: Fleet mix is 92.3% gasoline @ 30.6 miles/gallon and 7.7% diesel @ 12.1 miles/gallon.

**Energy by Land Use - Natural Gas (Mitigated)**

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>	
Apartments High Rise	0	0	
High Turnover (Sit Down Restaurant)	1,670,760	1,591,200	
Strip Mall	0	0	
General Office Building	0		
Enclosed Parking with Elevator	0	0	
Recreational Swimming Pool	818,688	779,703	Note: Propane
<b>Total</b>	<b>2,489,448</b>	<b>2,370,903</b>	

**Energy by Land Use - Electricity (Mitigated)**

<i>Land Uses</i>	<i>kWH/yr</i>
Apartments High Rise	3,890,108
High Turnover (Sit Down Restaurant)	1,221,608
Strip Mall	214,703
General Office Building	116,591
Enclosed Parking with Elevator	2,180,898
Recreational Swimming Pool	2,717,525
<b>Total</b>	<b>10,341,433</b>

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
Apartments High Rise	29.402	1.224	206,629
High Turnover (Sit Down Restaurant)	5.779	0.000	39,340
Strip Mall	0.889	0.000	6,051
General Office Building	0.746	0.000	5,081
Enclosed Parking with Elevator	0.000	0.000	0
Recreational Swimming Pool	0.222	0.000	1,514
<b>Total</b>	<b>37.04</b>	<b>1.22</b>	<b>258,614</b>

Notes: Indoor water results in 0.00687 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.005306 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod). The City of Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC) requires newly constructed non-residential and high-rise residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20 percent reduction in baseline water

EMFAC2021 Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: 2034

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)			
Los Angeles	2034	Annual	HHDT	Diesel	Aggregated	Aggregated	61,935	8,019,809	990,851	0.00	1,146.80			
Los Angeles	2034	Annual	HHDT	Gasoline	Aggregated	Aggregated	15	1,773	299	0.36	0.00			
Los Angeles	2034	Annual	LDA	Diesel	Aggregated	Aggregated	3,117	99,931	13,542	0.00	2.16			
Los Angeles	2034	Annual	LDA	Gasoline	Aggregated	Aggregated	3,011,055	116,305,648	13,975,087	3,536.54	0.00			
Los Angeles	2034	Annual	LDT1	Diesel	Aggregated	Aggregated	2	95	11	0.00	0.00			
Los Angeles	2034	Annual	LDT1	Gasoline	Aggregated	Aggregated	281,608	10,197,899	1,254,118	369.20	0.00			
Los Angeles	2034	Annual	LDT2	Diesel	Aggregated	Aggregated	6,725	269,781	31,807	0.00	7.80			
Los Angeles	2034	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,865,208	73,357,547	8,712,190	2,742.46	0.00			
Los Angeles	2034	Annual	LHDT1	Diesel	Aggregated	Aggregated	74,198	2,876,108	933,323	0.00	135.84			
Los Angeles	2034	Annual	LHDT1	Gasoline	Aggregated	Aggregated	115,937	4,347,542	1,727,291	278.51	0.00			
Los Angeles	2034	Annual	LHDT2	Diesel	Aggregated	Aggregated	35,109	1,317,903	441,625	0.00	72.90			
Los Angeles	2034	Annual	LHDT2	Gasoline	Aggregated	Aggregated	16,902	595,489	251,822	43.66	0.00			
Los Angeles	2034	Annual	MCY	Gasoline	Aggregated	Aggregated	179,919	1,104,286	359,839	26.32	0.00			
Los Angeles	2034	Annual	MDV	Diesel	Aggregated	Aggregated	12,001	442,136	55,707	0.00	16.84			
Los Angeles	2034	Annual	MDV	Gasoline	Aggregated	Aggregated	1,069,901	39,690,989	4,964,704	1,809.32	0.00			
Los Angeles	2034	Annual	MH	Diesel	Aggregated	Aggregated	7,031	71,905	703	0.00	7.22			
Los Angeles	2034	Annual	MH	Gasoline	Aggregated	Aggregated	13,276	143,109	1,328	29.54	0.00			
Los Angeles	2034	Annual	MHDT	Gasoline	Aggregated	Aggregated	61,393	2,397,526	758,384	0.00	255.34			
Los Angeles	2034	Annual	MHDT	Gasoline	Aggregated	Aggregated	10,912	556,982	218,321	98.65	0.00			
Los Angeles	2034	Annual	OBUS	Diesel	Aggregated	Aggregated	2,379	173,455	31,836	0.00	23.16			
Los Angeles	2034	Annual	OBUS	Gasoline	Aggregated	Aggregated	2,619	82,500	52,404	15.10	0.00			
Los Angeles	2034	Annual	SBUS	Diesel	Aggregated	Aggregated	1,178	24,567	17,053	0.00	3.16			
Los Angeles	2034	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,552	69,483	6,207	7.45	0.00			
Los Angeles	2034	Annual	UBUS	Diesel	Aggregated	Aggregated	NA	NA	NA	NA	NA			
Los Angeles	2034	Annual	UBUS	Gasoline	Aggregated	Aggregated	360	27,574	1,438	5.74	0.00			
Los Angeles	2034	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	129,905	2,285,135	537,157	83.60	0.00			
Los Angeles	2034	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	3,339	60,769	13,809	2.23	0.00			
Los Angeles	2034	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	39,239	689,875	162,253	25.50	0.00			
Los Angeles	2034	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	24,034	398,648	99,382	14.96	0.00			
											<b>MPG</b>	Gallons Per Mile		
							Totals	265,608,466.19			9,089.14	1,671.24	<b>24.7</b>	0.04
							Total (GAS)	249,915,248.92	0.94				<b>27.5</b>	0.04
							Total (DSL)	15,693,217.27	0.06				<b>9.4</b>	0.11

