

# **Appendix D**

---

## Energy Calculations

## Sunset Western

### Summary of Energy Use During Construction

<b>Electricity</b>	
Water Consumption	14,526 kWh
Temporary Power (lighting, tools)	26,309 kWh
<b>Total:</b>	<b>40,835 kWh</b>
<b>Gasoline</b>	
On Road	162,744 Gallons
Off Road	0 Gallons
<b>Total:</b>	<b>162,744 Gallons</b>
<b>Diesel</b>	
On Road	315,194 Gallons
Off Road	132,413 Gallons
<b>Total:</b>	<b>447,607 Gallons</b>
<b>Total Mobile</b>	<b>610,351</b>

### Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features/MXD	Buildout With Project Features/MXD		Percent Reduction due to Project Features	Project Without Project Features - Baseline (Buildout)	Project (Buildout) - Baseline (Buildout)
<b>Electricity</b>							
Electricity (building)	3,331,476	7,117,674	6,574,024	kWh/year	-8%	3,786,198	3,242,548
Electricity (water)	124,218	955,691	764,553	kWh/year	-20%	831,473	640,335
EV Chargers	0	93,891	93,891	kWh/year	0%	93,891	93,891
<b>Electricity Total</b>	<b>3,455,694</b>	<b>8,167,256</b>	<b>7,432,468</b>	<b>kWh/year</b>	<b>-9%</b>	<b>4,711,562</b>	<b>3,976,774</b>
<b>Natural Gas</b>	<b>2,618,926</b>	<b>7,568,314</b>	<b>7,534,329</b>	<b>cu ft/year</b>	<b>0%</b>	<b>4,949,389</b>	<b>4,915,403</b>
<b>Mobile</b>							
Gasoline	496,228	1,002,288	711,061	Gallons/year	-29%	506,060	214,834
Diesel	100,501	202,994	144,012	Gallons/year	-29%	102,493	43,510
<b>Mobile Total</b>	<b>596,729</b>	<b>1,205,282</b>	<b>855,073</b>	<b>Gallons/year</b>	<b>-29%</b>	<b>608,552</b>	<b>258,345</b>

## Construction Electricity Usage

### Construction Electricity Usage

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

---

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)	522
Total Construction (kWh)	26,309
Total Construction (MWh)	26.3

