

# **Appendix E**

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## Energy Calculations

# 1360 North Vine Street (Residential Option)

Draft EIR

Appendix E-1

Energy Analysis Spreadsheets

- Appendix E-1: Energy Analysis (Residential Option )
  - Energy Consumption Summary (Residential Option with Bungalows)
  - Energy Consumption Summary (Residential Option with Restaurant)
  - Construction Energy Usage
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    - Future Operations without Project Design Features
    - Future Operations
    - Peak Electricity Demand Calculations
    - Total County Fuel Consumption

**Energy Modeling Input Notes:**

- Project construction is anticipated to be completed as late as 2027 for both Project Options. For purposes of conservatively analyzing construction impacts, it was assumed that construction of the Project could be completed as early as 2025. Based on SCAQMD and CalEEMod factors, the construction equipment and truck fleet mix will consume less energy in future years due to more stringent energy efficiency standards. In addition, Project operational energy usage would also be lower in future years due to increasing energy efficiency standards. As construction and operational activities for the Project are evaluated based on an earlier start date, the energy usage presented are more conservative.

## 1360 Vine Project (Residential Option with Bungalows)

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	3,261 kWh
Temporary Power (lighting, tools)	32,004 kWh
<b>Total:</b>	<b>35,265 kWh</b>
<b>Gasoline</b>	
On Road	114,417 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>114,417 Gallons</b>
<b>Diesel</b>	
On Road	65,037 Gallons
Off Road	100,359 Gallons
<b>Total:</b>	<b>165,396 Gallons</b>
<b>Total Mobile</b>	<b>279,814</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features	Project (w/o Project Features - Baseline)	Project (Buildout - Baseline (Buildout))	Percent Reduction
<b>Electricity</b>						
Electricity (building)	471,814	4,553,662	4,233,361	4,081,849	3,761,547 kWh/year	-8%
Electricity (water)	75,660	579,141	463,314	503,481	387,654 kWh/year	-23%
Electric Vehicle Charging	0	662,836	662,836	662,836	662,836 kWh/year	
<b>Electricity Total</b>	<b>547,474</b>	<b>5,795,640</b>	<b>5,359,511</b>	<b>5,248,166</b>	<b>4,812,037 kWh/year</b>	<b>-8%</b>
<b>Natural Gas</b>	<b>269,775</b>	<b>4,886,421</b>	<b>4,886,421</b>	<b>4,616,646</b>	<b>4,616,646 cu ft/year</b>	<b>0%</b>
<b>Mobile</b>						
Gasoline	29,092	619,676	369,628	590,583	340,536 Gallons/year	-42%
Diesel	5,726	121,955	72,744	116,229	67,019 Gallons/year	-42%
<b>Mobile Total</b>	<b>34,818</b>	<b>741,631</b>	<b>442,372</b>	<b>706,813</b>	<b>407,554 Gallons/year</b>	<b>-42%</b>

Construction Electricity Usage (kWh)	35,265
Operational Electricity Usage (kWh/year)	4,812,037
Construction vs. Operational Electricity Usage	0.73%

## 1360 Vine Project (Residential Option with Restaurant)

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	3,261 kWh
Temporary Power (lighting, tools)	32,004 kWh
<b>Total:</b>	<b>35,265 kWh</b>
<b>Gasoline</b>	
On Road	114,417 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>114,417 Gallons</b>
<b>Diesel</b>	
On Road	65,037 Gallons
Off Road	100,359 Gallons
<b>Total:</b>	<b>165,396 Gallons</b>
<b>Total Mobile</b>	<b>279,814</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features	Project (w/o Project Features - Baseline)	Project (Buildout - Baseline (Buildout))	Percent Reduction
<b>Electricity</b>						
Electricity (building)	471,814	4,895,065	4,559,672	4,423,251	4,087,858 kWh/year	-8%
Electricity (water)	75,660	597,673	478,139	522,013	402,479 kWh/year	-23%
Electric Vehicle Charging	0	651,273	651,273	651,273	651,273 kWh/year	
<b>Electricity Total</b>	<b>547,474</b>	<b>6,144,011</b>	<b>5,689,084</b>	<b>5,596,538</b>	<b>5,141,611 kWh/year</b>	<b>-8%</b>
<b>Natural Gas</b>	<b>269,775</b>	<b>6,637,348</b>	<b>6,637,348</b>	<b>6,367,572</b>	<b>6,367,572 cu ft/year</b>	<b>0%</b>
<b>Mobile</b>						
Gasoline	29,092	676,220	406,168	647,128	377,077 Gallons/year	-42%
Diesel	5,726	133,083	79,936	127,357	74,210 Gallons/year	-42%
<b>Mobile Total</b>	<b>34,818</b>	<b>809,303</b>	<b>486,104</b>	<b>774,485</b>	<b>451,287 Gallons/year</b>	<b>-42%</b>

Construction Electricity Usage (kWh)	35,265
Operational Electricity Usage (kWh/year)	5,141,611
Construction vs. Operational Electricity Usage	0.69%

## 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)	635
Total Construction (kWh)	32,004
Total Construction (MWh)	32.0

<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	Air Compressors	1	8	78	0.48	0.6	54	485	
Demolition	Concrete/Industrial Saws	1	8	81	0.73	0.6	54	766	
Demolition	Excavators	1	8	158	0.38	0.6	54	778	
Demolition	Rubber Tired Dozers	0	8	247	0.4	0.6	54	0	
Demolition	Rubber Tired Loaders	1	8	203	0.36	0.6	54	947	
Demolition	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	54	465	
Grading	Bore/Drill Rigs	1	8	221	0.5	0.6	168	4,455	
Grading	Cranes	1	8	231	0.29	0.6	168	2,701	
Grading	Excavators	2	8	158	0.38	0.6	168	4,842	
Grading	Graders	0	8	187	0.41	0.6	168	0	
Grading	Pumps	1	8	84	0.74	0.6	168	2,506	
Grading	Rubber Tired Dozers	0	8	247	0.4	0.6	168	0	
Grading	Scrapers	0	8	367	0.48	0.6	168	0	
Grading	Tractors/Loaders/Backhoes	0	8	97	0.37	0.6	168	0	
Mat Foundation	Cement and Mortar Mixers	2	8	9	0.56	0.6	4	10	
Mat Foundation	Cranes	1	8	231	0.29	0.6	4	64	
Mat Foundation	Generator Sets	0	8	84	0.74	0.6	4	0	
Mat Foundation	Rubber Tired Dozers	0	8	247	0.4	0.6	4	0	
Mat Foundation	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	4	34	
Mat Foundation	Welders	1	8	46	0.45	0.6	4	20	
Foundation	Cement and Mortar Mixers	2	8	9	0.56	0.6	131	317	
Foundation	Concrete/Industrial Saws	1	8	81	0.73	0.6	131	1,859	
Foundation	Cranes	1	8	231	0.29	0.6	131	2,106	
Foundation	Forklifts	2	8	89	0.2	0.6	131	1,119	
Foundation	Pumps	1	8	84	0.74	0.6	131	1,954	
Foundation	Rough Terrain Forklifts	2	8	100	0.4	0.6	131	2,515	
Foundation	Tractors/Loaders/Backhoes	0	8	97	0.37	0.6	131	0	
Building Construction	Aerial Lifts	3	8	63	0.31	0.6	635	8,929	
Building Construction	Air Compressors	3	8	78	0.48	0.6	635	17,118	
Building Construction	Cement and Mortar Mixers	1	8	9	0.56	0.6	635	768	
Building Construction	Concrete/Industrial Saws	1	8	81	0.73	0.6	635	9,011	
Building Construction	Cranes	1	8	231	0.29	0.6	635	10,209	
Building Construction	Forklifts	2	8	89	0.2	0.6	635	5,425	
Building Construction	Generator Sets	0	8	84	0.74	0.6	635	0	
Building Construction	Plate Compactors	2	8	8	0.43	0.6	635	1,049	
Building Construction	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	635	0	
Building Construction	Welders	2	8	46	0.45	0.6	635	6,309	
Architectural Coating	Air Compressors	0	6	78	0.48	0.6	87	0	
Paving	Cement and Mortar Mixers	1	8	9	0.56	0.6	27	33	
Paving	Pavers	0	8	130	0.42	0.6	27	0	
Paving	Paving Equipment	1	8	132	0.36	0.6	27	308	
Paving	Rollers	1	8	80	0.38	0.6	27	197	
Paving	Skid Steer Loaders	2	8	65	0.37	0.6	27	312	
Paving	Tractors/Loaders/Backhoes	2	8	97	0.37	0.6	27	465	
<b>Total Diesel Usage for Construction (Offroad Equipment)</b>								<b>100,359.4</b>	<b>gallons of diesel fuel</b>

gallons of diesel fuel per horsepower-hour= 0.05

Notes: Equipment assumptions are provided 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.