Baseline Year

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)			
Los Angeles	2023	Annual	HHDT	Diesel	Aggregated	Aggregated	51,746	6,735,516	804,221	0.00	1,127.80			
Los Angeles	2023	Annual	HHDT	Gasoline	Aggregated	Aggregated	52	3,245	1,050	0.82	0.00			
Los Angeles	2023	Annual	LDA	Diesel	Aggregated	Aggregated	9,775	293,631	40,275	0.00	7.39			
Los Angeles	2023	Annual	LDA	Gasoline	Aggregated	Aggregated	3,441,157	137,073,184	16,009,115	4,845.08	0.00			
Los Angeles	2023	Annual	LDT1	Diesel	Aggregated	Aggregated	135	2,742	393	0.00	0.12			
Los Angeles	2023	Annual	LDT1	Gasoline	Aggregated	Aggregated	323,318	11,785,010	1,422,834	497.89	0.00			
Los Angeles	2023	Annual	LDT2	Diesel	Aggregated	Aggregated	4,736	207,450	22,903	0.00	6.82			
Los Angeles	2023	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,558,893	64,432,894	7,331,380	2,816.72	0.00			
Los Angeles	2023	Annual	LHDT1	Diesel	Aggregated	Aggregated	54,739	2,400,706	688,551	0.00	118.37			
Los Angeles	2023	Annual	LHDT1	Gasoline	Aggregated	Aggregated	126,299	4,975,896	1,881,670	379.01	0.00			
Los Angeles	2023	Annual	LHDT2	Diesel	Aggregated	Aggregated	24,419	1,058,012	307,155	0.00	62.09			
Los Angeles	2023	Annual	LHDT2	Gasoline	Aggregated	Aggregated	19,347	720,926	288,247	62.66	0.00			
Los Angeles	2023	Annual	MCY	Gasoline	Aggregated	Aggregated	147,384	966,253	294,767	23.59	0.00			
Los Angeles	2023	Annual	MDV	Diesel	Aggregated	Aggregated	10,935	433,865	51,746	0.00	18.92			
Los Angeles	2023	Annual	MDV	Gasoline	Aggregated	Aggregated	951,501	36,274,737	4,402,600	1,944.85	0.00			
Los Angeles	2023	Annual	MH	Diesel	Aggregated	Aggregated	5,471	56,805	547	0.00	5.69			
Los Angeles	2023	Annual	MH	Gasoline	Aggregated	Aggregated	16,465	159,232	1,647	32.88	0.00			
Los Angeles	2023	Annual	MHDT	Diesel	Aggregated	Aggregated	60,070	2,566,786	735,674	0.00	288.96			
Los Angeles	2023	Annual	MHDT	Gasoline	Aggregated	Aggregated	15,250	833,770	305,130	163.55	0.00			
Los Angeles	2023	Annual	OBUS	Diesel	Aggregated	Aggregated	2,107	170,067	27,221	0.00	24.73			
Los Angeles	2023	Annual	OBUS	Gasoline	Aggregated	Aggregated	3,862	157,361	77,280	31.50	0.00			
Los Angeles	2023	Annual	SBUS	Diesel	Aggregated	Aggregated	2,010	41,462	29,104	0.00	5.64			
Los Angeles	2023	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,386	64,114	5,545	7.17	0.00			
Los Angeles	2023	Annual	UBUS	Diesel	Aggregated	Aggregated	45	7,197	180	0.00	1.18			
Los Angeles	2023	Annual	UBUS	Gasoline	Aggregated	Aggregated	439	31,153	1,755	6.81	0.00			
Los Angeles	2023	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	86,566	2,058,404	357,950	75.01	0.00			
Los Angeles	2023	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	309	7,382	1,279	0.27	0.00			
Los Angeles	2023	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	11,316	271,382	46,790	9.96	0.00			
Los Angeles	2023	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	6,330	141,006	26,173	5.25	0.00			
											<b>MPG</b>	Gallons Per Mile		
							Totals	273,930,189.78			10,903.00	1,667.71	<b>21.8</b>	0.05
							Total (GAS)	259,955,950.25	0.95				<b>23.8</b>	0.04
							Total (DSL)	13,974,239.53	0.05				<b>8.4</b>	0.12