<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	81	0.73	0.6	44	624	
Demolition	Excavators	2	8	158	0.38	0.6	44	1,268	
Demolition	Generator Sets	1	8	84	0.74	0.6	44	656	
Demolition	Other Construction Equipment	1	2	172	0.42	0.6	44	191	
Demolition	Rubber Tired Dozers	0	8	247	0.4	0.6	44	0	
Demolition	Rubber Tired Loaders	1	8	203	0.36	0.6	44	772	
Demolition	Skid Steer Loaders	1	8	65	0.37	0.6	44	254	
Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	0.6	44	758	
Grading	Bore/Drill Rigs	2	8	221	0.5	0.6	154	8,168	
Grading	Cranes	1	8	231	0.29	0.6	154	2,476	
Grading	Excavators	3	8	158	0.38	0.6	154	6,657	
Grading	Generator Sets	1	8	84	0.74	0.6	154	2,297	
Grading	Other Construction Equipment	1	2	172	0.42	0.6	154	667	
Grading	Pumps	1	8	84	0.74	0.6	154	2,297	
Grading	Rubber Tired Dozers	1	8	247	0.4	0.6	154	3,652	
Grading	Tractors/Loaders/Backhoes	0	8	97	0.37	0.6	154	0	
Grading	Welders	1	8	46	0.45	0.6	154	765	
Mat Foundation	Cranes	0	7	231	0.29	0.6	19	0	
Mat Foundation	Forklifts	0	8	89	0.2	0.6	19	0	
Mat Foundation	Generator Sets	1	8	84	0.74	0.6	19	283	
Mat Foundation	Pumps	5	12	84	0.74	0.6	19	2,126	
Mat Foundation	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	19	0	
Mat Foundation	Welders	0	8	46	0.45	0.6	19	0	
Concrete - Foundation to Grade	Forklifts	3	8	89	0.2	0.6	178	2,281	
Concrete - Foundation to Grade	Generator Sets	1	8	84	0.74	0.6	178	2,655	
Concrete - Foundation to Grade	Plate Compactors	2	8	8	0.43	0.6	178	294	
Concrete - Foundation to Grade	Pumps	2	8	84	0.74	0.6	178	5,311	
Concrete - Foundation to Grade	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	178	0	
Concrete - Foundation to Grade	Welders	1	8	46	0.45	0.6	178	884	
Building Construction - Structure, Shell, Exteri	Aerial Lifts	3	8	63	0.31	0.6	522	7,340	
Building Construction - Structure, Shell, Exteri	Air Compressors	3	8	78	0.48	0.6	522	14,071	
Building Construction - Structure, Shell, Exteri	Cement and Mortar Mixers	1	8	9	0.56	0.6	522	631	
Building Construction - Structure, Shell, Exteri	Cranes	0	7	231	0.29	0.6	522	0	
Building Construction - Structure, Shell, Exteri	Forklifts	3	8	89	0.2	0.6	522	6,690	
Building Construction - Structure, Shell, Exteri	Generator Sets	1	8	84	0.74	0.6	522	7,787	
Building Construction - Structure, Shell, Exteri	Tractors/Loaders/Backhoes	2	8	97	0.37	0.6	522	8,993	
Building Construction - Structure, Shell, Exteri	Welders	3	8	46	0.45	0.6	522	7,780	
Building Construction - Finishing	Aerial Lifts	4	8	63	0.31	0.6	433	8,118	
Building Construction - Finishing	Air Compressors	4	8	78	0.48	0.6	433	15,563	
Building Construction - Finishing	Forklifts	0	8	89	0.2	0.6	433	0	
Building Construction - Finishing	Generator Sets	0	8	84	0.74	0.6	433	0	
Building Construction - Finishing	Tractors/Loaders/Backhoes	0	7	97	0.37	0.6	433	0	
Building Construction - Finishing	Welders	0	8	46	0.45	0.6	433	0	
Architectural Coating	Air Compressors	0	6	78	0.48	0.6	261	0	
Paving	Pavers	0	8	130	0.42	0.6	65	0	
Paving	Paving Equipment	1	8	132	0.36	0.6	65	741	
Paving	Skid Steer Loaders	2	8	65	0.37	0.6	65	750	
Paving	Trenchers	1	8	78	0.5	0.6	65	608	
<b>Total Diesel Usage for Construction (Offr</b>								<b>132,412.8</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.

EMFAC2017 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year:

2022

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	6,370,883	246,404,319	30,101,253	7,990	0	30.8
South Coast	LDT1	GAS	Aggregate	716,397	26,563,675	3,305,301	1,003	0	26.5
South Coast	LDT2	GAS	Aggregate	2,182,002	82,381,240	10,234,301	3,340	0	24.7
<b>Construction Worker Trip (Composite LDA/LDT1/LDT2):</b>									<b>28.2</b>
South Coast	HHDT	DSL	Aggregate	98,508	11,795,119	994,225	0	1763.0	<b>6.7</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 Phase 1 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	100	0	44	4400	0	2200	14.7	6.9	25	64680	0	55000	0.6	1,375.9	8,220.7
Grading	64	10	154	9856	1540	55440	14.7	6.9	25	144883.2	10626	1386000	0.6	3,081.9	208,114.8
Mat Foundation	100	700	19	1900	13300	0	14.7	6.9	20	27930	91770	0	0.6	594.1	8,230.0
Concrete - Foundation to Grade	100	400	178	17800	71200	0	14.7	6.9	20	261660	491280	0	0.6	5,566.0	44,058.2
Building Construction - Structure, Shell, Ex	100	110	522	52200	57420	0	14.7	6.9	20	767340	396198	0	0.6	16,322.7	35,531.2
Building Construction - Finishing	1000	40	433	433000	17320	0	14.7	6.9	20	6365100	119508	0	0.6	135,396.7	10,717.5
Architectural Coating	0	0	261	0	0	0	14.7	6.9	20	0	0	0	0.6	0.0	0.0
Paving	20	8	65	1300	520	0	14.7	6.9	20	19110	3588	0	0.6	406.5	321.8
<b>Total:</b>													<b>162,743.7</b>	<b>315,194.3</b>	

Worker Miles per gallon= 28.21 gasoline  
Vedor/Haul miles per gallon= 6.69 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	44	2.0	265,760	2,585
Grading	154	2.0	930,160	9,048
Mat Foundation	19	0.5	28,690	279
Concrete - Foundation to Grade	178	0.5	268,780	2,614
Building Construction - Structure, Shell,	522	0	0	0
Building Construction - Finishing	433	0	0	0
Architectural Coating	261	0	0	0
Paving	65	0	0	0
<b>Total:</b>			<b>1,493,390</b>	<b>14,526</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).