1360 Vine (Residential Option)

EMFAC2017 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year: 2021

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	GAS	Aggregate	6,276,234	246,181,276	29,647,186	8,196	0	30.0
South Coast	LDT1	GAS	Aggregate	695,146	26,066,042	3,200,417	1,010	0	25.8
South Coast	LDT2	GAS	Aggregate	2,144,804	81,991,236	10,052,342	3,442	0	23.8
<b>Construction Worker Trip (Composite LDA/LDT1/LDT2):</b>									<b>27.4</b>
South Coast	HHDT	DSL	Aggregate	96,727	11,545,820	974,406	0	1774.2	<b>6.5</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 Woker Trips	Daily Vendor 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	25	20	54	1350	1080	0	14.7	15.8	20	19845	17064	0	0.6	434.1	1,573.3
Grading	75	170	168	12600	28560	0	14.7	15.8	20	185220	451248	0	0.6	4,051.6	41,604.8
Mat Foundation	25	175	4	100	700	0	14.7	13.8	20	1470	9660	0	0.6	32.2	890.6
Foundation	175	100	131	22925	13100	0	14.7	6.9	20	336997.5	90390	0	0.6	7,371.6	8,333.9
Building Construction	500	30	635	317500	19050	0	14.7	6.9	20	4667250	131445	0	0.6	102,093.6	12,119.2
Architectural Coating	0	0	87	0	0	0	14.7	6.9	20	0	0	0	0.6	0.0	0.0
Paving	50	30	27	1350	810	0	14.7	6.9	20	19845	5589	0	0.6	434.1	515.3
<b>Total:</b>														<b>114,417.2</b>	<b>65,037.1</b>

Worker Miles per gallon=	27.43 gasoline
Vedor/Haul miles per gallon=	6.51 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)
Demolition	54	0.5	81,540	793
Grading	168	0.5	253,680	2,468
Mat Foundation	4	0.0	0	0
Foundation	131	0.0	0	0
Building Construction	635	0.0	0	0
Architectural Coating	87	0.0	0	0
<b>Total:</b>			<b>335,220</b>	<b>3,261</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).

EMFAC2014 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year: 2025

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)			
South Coast	2025	Annual	HHDT	DSL	Aggregated	Aggregated	104,110	12,515,660	1,062,535	0.00	1,707.97			
South Coast	2025	Annual	HHDT	GAS	Aggregated	Aggregated	73	8,703	1,459	1.95	0.00			
South Coast	2025	Annual	LDA	DSL	Aggregated	Aggregated	66,922	2,593,390	318,756	0.00	49.38			
South Coast	2025	Annual	LDA	GAS	Aggregated	Aggregated	6,623,933	247,134,863	31,282,323	7,386.88	0.00			
South Coast	2025	Annual	LDT1	DSL	Aggregated	Aggregated	307	7,182	1,077	0.00	0.30			
South Coast	2025	Annual	LDT1	GAS	Aggregated	Aggregated	778,182	27,926,963	3,602,143	977.96	0.00			
South Coast	2025	Annual	LDT2	DSL	Aggregated	Aggregated	17,588	702,823	85,874	0.00	18.22			
South Coast	2025	Annual	LDT2	GAS	Aggregated	Aggregated	2,295,149	83,832,765	10,772,144	3,069.91	0.00			
South Coast	2025	Annual	LHDT1	DSL	Aggregated	Aggregated	133,461	5,159,848	1,678,776	0.00	228.71			
South Coast	2025	Annual	LHDT1	GAS	Aggregated	Aggregated	168,882	5,923,526	2,516,094	543.18	0.00			
South Coast	2025	Annual	LHDT2	DSL	Aggregated	Aggregated	53,523	2,005,570	673,257	0.00	98.54			
South Coast	2025	Annual	LHDT2	GAS	Aggregated	Aggregated	29,352	993,571	437,303	104.80	0.00			
South Coast	2025	Annual	MCY	GAS	Aggregated	Aggregated	314,501	2,073,558	629,002	57.47	0.00			
South Coast	2025	Annual	MDV	DSL	Aggregated	Aggregated	40,102	1,517,288	194,655	0.00	51.21			
South Coast	2025	Annual	MDV	GAS	Aggregated	Aggregated	1,560,708	53,567,630	7,229,536	2,429.85	0.00			
South Coast	2025	Annual	MH	DSL	Aggregated	Aggregated	13,231	123,031	1,323	0.00	11.24			
South Coast	2025	Annual	MH	GAS	Aggregated	Aggregated	33,043	315,800	3,306	58.66	0.00			
South Coast	2025	Annual	MHDT	DSL	Aggregated	Aggregated	129,231	8,213,878	1,308,567	0.00	712.54			
South Coast	2025	Annual	MHDT	GAS	Aggregated	Aggregated	25,223	1,297,263	504,661	245.23	0.00			
South Coast	2025	Annual	OBUS	DSL	Aggregated	Aggregated	4,537	338,774	44,085	0.00	37.70			
South Coast	2025	Annual	OBUS	GAS	Aggregated	Aggregated	5,822	228,042	116,485	43.27	0.00			
South Coast	2025	Annual	SBUS	DSL	Aggregated	Aggregated	6,467	204,500	74,625	0.00	25.94			
South Coast	2025	Annual	SBUS	GAS	Aggregated	Aggregated	3,013	116,477	12,051	12.42	0.00			
South Coast	2025	Annual	UBUS	DSL	Aggregated	Aggregated	6	776	25	0.00	0.14			
South Coast	2025	Annual	UBUS	GAS	Aggregated	Aggregated	969	90,836	3,877	16.68	0.00			
												<b>MPG</b>	Gallons Per Mile	
							Totals	456,892,715.68			14,948.24	2,941.88	<b>25.5</b>	0.04
							Total (GAS)	423,509,995.51	0.93				<b>28.3</b>	0.04
							Total (DSL)	33,382,720.17	0.07				<b>11.3</b>	0.09

Baseline Year

Calendar Year: 2019

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)			
South Coast	2019	Annual	HHDT	DSL	Aggregated	Aggregated	92,086	11,035,510	918,238	0.00	1,756.36			
South Coast	2019	Annual	HHDT	GAS	Aggregated	Aggregated	101	7,659	2,026	2.00	0.00			
South Coast	2019	Annual	LDA	DSL	Aggregated	Aggregated	45,875	1,896,329	216,399	0.00	42.12			
South Coast	2019	Annual	LDA	GAS	Aggregated	Aggregated	6,081,048	244,446,391	28,695,373	8,546.80	0.00			
South Coast	2019	Annual	LDT1	DSL	Aggregated	Aggregated	482	11,462	1,689	0.00	0.52			
South Coast	2019	Annual	LDT1	GAS	Aggregated	Aggregated	651,943	24,807,246	2,983,370	1,008.68	0.00			
South Coast	2019	Annual	LDT2	DSL	Aggregated	Aggregated	9,665	445,810	48,035	0.00	13.63			
South Coast	2019	Annual	LDT2	GAS	Aggregated	Aggregated	2,073,197	80,872,282	9,694,322	3,631.58	0.00			
South Coast	2019	Annual	LHDT1	DSL	Aggregated	Aggregated	97,013	4,044,995	1,220,296	0.00	195.55			
South Coast	2019	Annual	LHDT1	GAS	Aggregated	Aggregated	175,207	6,463,196	2,610,330	629.75	0.00			
South Coast	2019	Annual	LHDT2	DSL	Aggregated	Aggregated	37,900	1,552,333	476,734	0.00	83.01			
South Coast	2019	Annual	LHDT2	GAS	Aggregated	Aggregated	28,635	1,024,337	426,614	114.60	0.00			
South Coast	2019	Annual	MCY	GAS	Aggregated	Aggregated	259,354	1,869,286	518,708	51.29	0.00			
South Coast	2019	Annual	MDV	DSL	Aggregated	Aggregated	23,710	1,023,301	117,204	0.00	40.71			
South Coast	2019	Annual	MDV	GAS	Aggregated	Aggregated	1,497,221	54,845,361	6,911,949	2,999.26	0.00			
South Coast	2019	Annual	MH	DSL	Aggregated	Aggregated	11,071	110,800	1,107	0.00	10.76			
South Coast	2019	Annual	MH	GAS	Aggregated	Aggregated	35,590	335,289	3,560	67.31	0.00			
South Coast	2019	Annual	MHDT	DSL	Aggregated	Aggregated	114,051	7,128,971	1,136,926	0.00	714.72			
South Coast	2019	Annual	MHDT	GAS	Aggregated	Aggregated	24,591	1,348,347	492,013	274.04	0.00			
South Coast	2019	Annual	OBUS	DSL	Aggregated	Aggregated	4,004	293,205	39,273	0.00	37.06			
South Coast	2019	Annual	OBUS	GAS	Aggregated	Aggregated	5,873	259,979	117,514	53.24	0.00			
South Coast	2019	Annual	SBUS	DSL	Aggregated	Aggregated	6,233	197,082	71,923	0.00	26.67			
South Coast	2019	Annual	SBUS	GAS	Aggregated	Aggregated	2,128	88,942	8,510	9.98	0.00			
South Coast	2019	Annual	UBUS	DSL	Aggregated	Aggregated	18	1,877	73	0.00	0.30			
South Coast	2019	Annual	UBUS	GAS	Aggregated	Aggregated	931	87,702	3,725	18.65	0.00			
												<b>MPG</b>	Gallons Per Mile	
							Totals	444,197,691.29			17,407.18	2,921.42	<b>21.9</b>	0.05
							Total (GAS)	416,456,015.85	0.94				<b>23.9</b>	0.04
							Total (DSL)	27,741,675.44	0.06				<b>9.5</b>	0.11