**Buena Vista**

All Electric Calculation

**CAPCOA Consumption Rate**

Building Type	Natural Gas (Therm/yr/KSF)							Electricity (kWh/yr/KSF)						
	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.
Apartment High Rise	268	48	20	17	31	35	NA	1052	350	262	365	205	560	NA
General Office	20	119	1	NA	18	43	1	46	396	9	NA	3103	2714	11
High Turnover (Sit Down Restaurant)	90	37	702	NA	48	67	4	35	268	1279	NA	3254	8965	6236
Strip Mall	1	4	0	NA	7	34	3	24	28	27	NA	1249	2867	162

<sup>3</sup> California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Appendix C. Table E-15. December 2021. Note: Residential use provides aux. heat which was included under cooling (residential use does not provide a natural gas usage for cooling or refrigeration). In addition, Table E-15 cites that the sample size for several end uses and housing types was limited and should be used with caution.

**Project Energy Demand**

Project Uses	Amount (DU/KSF)	Natural Gas (Therm/yr/KSF)							Electricity (kWh/yr/KSF)								
		Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Total	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Total
Apartment High Rise	986	264,248	47,328	19,720	16,762	30,566	34,510	NA	413,134	1,037,272	345,100	258,332	359,890	202,130	552,160	NA	2,754,884
General Office	5.25	105	625	5	NA	95	226	5	1,061	242	2,079	47	NA	16,291	14,249	58	32,965
High Turnover (Sit Down Restaurant)	23.8	2,142	881	16,708	NA	1,142	1,595	95	22,562	833	6,378	0	NA	77,445	213,367	148,417	446,440
Strip Mall	15	15	60	0	NA	105	510	45	735	360	420	405	NA	18,735	43,005	2,430	65,355
Total		266,495	48,833	36,433	16,762	31,803	36,330	100	436,757	1,038,347	353,557	258,379	359,890	295,866	779,776	148,475	3,234,289

**CalEEMod Adjustments**

**Default Values**

	Total	Total Natural		Difference between CalEEMod and CAPCOA natural gas usage
	Electricity	Gas	Check	
Apartment High Rise	3,237,525	9,786,404	41,313,400	322%
General Office	83,626	105,482	106,050	1%
High Turnover (Sit Down Restaurant)	775,168	2,254,565	2,256,240	0%
Strip Mall	149,348	73,862	73,500	0%
Enclosed Parking with Elevator	2,180,898	0		
Total	6,426,565	12,220,313	43,675,690	

**Adjusted Values**

	Total	Total Natural		Note: Includes an adjustment to account for difference between CalEEMod and CAPCOA natural gas usage
	Electricity	Gas		
Apartment High Rise	3,890,108	0		
General Office	116,591	0		
High Turnover (Sit Down Restaurant)	1,221,608	1,670,760		
Strip Mall	214,703	0		
Enclosed Parking with Elevator	2,180,898	0		
Total	7,623,908	1,670,760		