EMFAC2017 Emissions Inventory

Region Type: Air Basin

Region: South Coast

Calendar Year: 2026

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	2026	Annual	HHDT	DSL	Aggregated	Aggregated	105,675	12,751,065	1,083,231	0.00	1,706.12			
South Coast	2026	Annual	HHDT	GAS	Aggregated	Aggregated	72	9,056	1,448	1.98	0.00			
South Coast	2026	Annual	LDA	DSL	Aggregated	Aggregated	69,487	2,662,198	331,543	0.00	49.43			
South Coast	2026	Annual	LDA	GAS	Aggregated	Aggregated	6,704,944	246,806,990	31,652,207	7,181.31	0.00			
South Coast	2026	Annual	LDT1	DSL	Aggregated	Aggregated	271	6,523	972	0.00	0.27			
South Coast	2026	Annual	LDT1	GAS	Aggregated	Aggregated	797,972	28,250,579	3,694,973	965.17	0.00			
South Coast	2026	Annual	LDT2	DSL	Aggregated	Aggregated	18,736	731,082	91,137	0.00	18.48			
South Coast	2026	Annual	LDT2	GAS	Aggregated	Aggregated	2,335,277	84,175,951	10,957,538	2,984.26	0.00			
South Coast	2026	Annual	LHDT1	DSL	Aggregated	Aggregated	139,023	5,295,410	1,748,738	0.00	230.79			
South Coast	2026	Annual	LHDT1	GAS	Aggregated	Aggregated	168,489	5,874,475	2,510,232	530.41	0.00			
South Coast	2026	Annual	LHDT2	DSL	Aggregated	Aggregated	55,913	2,060,893	703,310	0.00	99.61			
South Coast	2026	Annual	LHDT2	GAS	Aggregated	Aggregated	29,463	989,949	438,956	102.88	0.00			
South Coast	2026	Annual	MCY	GAS	Aggregated	Aggregated	322,523	2,094,696	645,046	58.10	0.00			
South Coast	2026	Annual	MDV	DSL	Aggregated	Aggregated	42,426	1,571,040	205,257	0.00	51.68			
South Coast	2026	Annual	MDV	GAS	Aggregated	Aggregated	1,572,718	53,374,931	7,287,784	2,344.22	0.00			
South Coast	2026	Annual	MH	DSL	Aggregated	Aggregated	13,541	124,597	1,354	0.00	11.23			
South Coast	2026	Annual	MH	GAS	Aggregated	Aggregated	32,760	313,616	3,277	57.32	0.00			
South Coast	2026	Annual	MHDT	DSL	Aggregated	Aggregated	134,072	8,355,583	1,362,242	0.00	713.12			
South Coast	2026	Annual	MHDT	GAS	Aggregated	Aggregated	25,396	1,292,911	508,129	240.62	0.00			
South Coast	2026	Annual	OBUS	DSL	Aggregated	Aggregated	4,742	345,782	46,109	0.00	37.71			
South Coast	2026	Annual	OBUS	GAS	Aggregated	Aggregated	5,826	225,084	116,563	42.00	0.00			
South Coast	2026	Annual	SBUS	DSL	Aggregated	Aggregated	6,505	205,751	75,067	0.00	25.74			
South Coast	2026	Annual	SBUS	GAS	Aggregated	Aggregated	3,163	121,040	12,653	12.79	0.00			
South Coast	2026	Annual	UBUS	DSL	Aggregated	Aggregated	6	776	25	0.00	0.14			
South Coast	2026	Annual	UBUS	GAS	Aggregated	Aggregated	975	91,363	3,900	16.60	0.00			
												<b>MPG</b>	Gallons Per Mile	
							Totals	457,731,340.49			14,537.67	2,944.32	<b>26.2</b>	0.04
							Total (GAS)	423,620,640.66	0.93				<b>29.1</b>	0.03
							Total (DSL)	34,110,699.83	0.07				<b>11.6</b>	0.09