**1360 Vine - Existing Operations Buildout Year  
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>
General Office Building	21.60	1000sqft	0.50	21,600.00	0
Parking Lot	0.39	Acre	0.39	16,988.40	0
Strip Mall	8.00	1000sqft	0.18	8,000.00	0

**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>	
General Office Building	0	0	0	0
Parking Lot	0	0	0	0
Strip Mall	0	0	0	0
User Defined Commercial	352	352	352	889,208
<b>Total</b>	<b>352.00</b>	<b>352.00</b>	<b>352.00</b>	<b>889,208</b>

**Gasoline and Diesel Usage**

	<i>Buildout Year</i>		<i>Existing (Baseline) Year</i>	
	<i>Gasoline</i>	<i>Diesel</i>	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3	23.9	9.5
<i>% Fleet Mix</i>	92.7%	7.3%	93.8%	6.2%
<b>Total (Gallons):</b>	<b>29,092</b>	<b>5,726</b>	<b>34,846</b>	<b>5,848</b>

**Energy by Land Use - Natural Gas**

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
General Office Building	268,704	255,909
Parking Lot	0	0
Strip Mall	14,560	13,867
<b>Total</b>	<b>283,264</b>	<b>269,775</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
General Office Building	329,184
Parking Lot	14,950
Strip Mall	127,680
<b>Total</b>	<b>471,814</b>

**Water Detail**

<i>Land Uses</i>	<i>Indoor Use</i>	<i>Outdoor</i>	<i>Electricity</i>
	<i>(Mgal)</i>	<i>Use (Mgal)</i>	<i>Use (kWh/yr)</i>
General Office Building	3.84	2.35	65,543
Parking Lot	0.00	0.00	0
Strip Mall	0.59	0.36	10,117
User Defined Commercial	0.00	0.00	0
<b>Total</b>	<b>4.43</b>	<b>2.72</b>	<b>75,660</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**1360 Vine (Residential Option with Bungalows) - Buildout Operations Without Project Features  
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	417.00	Dwelling Unit	6.73	415,433.00	1193
Single Family Housing	12.00	Dwelling Unit	3.90	8,998.00	34
Strip Mall	5.00	1000sqft	0.11	5,000.00	0
Supermarket	55.00	1000sqft	1.26	55,000.00	0

**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>	
Apartments High Rise	0	0	0	0
Enclosed Parking with Elevator	0	0	0	0
Single Family Housing	0	0	0	0
Strip Mall	0	0	0	0
Supermarket	0	0	0	0
User Defined Commercial	8,453	8,453	8,453	18,940,376
<b>Total</b>	<b>8,453</b>	<b>8,453</b>	<b>8,453</b>	<b>18,940,376</b>

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>619,676</b>	<b>121,955</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	3,660,570	3,486,257
Enclosed Parking with Elevator	0	0
Single Family Housing	302,757	288,340
Strip Mall	7,625	7,262
Supermarket	1159790.0	1,104,562
User Defined Commercial	0.0	0
<b>Total</b>	<b>5,130,742</b>	<b>4,886,421</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
Apartments High Rise	1,644,490
Enclosed Parking with Elevator	719,382
Single Family Housing	95,455
Strip Mall	65,495
Supermarket	2,028,840
User Defined Commercial	0
<b>Total</b>	<b>4,553,662</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	27.951	17.621	481,967
Enclosed Parking with Elevator	0.000	0.000	0
Single Family Housing	0.782	0.493	13,482
Strip Mall	0.370	0.227	6,323
Supermarket	6.780	0.210	77,369
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>35.88</b>	<b>18.55</b>	<b>579,141</b>

Notes: Indoor water results in 0.0111 kWh of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWh of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**1360 Vine Project (Residential Option with Bungalows) - 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	417.00	Dwelling Unit	6.73	415,433.00	1193
Single Family Housing	12.00	Dwelling Unit	3.90	8,998.00	34
Strip Mall	5.00	1000sqft	0.11	5,000.00	0
Supermarket	55.00	1000sqft	1.26	55,000.00	0

**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>	
Apartments High Rise	0.0	0.0	0.0	0
Enclosed Parking with Elevator	0.0	0.0	0.0	0
Single Family Housing	0.0	0.0	0.0	0
Strip Mall	0.0	0.0	0.0	0
Supermarket	0	0	0	0
User Defined Commercial	4,911	4,911	4,911	11,297,657
<b>Total</b>	<b>4,911</b>	<b>4,911</b>	<b>4,911</b>	<b>11,297,657</b>

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>369,628</b>	<b>72,744</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	3,660,570	3,486,257
Enclosed Parking with Elevator	0	0
Single Family Housing	302,757	288,340
Strip Mall	7,625	7,262
Supermarket	1,159,790	1,104,562
User Defined Commercial	0.0	0
<b>Total</b>	<b>5,130,742</b>	<b>4,886,421</b>

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

<i>Land Uses</i>	<i>kWh/yr</i>
Apartments High Rise	1,567,200
Enclosed Parking with Elevator	585,682
Single Family Housing	90,629
Strip Mall	57,670
Supermarket	1,932,180
User Defined Commercial	0
<b>Total</b>	<b>4,233,361</b>

Note: Reduction in electricity usage reflects implementation of CalGreen and 2019 Title 24 (Exceed Title 24, Part 6, CEC baseline requirements by 10 percent for energy efficiency, based on 2019 standards and 25% for lighting).

**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	22.361	14.097	385,574
Enclosed Parking with Elevator	0.000	0.000	0
Single Family Housing	0.625	0.394	10,785
Strip Mall	0.296	0.182	5,058
Supermarket	5.424	0.168	61,896
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>28.71</b>	<b>14.84</b>	<b>463,314</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 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

## 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)	472	4,233	3,762
Water (MWh)	76	463	388
Total (MWh)	547	5,360	4,812

### Average Daily Demand

Building (kWh)	1,293	11,598	10,306
Water (kWh)	207	1,269	1,062
Total (kWh)	1,500	14,684	13,184

### Average Load

Building (kW)	54	483	429
Water (kW)	9	53	44
Total (kW)	62	612	549

### Peak Load Calculation

Peak Load (kW)	112	982	<b>870</b>
Systemwide Peak Load (MW)		5,854	5,854
Percent of Peak		0.017%	0.015%

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

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2021** (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	2021	HHDT	Aggregatec	Aggregatec	DSL	0.00	1774.20
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2021	LDA	Aggregatec	Aggregatec	DSL	0.00	46.12
Los Angeles	2021	LDA	Aggregatec	Aggregatec	GAS	8195.76	0.00
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.43
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	GAS	1009.57	0.00
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	DSL	0.00	15.84
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	GAS	3441.72	0.00
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	DSL	0.00	211.28
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	GAS	598.07	0.00
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	DSL	0.00	90.14
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	GAS	111.80	0.00
Los Angeles	2021	MCY	Aggregatec	Aggregatec	GAS	53.90	0.00
Los Angeles	2021	MDV	Aggregatec	Aggregatec	DSL	0.00	46.02
Los Angeles	2021	MDV	Aggregatec	Aggregatec	GAS	2808.58	0.00
Los Angeles	2021	MH	Aggregatec	Aggregatec	DSL	0.00	11.04
Los Angeles	2021	MH	Aggregatec	Aggregatec	GAS	64.52	0.00
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	DSL	0.00	727.46
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	GAS	264.51	0.00
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.68
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	GAS	49.58	0.00
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.53
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	GAS	10.85	0.00
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	GAS	18.46	0.00
						6,069,653,628	1,090,251,415
Fuel Usage for Project Construction						114,417	165,396
Percentage of County for Construction						0.0019%	0.015%