Additional Sources

	Natural Gas (Btu/hr)	Electricity (kWh/yr for an average single-family residential pool)		
	Pool and Spa Heat	Heat Pump	Pool Pump	Spa Pump
Swimming Pool (5)	800,000	525,600	2898	683
	Natural Gas (kBtu/yr)	Electricity (kWh/yr)		
	8,760,000	2,628,000	72,450	17,075
			2,717,525	

- Pool and Spa heat based on 2 (400,000 btu/hr) natural gas heaters 6 hours per day for 365 days/yr.
- Pool and spa pumps electricity usage is based on 2019 California Residential Appliance Duration Study, Page 6: <https://www.energy.ca.gov/sites/default/files/2021-08/CEC-200-2021-005-RSUS.pdf>
- Project pool and spa are conservatively estimated to be approximately 5 times the average single family residential pool.
- Electric pool heat (heat pump) assumes conversion of 1 therm = 30 kWh.

	Units	Natural Gas (kBtu/yr)
Grills (8) @ 360,000 btu/hr	8	718,848
Firepits (4) @ 100,000 btu/hr	4	99,840

Notes:  
 (1) CalEEMod provide pollutant emissions associated fireplaces, but does not include natural gas usage in output files. The provided usage rate is consistent with CalEEMod default factors (i.e., 90 percent of DUs have 60,000 btu/hr fireplaces, operate 25 days per year for three hours per day).  
 (2) Natural gas grills and firepits are assumed to operate 104 days per year for three hours per day @ 80 percent output.

Total with CalEEMod Defaults

	Total		Compliance with Ordinance No. 187,714		
	Electricity	Total Natural Gas	Electricity	Total Natural Gas	
Land Uses	6,426,565	12,220,313	7,623,908	1,670,760	
Swimming Pool (5)	89,525	8,760,000	2,717,525	0	
Grills (8) @ 360,000 btu/hr		718,848		718,848	propane
Firepits (4) @ 100,000 btu/hr		99,840		99,840	propane
Total:	6,516,090	21,799,001	10,341,433	2,489,448	
		9,578,688	Difference in Energy Use with Implementation of Ordinance:	3,825,343	-19,309,553
			Percent Change:	59%	-89%

Calculation of Miscellaneous Outdoor Trellis/Overhang Areas (circulation and balconies) Lighting Electricity Usage

	Proposed (sf)	Electricity (kWh/yr)	
South Parcel	48,263	21,139	Lighting would be limited (miscellaneous), but conservatively includes 8 hrs at 0.15 watts/sf
North Parcel	68,347	29,936	Lighting would be limited (miscellaneous), but conservatively includes 8 hrs at 0.15 watts/sf
Total:		51,294	kWh/yr

Source: 2022 Building Energy Efficiency Standards (Table 140.6-C (Area Category Method-Lighting Power Density Values))

GHG Emissions

	Electricity (lb/MWh)	Natural Gas (lb/MMBtu)	Global Warming Potential
	267	116.9771	1 CO <sub>2</sub>
	0.0489	0.0104	25 CH <sub>4</sub>
	0.0069	0.0002	298 N <sub>2</sub> O
Default Values CO <sub>2</sub> e	799	1,160	1,959 mtons/yr
Code Compliance Values CO <sub>2</sub> e	1,268	132	1,400 mtons/yr
			(558) mtons/yr decrease

**Buena Vista (South Parcel)**

**All Electric Calculation**

**CAPCOA Consumption Rate**

Building Type	Natural Gas (Therm/yr/KSF)							Electricity (kWh/yr/KSF)						
	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.
Apartment High Rise	268	48	20	17	31	35	NA	1052	350	262	365	205	560	NA
General Office	20	119	1	NA	18	43	1	46	396	9	NA	3103	2714	11
High Turnover (Sit Down Restaurant)	90	37	702	NA	48	67	4	35	268	1279	NA	3254	8965	6236
Strip Mall	1	4	0	NA	7	34	3	24	28	27	NA	1249	2867	162

<sup>3</sup> California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Appendix C. Table E-15. December 2021. Note: Residential use provides aux. heat which was included under cooling (residential use does not provide a natural gas usage for cooling or refrigeration). In addition, Table E-15 cites that the sample size for several end uses and housing types was limited and should be used with caution.