**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2025** (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	2025	HHDT	Aggregatec	Aggregatec	DSL	0.00	1707.97
Los Angeles	2025	HHDT	Aggregatec	Aggregatec	GAS	1.95	0.00
Los Angeles	2025	LDA	Aggregatec	Aggregatec	DSL	0.00	49.38
Los Angeles	2025	LDA	Aggregatec	Aggregatec	GAS	7386.88	0.00
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.30
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	GAS	977.96	0.00
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	DSL	0.00	18.22
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	GAS	3069.91	0.00
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	DSL	0.00	228.71
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	GAS	543.18	0.00
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	DSL	0.00	98.54
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	GAS	104.80	0.00
Los Angeles	2025	MCY	Aggregatec	Aggregatec	GAS	57.47	0.00
Los Angeles	2025	MDV	Aggregatec	Aggregatec	DSL	0.00	51.21
Los Angeles	2025	MDV	Aggregatec	Aggregatec	GAS	2429.85	0.00
Los Angeles	2025	MH	Aggregatec	Aggregatec	DSL	0.00	11.24
Los Angeles	2025	MH	Aggregatec	Aggregatec	GAS	58.66	0.00
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	DSL	0.00	712.54
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	GAS	245.23	0.00
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.70
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	GAS	43.27	0.00
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	DSL	0.00	25.94
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	GAS	12.42	0.00
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.14
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	GAS	16.68	0.00
						5,456,109,145	1,073,785,458
Net Fuel Usage for Project Operation						340,536	67,019
Percentage of County for Operation						0.0062%	0.0062%

**1360 Vine (Residential Option with Restaurant) - Buildout Operations Without Project Features  
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>
High Turnover (Sit Down Restaurant)	8.99	1000sqft	0.21	8,990.00	0
Apartments High Rise	429.00	Dwelling Unit	6.92	415,433.00	1227
Strip Mall	5.00	1000sqft	0.11	5,000.00	0
Supermarket	55.00	1000sqft	1.26	55,000.00	0

**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>	
Apartments High Rise	0	0	0	0
Enclosed Parking with Elevator	0	0	0	0
High Turnover (Sit Down Restaurant)	0	0	0	0
Strip Mall	0	0	0	0
Supermarket	0	0	0	0
User Defined Commercial	9,179	9,179	9,179	20,668,648
<b>Total</b>	<b>9,179</b>	<b>9,179</b>	<b>9,179</b>	<b>20,668,648</b>

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>676,220</b>	<b>133,083</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	3,765,910	3,586,581
Enclosed Parking with Elevator	0	0
High Turnover (Sit Down Restaurant)	2,035,890	1,938,943
Strip Mall	7,625	7,262
Supermarket	1159790.0	1,104,562
User Defined Commercial	0.0	0
<b>Total</b>	<b>6,969,215</b>	<b>6,637,348</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
Apartments High Rise	1,691,820
Enclosed Parking with Elevator	719,382
High Turnover (Sit Down Restaurant)	389,528
Strip Mall	65,495
Supermarket	2,028,840
User Defined Commercial	0
<b>Total</b>	<b>4,895,065</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	27.951	17.621	481,967
Enclosed Parking with Elevator	0.000	0.000	0
High Turnover (Sit Down Restaurant)	2.729	0.174	32,014
Strip Mall	0.370	0.227	6,323
Supermarket	6.780	0.210	77,369
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>37.83</b>	<b>18.23</b>	<b>597,673</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**1360 Vine Project (Residential Option with Restaurant) - 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>
High Turnover (Sit Down Restaurant)	8.99	1000sqft	0.21	8,990.00	0
Apartments High Rise	429.00	Dwelling Unit	6.92	415,433.00	1227
Strip Mall	5.00	1000sqft	0.11	5,000.00	0
Supermarket	55.00	1000sqft	1.26	55,000.00	0

**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>	
Apartments High Rise	0.0	0.0	0.0	0
Enclosed Parking with Elevator	0.0	0.0	0.0	0
High Turnover (Sit Down Restaurant)	0.0	0.0	0.0	0
Strip Mall	0.0	0.0	0.0	0
Supermarket	0	0	0	0
User Defined Commercial	5,371	5,371	5,371	12,414,529
<b>Total</b>	<b>5,371</b>	<b>5,371</b>	<b>5,371</b>	<b>12,414,529</b>

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>406,168</b>	<b>79,936</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	3,765,910	3,586,581
Enclosed Parking with Elevator	0	0
High Turnover (Sit Down Restaurant)	2,035,890	1,938,943
Strip Mall	7,625	7,262
Supermarket	1,159,790	1,104,562
User Defined Commercial	0.0	0
<b>Total</b>	<b>6,969,215</b>	<b>6,637,348</b>

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

<i>Land Uses</i>	<i>kWH/yr</i>
Apartments High Rise	1,612,300
Enclosed Parking with Elevator	585,682
High Turnover (Sit Down Restaurant)	371,840
Strip Mall	57,670
Supermarket	1,932,180
User Defined Commercial	0
<b>Total</b>	<b>4,559,672</b>

Note: Reduction in electricity usage reflects implementation of CalGreen and 2019 Title 24 (Exceed Title 24, Part 6, CEC baseline requirements by 10 percent for energy efficiency, based on 2019 standards and 25% for lighting).

**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	22.361	14.097	385,574
Enclosed Parking with Elevator	0.000	0.000	0
High Turnover (Sit Down Restaurant)	2.183	0.139	25,611
Strip Mall	0.296	0.182	5,058
Supermarket	5.424	0.168	61,896
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>30.26</b>	<b>14.59</b>	<b>478,139</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 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

## 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)	472	4,560	4,088
Water (MWh)	76	478	402
Total (MWh)	547	5,689	5,142

### Average Daily Demand

Building (kWh)	1,293	12,492	11,200
Water (kWh)	207	1,310	1,103
Total (kWh)	1,500	15,587	14,087

### Average Load

Building (kW)	54	521	467
Water (kW)	9	55	46
Total (kW)	62	649	587

### Peak Load Calculation

Peak Load (kW)	112	1,056	<b>943</b>
Systemwide Peak Load (MW)		5,854	5,854
Percent of Peak		0.018%	0.016%

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

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2021** (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	2021	HHDT	Aggregatec	Aggregatec	DSL	0.00	1774.20
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2021	LDA	Aggregatec	Aggregatec	DSL	0.00	46.12
Los Angeles	2021	LDA	Aggregatec	Aggregatec	GAS	8195.76	0.00
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.43
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	GAS	1009.57	0.00
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	DSL	0.00	15.84
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	GAS	3441.72	0.00
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	DSL	0.00	211.28
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	GAS	598.07	0.00
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	DSL	0.00	90.14
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	GAS	111.80	0.00
Los Angeles	2021	MCY	Aggregatec	Aggregatec	GAS	53.90	0.00
Los Angeles	2021	MDV	Aggregatec	Aggregatec	DSL	0.00	46.02
Los Angeles	2021	MDV	Aggregatec	Aggregatec	GAS	2808.58	0.00
Los Angeles	2021	MH	Aggregatec	Aggregatec	DSL	0.00	11.04
Los Angeles	2021	MH	Aggregatec	Aggregatec	GAS	64.52	0.00
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	DSL	0.00	727.46
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	GAS	264.51	0.00
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.68
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	GAS	49.58	0.00
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.53
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	GAS	10.85	0.00
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	GAS	18.46	0.00
						6,069,653,628	1,090,251,415
Fuel Usage for Project Construction						114,417	165,396
Percentage of County for Construction						0.0019%	0.015%

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2025** (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	2025	HHDT	Aggregatec	Aggregatec	DSL	0.00	1707.97
Los Angeles	2025	HHDT	Aggregatec	Aggregatec	GAS	1.95	0.00
Los Angeles	2025	LDA	Aggregatec	Aggregatec	DSL	0.00	49.38
Los Angeles	2025	LDA	Aggregatec	Aggregatec	GAS	7386.88	0.00
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.30
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	GAS	977.96	0.00
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	DSL	0.00	18.22
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	GAS	3069.91	0.00
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	DSL	0.00	228.71
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	GAS	543.18	0.00
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	DSL	0.00	98.54
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	GAS	104.80	0.00
Los Angeles	2025	MCY	Aggregatec	Aggregatec	GAS	57.47	0.00
Los Angeles	2025	MDV	Aggregatec	Aggregatec	DSL	0.00	51.21
Los Angeles	2025	MDV	Aggregatec	Aggregatec	GAS	2429.85	0.00
Los Angeles	2025	MH	Aggregatec	Aggregatec	DSL	0.00	11.24
Los Angeles	2025	MH	Aggregatec	Aggregatec	GAS	58.66	0.00
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	DSL	0.00	712.54
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	GAS	245.23	0.00
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.70
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	GAS	43.27	0.00
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	DSL	0.00	25.94
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	GAS	12.42	0.00
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.14
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	GAS	16.68	0.00
						5,456,109,145	1,073,785,458
Net Fuel Usage for Project Operation						377,077	74,210
Percentage of County for Operation						0.0069%	0.0069%

# 1360 North Vine Street (Office Option)

Draft EIR  
Appendix E-2  
Energy Analysis Spreadsheets

- Appendix E-2: Energy Analysis (Office Option)
  - Energy Consumption Summary (Office Option with Bungalows)
  - Energy Consumption Summary (Office Option with Restaurant)
  - Construction Energy Usage
    - Electricity Usage
    - Off-Road Equipment
    - On-Road Fuel Usage Rates
    - On-Road Vehicles
    - Construction Water Usage
  - Operational Energy Usage (Office Option with Bungalows)
    - On-Road Fuel Usage Rates
    - Existing Operations
    - Future Operations without Project Design Features
    - Future Operations
    - Peak Electricity Demand Calculations
    - Total County Fuel Consumption
  - Operational Energy Usage (Office Option with Restaurant)
    - Future Operations without Project Design Features
    - Future Operations
    - Peak Electricity Demand Calculations
    - Total County Fuel Consumption

## 1360 Vine Project (Office Option with Bungalows)

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	4,671 kWh
Temporary Power (lighting, tools)	21,773 kWh
<b>Total:</b>	<b>26,444 kWh</b>
<b>Gasoline</b>	
On Road	89,328 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>89,328 Gallons</b>
<b>Diesel</b>	
On Road	98,545 Gallons
Off Road	103,554 Gallons
<b>Total:</b>	<b>202,099 Gallons</b>
<b>Total Mobile</b>	<b>291,427</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features	Project (w/o Project Features - Baseline)	Project (Buildout - Baseline (Buildout))	Percent Reduction
<b>Electricity</b>						
Electricity (building)	471,814	8,420,587	7,558,180	7,948,774	7,086,366 kWh/year	-11%
Electricity (water)	75,660	1,462,396	1,169,917	1,386,736	1,094,257 kWh/year	-21%
Electric Vehicle Charging	0	1,120,305	1,120,305	1,120,305	1,120,305 kWh/year	
<b>Electricity Total</b>	<b>547,474</b>	<b>11,003,289</b>	<b>9,848,402</b>	<b>10,455,816</b>	<b>9,300,929 kWh/year</b>	<b>-11%</b>
<b>Natural Gas</b>	<b>269,775</b>	<b>7,011,083</b>	<b>7,011,083</b>	<b>6,741,308</b>	<b>6,741,308 cu ft/year</b>	<b>0%</b>
<b>Mobile</b>						
Gasoline	29,092	466,153	256,854	437,061	227,762 Gallons/year	-48%
Diesel	5,726	91,741	50,550	86,015	44,824 Gallons/year	-48%
<b>Mobile Total</b>	<b>34,818</b>	<b>557,894</b>	<b>307,404</b>	<b>523,076</b>	<b>272,587 Gallons/year</b>	<b>-48%</b>

Construction Electricity Usage (kWh)	26,444
Operational Electricity Usage (kWh/year)	9,300,929
Construction vs. Operational Electricity Usage	0.28%



## 1360 Vine Project (Office Option with Restaurant)

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	4,671 kWh
Temporary Power (lighting, tools)	21,773 kWh
<b>Total:</b>	<b>26,444 kWh</b>
<b>Gasoline</b>	
On Road	89,328 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>89,328 Gallons</b>
<b>Diesel</b>	
On Road	98,545 Gallons
Off Road	103,554 Gallons
<b>Total:</b>	<b>202,099 Gallons</b>
<b>Total Mobile</b>	<b>291,427</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features	Project (w/o Project Features - Baseline)	Project (Buildout - Baseline (Buildout))	Percent Reduction
<b>Electricity</b>						
Electricity (building)	471,814	8,700,386	7,828,028	8,228,572	7,356,214 kWh/year	-11%
Electricity (water)	75,660	1,448,915	1,159,132	1,373,255	1,083,472 kWh/year	-21%
Electric Vehicle Charging	0	1,216,425	1,216,425	1,216,425	1,216,425 kWh/year	
<b>Electricity Total</b>	<b>547,474</b>	<b>11,365,725</b>	<b>10,203,584</b>	<b>10,818,252</b>	<b>9,656,111 kWh/year</b>	<b>-11%</b>
<b>Natural Gas</b>	<b>269,775</b>	<b>8,660,819</b>	<b>8,661,257</b>	<b>8,391,044</b>	<b>8,391,482 cu ft/year</b>	<b>0%</b>
<b>Mobile</b>						
Gasoline	29,092	520,909	302,182	491,816	273,090 Gallons/year	-44%
Diesel	5,726	102,517	59,471	96,792	53,745 Gallons/year	-44%
<b>Mobile Total</b>	<b>34,818</b>	<b>623,426</b>	<b>361,652</b>	<b>588,608</b>	<b>326,835 Gallons/year</b>	<b>-44%</b>

Construction Electricity Usage (kWh)	26,444
Operational Electricity Usage (kWh/year)	9,656,111
Construction vs. Operational Electricity Usage	0.27%

## 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)	432
Total Construction (kWh)	21,773
Total Construction (MWh)	21.8

<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	Air Compressors	1	8	78	0.48	0.6	54	485	
Demolition	Concrete/Industrial Saws	1	8	81	0.73	0.6	54	766	
Demolition	Excavators	1	8	158	0.38	0.6	54	778	
Demolition	Rubber Tired Dozers	0	8	247	0.4	0.6	54	0	
Demolition	Rubber Tired Loaders	1	8	203	0.36	0.6	54	947	
Demolition	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	54	465	
Grading	Bore/Drill Rigs	1	8	221	0.5	0.6	264	7,001	
Grading	Cranes	1	8	231	0.29	0.6	264	4,244	
Grading	Excavators	2	8	158	0.38	0.6	264	7,608	
Grading	Graders	0	8	187	0.41	0.6	264	0	
Grading	Pumps	1	8	84	0.74	0.6	264	3,938	
Grading	Rubber Tired Dozers	0	8	247	0.4	0.6	264	0	
Grading	Rubber Tired Loaders	1	8	203	0.36	0.6	264	4,630	
Grading	Scrapers	0	8	367	0.48	0.6	264	0	
Grading	Welders	1	8	46	0.45	0.6	264	1,312	
Mat Foundation	Cement and Mortar Mixers	2	8	9	0.56	0.6	4	10	
Mat Foundation	Forklifts	0	8	89	0.2	0.6	4	0	
Mat Foundation	Pumps	4	8	84	0.74	0.6	4	239	
Mat Foundation	Rubber Tired Dozers	0	8	247	0.4	0.6	4	0	
Mat Foundation	Tractors/Loaders/Backhoes	1	8	97	0.37	0.6	4	34	
Mat Foundation	Welders	1	8	46	0.45	0.6	4	20	
Building Foundation and Subgrade	Cement and Mortar Mixers	2	8	9	0.56	0.6	224	542	
Building Foundation and Subgrade	Concrete/Industrial Saws	1	8	81	0.73	0.6	224	3,179	
Building Foundation and Subgrade	Cranes	1	8	231	0.29	0.6	224	3,601	
Building Foundation and Subgrade	Generator Sets	0	8	84	0.74	0.6	224	0	
Building Foundation and Subgrade	Plate Compactors	4	8	8	0.43	0.6	224	740	
Building Foundation and Subgrade	Rough Terrain Forklifts	2	8	100	0.4	0.6	224	4,301	
Building Foundation and Subgrade	Welders	2	8	46	0.45	0.6	224	2,226	
Building Construction	Aerial Lifts	3	8	63	0.31	0.6	432	6,075	
Building Construction	Air Compressors	3	8	78	0.48	0.6	432	11,645	
Building Construction	Cement and Mortar Mixers	1	8	9	0.56	0.6	432	523	
Building Construction	Concrete/Industrial Saws	1	8	81	0.73	0.6	432	6,131	
Building Construction	Cranes	1	8	231	0.29	0.6	432	6,946	
Building Construction	Forklifts	2	8	89	0.2	0.6	432	3,691	
Building Construction	Generator Sets	0	8	84	0.74	0.6	432	0	
Building Construction	Pumps	1	8	84	0.74	0.6	432	6,445	
<b>Total Diesel Usage for Construction (Offr</b>								<b>103,554.4</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.