**Project Energy Demand**

Project Uses	Amount (DU/KSF)	Natural Gas (Therm/yr/KSF)							Electricity (kWh/yr/KSF)								
		Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Total	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	Total
Apartment High Rise	631	169,108	30,288	12,620	10,727	19,561	22,085	NA	264,389	663,812	220,850	165,322	230,315	129,355	353,360	NA	1,763,014
General Office	1.5	30	179	2	NA	27	65	2	303	69	594	14	NA	4,655	4,071	17	9,419
High Turnover (Sit Down Restaurant)	15.8	1,422	585	11,092	NA	758	1,059	63	14,978	553	4,234	0	NA	51,413	141,647	98,529	296,376
Strip Mall	10	10	40	0	NA	70	340	30	490	240	280	270	NA	12,490	28,670	1,620	43,570
Total		170,560	31,051	23,713	10,727	20,346	23,208	65	279,670	664,434	225,678	165,336	230,315	185,423	499,078	98,545	2,068,809

**CalEEMod Adjustments**

**Default Values**

	Total	Total Natural		Difference between CalEEMod and CAPCOA natural gas usage
	Electricity	Gas	Check	
Apartment High Rise	2,071,885	6,262,901	26,438,900	322%
General Office	23,893	30,138	30,300	1%
High Turnover (Sit Down Restaurant)	514,607	1,496,728	1,497,840	0%
Strip Mall	99,565	49,241	49,000	0%
Enclosed Parking with Elevator	1,374,689	0		
Total	4,084,639	7,839,008	27,967,040	

**Adjusted Values**

	Total	Total Natural		Note: Includes an adjustment to account for difference between CalEEMod and CAPCOA natural gas usage
	Electricity	Gas		
Apartment High Rise	2,489,511	0		
General Office	33,312	0		
High Turnover (Sit Down Restaurant)	810,983	1,109,160		
Strip Mall	143,135	0		
Enclosed Parking with Elevator	1,374,689	0		
Total	4,851,630	1,109,160		

Additional Sources

	Natural Gas (Btu/hr)	Electricity (kWh/yr for an average single-family residential pool)		
	Pool and Spa Heat	Heat Pump	Pump	Spa Pump
Swimming Pool (3)	900,000	525,600	2898	683
	Natural Gas (kBtu/yr)	Electricity (kWh/yr)		
	5,256,000	1,576,800	43,470	10,245
				1,630,515

- Pool and Spa heat based on 2,400,000 btu/hr natural gas heaters 6 hours per day for 365 days/yr.
- Pool and spa pumps electricity usage is based on 2019 California Residential Appliance Saturation Study, Page 6: <https://www.energy.ca.gov/sites/default/files/2021-08/CEC-200-2021-005-RSLTS.pdf>
- Project pool and spa are conservatively estimated to be approximately 5 times the average single family residential pool.
- Electric pool heat (heat pump) assumes conversion of 1 therm = 30 kwh.

Natural Gas

	Units	(kBtu/yr)
Grills (6) @ 360,000 btu/hr	6	539,136
Firepits (3) @ 100,000 btu/hr	3	74,880
		614,016

- Notes:
- (1) CalEEMod provide pollutant emissions associated fireplaces, but does not include natural gas usage in output files. The provided usage rate is consistent with CalEEMod default factors (i.e., 90 percent of DUs have 60,000 btu/hr fireplaces, operate 25 days per year for three hours per day).
  - (2) Natural gas grills and firepits are assumed to operate 104 days per year for three hours per day @ 80 percent output.