1360 Vine (Office Option)

EMFAC2017 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year: 2021

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	GAS	Aggregate	6,276,234	246,181,276	29,647,186	8,196	0	30.0
South Coast	LDT1	GAS	Aggregate	695,146	26,066,042	3,200,417	1,010	0	25.8
South Coast	LDT2	GAS	Aggregate	2,144,804	81,991,236	10,052,342	3,442	0	23.8
<b>Construction Worker Trip (Composite LDA/LDT1/LDT2):</b>									<b>27.4</b>
South Coast	HHDT	DSL	Aggregate	96,727	11,545,820	974,406	0	1774.2	<b>6.5</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 Woker Trips	Daily Vendor 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	25	20	54	1350	1080	0	14.7	15.8	20	19845	17064	0	0.6	434.1	1,573.3
Grading	75	190	264	19800	50160	0	14.7	15.8	20	291060	792528	0	0.6	6,366.8	73,070.6
Mat Foundation	25	350	4	100	1400	0	14.7	6.9	20	1470	9660	0	0.6	32.2	890.6
Building Foundation and Subgrade	175	100	224	39200	22400	0	14.7	6.9	20	576240	154560	0	0.6	12,604.9	14,250.3
Building Construction	500	30	432	216000	12960	0	14.7	6.9	20	3175200	89424	0	0.6	69,455.8	8,244.8
Architectural Coating	0	0	166	0	0	0	14.7	6.9	20	0	0	0	0.6	0.0	0.0
<b>Total:</b>													<b>89,327.9</b>	<b>98,545.1</b>	

Worker Miles per gallon= 27.43 gasoline  
 Vendor/Haul miles per gallon= 6.51 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)
Demolition	54	0.5	81,540	793
Grading	264	0.5	398,640	3,878
Mat Foundation	4	0.0	0	0
Building Foundation and Subgrade	224	0.0	0	0
Building Construction	432	0.0	0	0
Architectural Coating	166	0.0	0	0
<b>Total:</b>			<b>480,180</b>	<b>4,671</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).

EMFAC2014 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year: 2025

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)			
South Coast	2025	Annual	HHDT	DSL	Aggregated	Aggregated	104,110	12,515,660	1,062,535	0.00	1,707.97			
South Coast	2025	Annual	HHDT	GAS	Aggregated	Aggregated	73	8,703	1,459	1.95	0.00			
South Coast	2025	Annual	LDA	DSL	Aggregated	Aggregated	66,922	2,593,390	318,756	0.00	49.38			
South Coast	2025	Annual	LDA	GAS	Aggregated	Aggregated	6,623,933	247,134,863	31,282,323	7,386.88	0.00			
South Coast	2025	Annual	LDT1	DSL	Aggregated	Aggregated	307	7,182	1,077	0.00	0.30			
South Coast	2025	Annual	LDT1	GAS	Aggregated	Aggregated	778,182	27,926,963	3,602,143	977.96	0.00			
South Coast	2025	Annual	LDT2	DSL	Aggregated	Aggregated	17,588	702,823	85,874	0.00	18.22			
South Coast	2025	Annual	LDT2	GAS	Aggregated	Aggregated	2,295,149	83,832,765	10,772,144	3,069.91	0.00			
South Coast	2025	Annual	LHDT1	DSL	Aggregated	Aggregated	133,461	5,159,848	1,678,776	0.00	228.71			
South Coast	2025	Annual	LHDT1	GAS	Aggregated	Aggregated	168,882	5,923,526	2,516,094	543.18	0.00			
South Coast	2025	Annual	LHDT2	DSL	Aggregated	Aggregated	53,523	2,005,570	673,257	0.00	98.54			
South Coast	2025	Annual	LHDT2	GAS	Aggregated	Aggregated	29,352	993,571	437,303	104.80	0.00			
South Coast	2025	Annual	MCY	GAS	Aggregated	Aggregated	314,501	2,073,558	629,002	57.47	0.00			
South Coast	2025	Annual	MDV	DSL	Aggregated	Aggregated	40,102	1,517,288	194,655	0.00	51.21			
South Coast	2025	Annual	MDV	GAS	Aggregated	Aggregated	1,560,708	53,567,630	7,229,536	2,429.85	0.00			
South Coast	2025	Annual	MH	DSL	Aggregated	Aggregated	13,231	123,031	1,323	0.00	11.24			
South Coast	2025	Annual	MH	GAS	Aggregated	Aggregated	33,043	315,800	3,306	58.66	0.00			
South Coast	2025	Annual	MHDT	DSL	Aggregated	Aggregated	129,231	8,213,878	1,308,567	0.00	712.54			
South Coast	2025	Annual	MHDT	GAS	Aggregated	Aggregated	25,223	1,297,263	504,661	245.23	0.00			
South Coast	2025	Annual	OBUS	DSL	Aggregated	Aggregated	4,537	338,774	44,085	0.00	37.70			
South Coast	2025	Annual	OBUS	GAS	Aggregated	Aggregated	5,822	228,042	116,485	43.27	0.00			
South Coast	2025	Annual	SBUS	DSL	Aggregated	Aggregated	6,467	204,500	74,625	0.00	25.94			
South Coast	2025	Annual	SBUS	GAS	Aggregated	Aggregated	3,013	116,477	12,051	12.42	0.00			
South Coast	2025	Annual	UBUS	DSL	Aggregated	Aggregated	6	776	25	0.00	0.14			
South Coast	2025	Annual	UBUS	GAS	Aggregated	Aggregated	969	90,836	3,877	16.68	0.00			
												<b>MPG</b>	Gallons Per Mile	
							Totals	456,892,715.68			14,948.24	2,941.88	<b>25.5</b>	0.04
							Total (GAS)	423,509,995.51	0.93				<b>28.3</b>	0.04
							Total (DSL)	33,382,720.17	0.07				<b>11.3</b>	0.09

Baseline Year

Calendar Year: 2019

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)			
South Coast	2019	Annual	HHDT	DSL	Aggregated	Aggregated	92,086	11,035,510	918,238	0.00	1,756.36			
South Coast	2019	Annual	HHDT	GAS	Aggregated	Aggregated	101	7,659	2,026	2.00	0.00			
South Coast	2019	Annual	LDA	DSL	Aggregated	Aggregated	45,875	1,896,329	216,399	0.00	42.12			
South Coast	2019	Annual	LDA	GAS	Aggregated	Aggregated	6,081,048	244,446,391	28,695,373	8,546.80	0.00			
South Coast	2019	Annual	LDT1	DSL	Aggregated	Aggregated	482	11,462	1,689	0.00	0.52			
South Coast	2019	Annual	LDT1	GAS	Aggregated	Aggregated	651,943	24,807,246	2,983,370	1,008.68	0.00			
South Coast	2019	Annual	LDT2	DSL	Aggregated	Aggregated	9,665	445,810	48,035	0.00	13.63			
South Coast	2019	Annual	LDT2	GAS	Aggregated	Aggregated	2,073,197	80,872,282	9,694,322	3,631.58	0.00			
South Coast	2019	Annual	LHDT1	DSL	Aggregated	Aggregated	97,013	4,044,995	1,220,296	0.00	195.55			
South Coast	2019	Annual	LHDT1	GAS	Aggregated	Aggregated	175,207	6,463,196	2,610,330	629.75	0.00			
South Coast	2019	Annual	LHDT2	DSL	Aggregated	Aggregated	37,900	1,552,333	476,734	0.00	83.01			
South Coast	2019	Annual	LHDT2	GAS	Aggregated	Aggregated	28,635	1,024,337	426,614	114.60	0.00			
South Coast	2019	Annual	MCY	GAS	Aggregated	Aggregated	259,354	1,869,286	518,708	51.29	0.00			
South Coast	2019	Annual	MDV	DSL	Aggregated	Aggregated	23,710	1,023,301	117,204	0.00	40.71			
South Coast	2019	Annual	MDV	GAS	Aggregated	Aggregated	1,497,221	54,845,361	6,911,949	2,999.26	0.00			
South Coast	2019	Annual	MH	DSL	Aggregated	Aggregated	11,071	110,800	1,107	0.00	10.76			
South Coast	2019	Annual	MH	GAS	Aggregated	Aggregated	35,590	335,289	3,560	67.31	0.00			
South Coast	2019	Annual	MHDT	DSL	Aggregated	Aggregated	114,051	7,128,971	1,136,926	0.00	714.72			
South Coast	2019	Annual	MHDT	GAS	Aggregated	Aggregated	24,591	1,348,347	492,013	274.04	0.00			
South Coast	2019	Annual	OBUS	DSL	Aggregated	Aggregated	4,004	293,205	39,273	0.00	37.06			
South Coast	2019	Annual	OBUS	GAS	Aggregated	Aggregated	5,873	259,979	117,514	53.24	0.00			
South Coast	2019	Annual	SBUS	DSL	Aggregated	Aggregated	6,233	197,082	71,923	0.00	26.67			
South Coast	2019	Annual	SBUS	GAS	Aggregated	Aggregated	2,128	88,942	8,510	9.98	0.00			
South Coast	2019	Annual	UBUS	DSL	Aggregated	Aggregated	18	1,877	73	0.00	0.30			
South Coast	2019	Annual	UBUS	GAS	Aggregated	Aggregated	931	87,702	3,725	18.65	0.00			
												<b>MPG</b>	Gallons Per Mile	
							Totals	444,197,691.29			17,407.18	2,921.42	<b>21.9</b>	0.05
							Total (GAS)	416,456,015.85	0.94				<b>23.9</b>	0.04
							Total (DSL)	27,741,675.44	0.06				<b>9.5</b>	0.11

**1360 Vine - Existing Operations Buildout Year  
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>
General Office Building	21.60	1000sqft	0.50	21,600.00	0
Parking Lot	0.39	Acre	0.39	16,988.40	0
Strip Mall	8.00	1000sqft	0.18	8,000.00	0

**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>	
General Office Building	0	0	0	0
Parking Lot	0	0	0	0
Strip Mall	0	0	0	0
User Defined Commercial	352	352	352	889,208
<b>Total</b>	<b>352.00</b>	<b>352.00</b>	<b>352.00</b>	<b>889,208</b>

**Gasoline and Diesel Usage**

	<i>Buildout Year</i>		<i>Existing (Baseline) Year</i>	
	<i>Gasoline</i>	<i>Diesel</i>	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3	23.9	9.5
<i>% Fleet Mix</i>	92.7%	7.3%	93.8%	6.2%
<b>Total (Gallons):</b>	<b>29,092</b>	<b>5,726</b>	<b>34,846</b>	<b>5,848</b>

**Energy by Land Use - Natural Gas**

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
General Office Building	268,704	255,909
Parking Lot	0	0
Strip Mall	14,560	13,867
<b>Total</b>	<b>283,264</b>	<b>269,775</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
General Office Building	329,184
Parking Lot	14,950
Strip Mall	127,680
<b>Total</b>	<b>471,814</b>

**Water Detail**

<i>Land Uses</i>	<i>Indoor Use</i>		<i>Electricity Use (kWh/yr)</i>
	<i>(Mgal)</i>	<i>Outdoor Use (Mgal)</i>	
General Office Building	3.84	2.35	65,543
Parking Lot	0.00	0.00	0
Strip Mall	0.59	0.36	10,117
User Defined Commercial	0.00	0.00	0
<b>Total</b>	<b>4.43</b>	<b>2.72</b>	<b>75,660</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod ). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).



**1360 Vine (Office Option with Bungalows) - Buildout Operations Without Project Features**  
**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>
General Office Building	463.52	1000sqft	10.64	463,521.00	0
User Defined Commercial	1.00	User Defined Un	0.00	0.00	0
Enclosed Parking with Elevator	1,705.00	Space	15.34	682,000.00	0
Quality Restaurant	11.91	1000sqft	0.27	11,914.00	0
Single Family Housing	12.00	Dwelling Unit	3.90	8,998.00	34

**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>	
Enclosed Parking with Elevator	0	0	0	0
General Office Building	0	0	0	0
Quality Restaurant	0	0	0	0
Single Family Housing	0	0	0	0
User Defined Commercial	5,399	5,399	5,399	14,247,961
<b>Total</b>	<b>5,399</b>	<b>5,399</b>	<b>5,399</b>	<b>14,247,961</b>

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>466,153</b>	<b>91,741</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>
Enclosed Parking with Elevator	0	0
General Office Building	4,360,810	4,153,152
Quality Restaurant	2,698,070	2,569,590
Single Family Housing	302,757	288,340
<b>Total</b>	<b>7,361,637</b>	<b>7,011,083</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
Enclosed Parking with Elevator	2,000,990
General Office Building	5,807,920
Quality Restaurant	516,222
Single Family Housing	95,455
<b>Total</b>	<b>8,420,587</b>

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
Enclosed Parking with Elevator	0.000	0.000	0
General Office Building	82.383	50.493	1,406,503
Quality Restaurant	3.615	0.231	42,412
Single Family Housing	0.782	0.493	13,482
<b>Total</b>	<b>86.78</b>	<b>51.22</b>	<b>1,462,396</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**1360 Vine Project (Office Option with Bungalows) - 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>
General Office Building	463.52	1000sqft	10.64	463,521.00	0
User Defined Commercial	1.00	User Defined U	0.00	0.00	0
Enclosed Parking with Elevator	1,705.00	Space	15.34	682,000.00	0
Quality Restaurant	11.91	1000sqft	0.27	11,914.00	0
Single Family Housing	12.00	Dwelling Unit	3.90	8,998.00	34

**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>	
Enclosed Parking with Elevator	0.0	0.0	0.0	0
General Office Building	0.0	0.0	0.0	0
Quality Restaurant	0.0	0.0	0.0	0
Single Family Housing	0.0	0.0	0.0	0
User Defined Commercial	2,979	2,979	2,979	7,850,737
<b>Total</b>	<b>2,979</b>	<b>2,979</b>	<b>2,979</b>	<b>7,850,737</b>

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>256,854</b>	<b>50,550</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>
Enclosed Parking with Elevator	0	0
General Office Building	4,360,810	4,153,152
Quality Restaurant	2,698,070	2,569,590
Single Family Housing	302,757	288,340
<b>Total</b>	<b>7,361,637</b>	<b>7,011,083</b>

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

<i>Land Uses</i>	<i>kWh/yr</i>
Enclosed Parking with Elevator	1,603,720
General Office Building	5,371,050
Quality Restaurant	492,781
Single Family Housing	90,629
<b>Total</b>	<b>7,558,180</b>

Note: Reduction in electricity usage reflects implementation of CalGreen and 2019 Title 24 (Exceed Title 24, Part 6, CEC baseline requirements by 10 percent for energy efficiency, based on 2019 standards and 25% for lighting).

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
General Office Building	65.907	40.394	1,125,202
Quality Restaurant	2.892	0.185	33,929
Single Family Housing	0.625	0.394	10,785
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>69.42</b>	<b>40.97</b>	<b>1,169,917</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 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

## 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)	472	7,558	7,086
Water (MWh)	76	1,170	1,094
Total (MWh)	547	9,848	9,301

<b>Average Daily Demand</b>			
Building (kWh)	1,293	20,707	19,415
Water (kWh)	207	3,205	2,998
Total (kWh)	1,500	26,982	25,482

<b>Average Load</b>			
Building (kW)	54	863	809
Water (kW)	9	134	125
Total (kW)	62	1,124	1,062

### Peak Load Calculation

Peak Load (kW)	112	1,793	<b>1,681</b>
Systemwide Peak Load (MW)		5,854	5,854
Percent of Peak		0.031%	0.029%

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

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2021** (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	2021	HHDT	Aggregatec	Aggregatec	DSL	0.00	1774.20
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2021	LDA	Aggregatec	Aggregatec	DSL	0.00	46.12
Los Angeles	2021	LDA	Aggregatec	Aggregatec	GAS	8195.76	0.00
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.43
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	GAS	1009.57	0.00
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	DSL	0.00	15.84
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	GAS	3441.72	0.00
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	DSL	0.00	211.28
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	GAS	598.07	0.00
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	DSL	0.00	90.14
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	GAS	111.80	0.00
Los Angeles	2021	MCY	Aggregatec	Aggregatec	GAS	53.90	0.00
Los Angeles	2021	MDV	Aggregatec	Aggregatec	DSL	0.00	46.02
Los Angeles	2021	MDV	Aggregatec	Aggregatec	GAS	2808.58	0.00
Los Angeles	2021	MH	Aggregatec	Aggregatec	DSL	0.00	11.04
Los Angeles	2021	MH	Aggregatec	Aggregatec	GAS	64.52	0.00
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	DSL	0.00	727.46
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	GAS	264.51	0.00
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.68
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	GAS	49.58	0.00
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.53
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	GAS	10.85	0.00
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	GAS	18.46	0.00
						6,069,653,628	1,090,251,415
Fuel Usage for Project Construction						89,328	202,099
Percentage of County for Construction						0.0015%	0.019%

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2025** (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	2025	HHDT	Aggregatec	Aggregatec	DSL	0.00	1707.97
Los Angeles	2025	HHDT	Aggregatec	Aggregatec	GAS	1.95	0.00
Los Angeles	2025	LDA	Aggregatec	Aggregatec	DSL	0.00	49.38
Los Angeles	2025	LDA	Aggregatec	Aggregatec	GAS	7386.88	0.00
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.30
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	GAS	977.96	0.00
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	DSL	0.00	18.22
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	GAS	3069.91	0.00
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	DSL	0.00	228.71
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	GAS	543.18	0.00
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	DSL	0.00	98.54
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	GAS	104.80	0.00
Los Angeles	2025	MCY	Aggregatec	Aggregatec	GAS	57.47	0.00
Los Angeles	2025	MDV	Aggregatec	Aggregatec	DSL	0.00	51.21
Los Angeles	2025	MDV	Aggregatec	Aggregatec	GAS	2429.85	0.00
Los Angeles	2025	MH	Aggregatec	Aggregatec	DSL	0.00	11.24
Los Angeles	2025	MH	Aggregatec	Aggregatec	GAS	58.66	0.00
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	DSL	0.00	712.54
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	GAS	245.23	0.00
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.70
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	GAS	43.27	0.00
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	DSL	0.00	25.94
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	GAS	12.42	0.00
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.14
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	GAS	16.68	0.00
						5,456,109,145	1,073,785,458
Net Fuel Usage for Project Operation						227,762	44,824
Percentage of County for Operation						0.0042%	0.0042%