Total with CalEEMod Defaults

	Total		Compliance with Ordinance No. 187,714	
	Electricity	Total Natural Gas	Electricity	Total Natural Gas
Land Uses	4,084,639	7,839,008	4,851,630	1,109,160
Swimming Pool (3)	53,715	5,256,000	1,630,515	0
Grills (6) @ 360,000 btu/hr		539,136		539,136 propane
Firepits (3) @ 100,000 btu/hr		74,880		74,880 propane
Total:	4,138,354	13,709,024	6,482,145	1,723,176
			Difference in Energy Use with Implementation of Ordinance:	2,343,791 -11,985,848
			Percent Change:	57% -87%

GHG Emissions

	Electricity	Natural Gas	
	lb/MWh	lb/MMBtu	Global Warming Potential
	332	116.9771	1 CO <sub>2</sub>
	0.0489	0.0104	25 CH <sub>4</sub>
	0.0069	0.0002	298 N <sub>2</sub> O
Default Values CO <sub>2</sub> e	629	729	1,359 mtons/yr
Code Compliance Values CO <sub>2</sub> e	986	92	1,077 mtons/yr
			(281) mtons/yr decrease

## Peak Electricity Demand Calculations

### Electrical Load Factor Equation

$$f_{Load} = \frac{\text{Average load}}{\text{Maximum load in given time period}}$$

Load Factor (%)<sup>1</sup> **52%**

### Project Electricity Demand (Operational)

	Baseline (Existing)	Project	Net Increase
<b>Annual Demand</b>			
Building (MWh)	0	10,606	10,606
Water (MWh)	0	259	259
Total (MWh)	0	10,864	10,864

### Average Daily Demand

Building (kWh)	0	29,056	29,056
Water (kWh)	0	709	709
Total (kWh)	0	29,765	29,765

### Average Load

Building (kW)	0	1,211	1,211
Water (kW)	0	30	30
Total (kW)	0	1,240	1,240

### Peak Load Calculation

Peak Load (kW)	0	2,358	2,358
Systemwide Peak Load (MW)	6,322	6,322	6,322
Percent of Peak			0.037%

<sup>1</sup>2017 Report: System Efficiency of California's Electric Grid. California Public Utilities Comm 2017. Page 11, Figure 6. Visual estimate.

**EMFAC Emission inventories for County**

EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2028** (Construction Start Year)

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2028	HHDT	Aggregatec	Aggregatec	Diesel	0.00	1133.53
Los Angeles	2028	HHDT	Aggregatec	Aggregatec	Gasoline	0.52	0.00
Los Angeles	2028	LDA	Aggregatec	Aggregatec	Diesel	0.00	4.26
Los Angeles	2028	LDA	Aggregatec	Aggregatec	Gasoline	4082.09	0.00
Los Angeles	2028	LDT1	Aggregatec	Aggregatec	Diesel	0.00	0.02
Los Angeles	2028	LDT1	Aggregatec	Aggregatec	Gasoline	426.63	0.00
Los Angeles	2028	LDT2	Aggregatec	Aggregatec	Diesel	0.00	7.56
Los Angeles	2028	LDT2	Aggregatec	Aggregatec	Gasoline	2789.33	0.00
Los Angeles	2028	LHDT1	Aggregatec	Aggregatec	Diesel	0.00	140.41
Los Angeles	2028	LHDT1	Aggregatec	Aggregatec	Gasoline	341.69	0.00
Los Angeles	2028	LHDT2	Aggregatec	Aggregatec	Diesel	0.00	74.65
Los Angeles	2028	LHDT2	Aggregatec	Aggregatec	Gasoline	54.90	0.00
Los Angeles	2028	MCY	Aggregatec	Aggregatec	Gasoline	25.31	0.00
Los Angeles	2028	MDV	Aggregatec	Aggregatec	Diesel	0.00	18.07
Los Angeles	2028	MDV	Aggregatec	Aggregatec	Gasoline	1866.61	0.00
Los Angeles	2028	MH	Aggregatec	Aggregatec	Diesel	0.00	6.60
Los Angeles	2028	MH	Aggregatec	Aggregatec	Gasoline	30.86	0.00
Los Angeles	2028	MHDT	Aggregatec	Aggregatec	Diesel	0.00	288.66
Los Angeles	2028	MHDT	Aggregatec	Aggregatec	Gasoline	136.02	0.00
Los Angeles	2028	OBUS	Aggregatec	Aggregatec	Diesel	0.00	23.86
Los Angeles	2028	OBUS	Aggregatec	Aggregatec	Gasoline	23.06	0.00
Los Angeles	2028	SBUS	Aggregatec	Aggregatec	Diesel	0.00	4.60
Los Angeles	2028	SBUS	Aggregatec	Aggregatec	Gasoline	7.69	0.00
Los Angeles	2028	UBUS	Aggregatec	Aggregatec	Diesel	0.00	0.26
Los Angeles	2028	UBUS	Aggregatec	Aggregatec	Gasoline	6.55	0.00
Los Angeles	2028	LDA	Aggregatec	Aggregatec	Plug-in Hybrid	83.91	0.00
Los Angeles	2028	LDT1	Aggregatec	Aggregatec	Plug-in Hybrid	1.05	0.00
Los Angeles	2028	LDT2	Aggregatec	Aggregatec	Plug-in Hybrid	17.76	0.00
Los Angeles	2028	MDV	Aggregatec	Aggregatec	Plug-in Hybrid	10.33	0.00
						3,615,072,524	621,398,931
Fuel Usage for Project Construction						351,644	543,957
Percentage of County for Construction						0.0097%	0.088%