**1360 Vine (Office Option with Restaurant) - Buildout Operations Without Project Features**  
**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>
General Office Building	463.52	1000sqft	10.64	463,520.00	0
User Defined Commercial	1.00	User Defined Ur	0.00	0.00	0
Enclosed Parking with Elevator	1,693.00	Space	15.24	677,200.00	0
Quality Restaurant	20.90	1000sqft	0.48	20,900.00	0

**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>	
Enclosed Parking with Elevator	0	0	0	0
General Office Building	0	0	0	0
Quality Restaurant	0	0	0	0
User Defined Commercial	6,092	6,092	6,092	15,921,564
<b>Total</b>	<b>6,092</b>	<b>6,092</b>	<b>6,092</b>	<b>15,921,564</b>

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>520,909</b>	<b>102,517</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>
Enclosed Parking with Elevator	0	0
General Office Building	4,360,800	4,153,143
Quality Restaurant	4,733,060	4,507,676
User Defined Commercial	0	0
<b>Total</b>	<b>9,093,860</b>	<b>8,660,819</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
Enclosed Parking with Elevator	1,986,900
General Office Building	5,807,910
Quality Restaurant	905,576
User Defined Commercial	0
<b>Total</b>	<b>8,700,386</b>

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
Enclosed Parking with Elevator	0.000	0.000	0
General Office Building	82.383	50.493	1,406,503
Quality Restaurant	3.615	0.231	42,412
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>86.00</b>	<b>50.72</b>	<b>1,448,915</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 kWhr of electricity usage per gallon from delivery and distribution of water within Southern California (CalEEMod).

**1360 Vine Project (Office Option with Restaurant) - 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>
General Office Building	463.52	1000sqft	10.64	463,521.00	0
User Defined Commercial	1.00	User Defined U	0.00	0.00	0
Enclosed Parking with Elevator	1,693.00	Space	15.24	677,200.00	0
Quality Restaurant	20.90	1000sqft	0.48	20,902.00	0

**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>	
Enclosed Parking with Elevator	0.0	0.0	0.0	0
General Office Building	0.0	0.0	0.0	0
Quality Restaurant	0.0	0.0	0.0	0
User Defined Commercial	3534.0	3534.0	3534.0	9,236,180
<b>Total</b>	<b>3,534</b>	<b>3,534</b>	<b>3,534</b>	<b>9,236,180</b>

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	28.3	11.3
<i>% Fleet Mix</i>	92.7%	7.3%
<b>Total (Gallons):</b>	<b>302,182</b>	<b>59,471</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>
Enclosed Parking with Elevator	0	0
General Office Building	4,360,810	4,153,152
Quality Restaurant	4,733,510	4,508,105
User Defined Commercial	0	0
<b>Total</b>	<b>9,094,320</b>	<b>8,661,257</b>

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

<i>Land Uses</i>	<i>kWh/yr</i>
Enclosed Parking with Elevator	1,592,440
General Office Building	5,371,050
Quality Restaurant	864,538
User Defined Commercial	0
<b>Total</b>	<b>7,828,028</b>

Note: Reduction in electricity usage reflects implementation of CalGreen and 2019 Title 24 (Exceed Title 24, Part 6, CEC baseline requirements by 10 percent for energy efficiency, based on 2019 standards and 25% for lighting).

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
General Office Building	65.907	40.394	1,125,202
Quality Restaurant	2.892	0.185	33,929
User Defined Commercial	0.000	0.000	0
<b>Total</b>	<b>68.80</b>	<b>40.58</b>	<b>1,159,132</b>

Notes: Indoor water results in 0.0111 kWhr of electricity usage per gallon from delivery, treatment, and distribution of water within Southern California (CalEEMod). Outdoor water results in 0.009727 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

## 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)	472	7,828	7,356
Water (MWh)	76	1,159	1,083
Total (MWh)	547	10,204	9,656

### Average Daily Demand

Building (kWh)	1,293	21,447	20,154
Water (kWh)	207	3,176	2,968
Total (kWh)	1,500	27,955	26,455

### Average Load

Building (kW)	54	894	840
Water (kW)	9	132	124
Total (kW)	62	1,165	1,102

### Peak Load Calculation

Peak Load (kW)	112	1,851	<b>1,739</b>
Systemwide Peak Load (MW)		5,854	5,854
Percent of Peak		0.032%	0.030%

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



**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2021** (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	2021	HHDT	Aggregatec	Aggregatec	DSL	0.00	1774.20
Los Angeles	2021	HHDT	Aggregatec	Aggregatec	GAS	1.89	0.00
Los Angeles	2021	LDA	Aggregatec	Aggregatec	DSL	0.00	46.12
Los Angeles	2021	LDA	Aggregatec	Aggregatec	GAS	8195.76	0.00
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.43
Los Angeles	2021	LDT1	Aggregatec	Aggregatec	GAS	1009.57	0.00
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	DSL	0.00	15.84
Los Angeles	2021	LDT2	Aggregatec	Aggregatec	GAS	3441.72	0.00
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	DSL	0.00	211.28
Los Angeles	2021	LHDT1	Aggregatec	Aggregatec	GAS	598.07	0.00
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	DSL	0.00	90.14
Los Angeles	2021	LHDT2	Aggregatec	Aggregatec	GAS	111.80	0.00
Los Angeles	2021	MCY	Aggregatec	Aggregatec	GAS	53.90	0.00
Los Angeles	2021	MDV	Aggregatec	Aggregatec	DSL	0.00	46.02
Los Angeles	2021	MDV	Aggregatec	Aggregatec	GAS	2808.58	0.00
Los Angeles	2021	MH	Aggregatec	Aggregatec	DSL	0.00	11.04
Los Angeles	2021	MH	Aggregatec	Aggregatec	GAS	64.52	0.00
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	DSL	0.00	727.46
Los Angeles	2021	MHDT	Aggregatec	Aggregatec	GAS	264.51	0.00
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.68
Los Angeles	2021	OBUS	Aggregatec	Aggregatec	GAS	49.58	0.00
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.53
Los Angeles	2021	SBUS	Aggregatec	Aggregatec	GAS	10.85	0.00
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2021	UBUS	Aggregatec	Aggregatec	GAS	18.46	0.00
						6,069,653,628	1,090,251,415
Fuel Usage for Project Construction						89,328	202,099
Percentage of County for Construction						0.0015%	0.019%

**EMFAC Emission inventories for County**

EMFAC2014 (v1.0.7) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2025** (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	2025	HHDT	Aggregatec	Aggregatec	DSL	0.00	1707.97
Los Angeles	2025	HHDT	Aggregatec	Aggregatec	GAS	1.95	0.00
Los Angeles	2025	LDA	Aggregatec	Aggregatec	DSL	0.00	49.38
Los Angeles	2025	LDA	Aggregatec	Aggregatec	GAS	7386.88	0.00
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.30
Los Angeles	2025	LDT1	Aggregatec	Aggregatec	GAS	977.96	0.00
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	DSL	0.00	18.22
Los Angeles	2025	LDT2	Aggregatec	Aggregatec	GAS	3069.91	0.00
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	DSL	0.00	228.71
Los Angeles	2025	LHDT1	Aggregatec	Aggregatec	GAS	543.18	0.00
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	DSL	0.00	98.54
Los Angeles	2025	LHDT2	Aggregatec	Aggregatec	GAS	104.80	0.00
Los Angeles	2025	MCY	Aggregatec	Aggregatec	GAS	57.47	0.00
Los Angeles	2025	MDV	Aggregatec	Aggregatec	DSL	0.00	51.21
Los Angeles	2025	MDV	Aggregatec	Aggregatec	GAS	2429.85	0.00
Los Angeles	2025	MH	Aggregatec	Aggregatec	DSL	0.00	11.24
Los Angeles	2025	MH	Aggregatec	Aggregatec	GAS	58.66	0.00
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	DSL	0.00	712.54
Los Angeles	2025	MHDT	Aggregatec	Aggregatec	GAS	245.23	0.00
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.70
Los Angeles	2025	OBUS	Aggregatec	Aggregatec	GAS	43.27	0.00
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	DSL	0.00	25.94
Los Angeles	2025	SBUS	Aggregatec	Aggregatec	GAS	12.42	0.00
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.14
Los Angeles	2025	UBUS	Aggregatec	Aggregatec	GAS	16.68	0.00
						5,456,109,145	1,073,785,458
Net Fuel Usage for Project Operation						273,090	53,745
Percentage of County for Operation						0.0050%	0.0050%