**EMFAC Emission inventories for County**

EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2034** (Operational Start Year)

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Fuel_Gasoline (1000 gallons/day)	Fuel_DSL (1000 gallons/day)
Los Angeles	2034	HHDT	Aggregatec	Aggregatec	Diesel	0.00	1146.80
Los Angeles	2034	HHDT	Aggregatec	Aggregatec	Gasoline	0.36	0.00
Los Angeles	2034	LDA	Aggregatec	Aggregatec	Diesel	0.00	2.16
Los Angeles	2034	LDA	Aggregatec	Aggregatec	Gasoline	3536.54	0.00
Los Angeles	2034	LDT1	Aggregatec	Aggregatec	Diesel	0.00	0.00
Los Angeles	2034	LDT1	Aggregatec	Aggregatec	Gasoline	369.20	0.00
Los Angeles	2034	LDT2	Aggregatec	Aggregatec	Diesel	0.00	7.80
Los Angeles	2034	LDT2	Aggregatec	Aggregatec	Gasoline	2742.46	0.00
Los Angeles	2034	LHDT1	Aggregatec	Aggregatec	Diesel	0.00	135.84
Los Angeles	2034	LHDT1	Aggregatec	Aggregatec	Gasoline	278.51	0.00
Los Angeles	2034	LHDT2	Aggregatec	Aggregatec	Diesel	0.00	72.90
Los Angeles	2034	LHDT2	Aggregatec	Aggregatec	Gasoline	43.66	0.00
Los Angeles	2034	MCY	Aggregatec	Aggregatec	Gasoline	26.32	0.00
Los Angeles	2034	MDV	Aggregatec	Aggregatec	Diesel	0.00	16.84
Los Angeles	2034	MDV	Aggregatec	Aggregatec	Gasoline	1809.32	0.00
Los Angeles	2034	MH	Aggregatec	Aggregatec	Diesel	0.00	7.22
Los Angeles	2034	MH	Aggregatec	Aggregatec	Gasoline	29.54	0.00
Los Angeles	2034	MHDT	Aggregatec	Aggregatec	Diesel	0.00	255.34
Los Angeles	2034	MHDT	Aggregatec	Aggregatec	Gasoline	98.65	0.00
Los Angeles	2034	OBUS	Aggregatec	Aggregatec	Diesel	0.00	23.16
Los Angeles	2034	OBUS	Aggregatec	Aggregatec	Gasoline	15.10	0.00
Los Angeles	2034	SBUS	Aggregatec	Aggregatec	Diesel	0.00	3.16
Los Angeles	2034	SBUS	Aggregatec	Aggregatec	Gasoline	7.45	0.00
Los Angeles	2034	UBUS	Aggregatec	Aggregatec	Diesel	NA	NA
Los Angeles	2034	UBUS	Aggregatec	Aggregatec	Gasoline	5.74	0.00
Los Angeles	2034	LDA	Aggregatec	Aggregatec	Plug-in Hybrid	83.60	0.00
Los Angeles	2034	LDT1	Aggregatec	Aggregatec	Plug-in Hybrid	2.23	0.00
Los Angeles	2034	LDT2	Aggregatec	Aggregatec	Plug-in Hybrid	25.50	0.00
Los Angeles	2034	MDV	Aggregatec	Aggregatec	Plug-in Hybrid	14.96	0.00
						3,271,439,664	610,003,411
Net Fuel Usage for Project Operation						465,427	85,579
Percentage of County for Operation						0.0142%	0.0140%