Baseline Year

Calendar Year: 2017

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	2017	Annual	HHDT	DSL	Aggregated	Aggregated	92,086	11,035,510	918,238	0.00	1,756.36			
South Coast	2017	Annual	HHDT	GAS	Aggregated	Aggregated	101	7,659	2,026	2.00	0.00			
South Coast	2017	Annual	LDA	DSL	Aggregated	Aggregated	45,875	1,896,329	216,399	0.00	42.12			
South Coast	2017	Annual	LDA	GAS	Aggregated	Aggregated	6,081,048	244,446,391	28,695,373	8,546.80	0.00			
South Coast	2017	Annual	LDT1	DSL	Aggregated	Aggregated	482	11,462	1,689	0.00	0.52			
South Coast	2017	Annual	LDT1	GAS	Aggregated	Aggregated	651,943	24,807,246	2,983,370	1,008.68	0.00			
South Coast	2017	Annual	LDT2	DSL	Aggregated	Aggregated	9,665	445,810	48,035	0.00	13.63			
South Coast	2017	Annual	LDT2	GAS	Aggregated	Aggregated	2,073,197	80,872,282	9,694,322	3,631.58	0.00			
South Coast	2017	Annual	LHDT1	DSL	Aggregated	Aggregated	97,013	4,044,995	1,220,296	0.00	195.55			
South Coast	2017	Annual	LHDT1	GAS	Aggregated	Aggregated	175,207	6,463,196	2,610,330	629.75	0.00			
South Coast	2017	Annual	LHDT2	DSL	Aggregated	Aggregated	37,900	1,552,333	476,734	0.00	83.01			
South Coast	2017	Annual	LHDT2	GAS	Aggregated	Aggregated	28,635	1,024,337	426,614	114.60	0.00			
South Coast	2017	Annual	MCY	GAS	Aggregated	Aggregated	259,354	1,869,286	518,708	51.29	0.00			
South Coast	2017	Annual	MDV	DSL	Aggregated	Aggregated	23,710	1,023,301	117,204	0.00	40.71			
South Coast	2017	Annual	MDV	GAS	Aggregated	Aggregated	1,497,221	54,845,361	6,911,949	2,999.26	0.00			
South Coast	2017	Annual	MH	DSL	Aggregated	Aggregated	11,071	110,800	1,107	0.00	10.76			
South Coast	2017	Annual	MH	GAS	Aggregated	Aggregated	35,590	335,289	3,560	67.31	0.00			
South Coast	2017	Annual	MHDT	DSL	Aggregated	Aggregated	114,051	7,128,971	1,136,926	0.00	714.72			
South Coast	2017	Annual	MHDT	GAS	Aggregated	Aggregated	24,591	1,348,347	492,013	274.04	0.00			
South Coast	2017	Annual	OBUS	DSL	Aggregated	Aggregated	4,004	293,205	39,273	0.00	37.06			
South Coast	2017	Annual	OBUS	GAS	Aggregated	Aggregated	5,873	259,979	117,514	53.24	0.00			
South Coast	2017	Annual	SBUS	DSL	Aggregated	Aggregated	6,233	197,082	71,923	0.00	26.67			
South Coast	2017	Annual	SBUS	GAS	Aggregated	Aggregated	2,128	88,942	8,510	9.98	0.00			
South Coast	2017	Annual	UBUS	DSL	Aggregated	Aggregated	18	1,877	73	0.00	0.30			
South Coast	2017	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



**Sunset Western - Existing Conditions**  
**Los Angeles-South Coast County, Annual**

**Trip Summary Information**

<i>Total</i>	<i>Average Daily Trip Rate</i>			<i>Annual VMT</i>
	<i>Weekday</i>	<i>Saturday</i>	<i>Sunday</i>	
<b>Total</b>	<b>9,896.00</b>	<b>14,252.94</b>	<b>14,252.94</b>	<b>15,624,179</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>	29.1	11.6	23.9	9.5
<i>% Fleet Mix</i>	92.5%	7.5%	93.8%	6.2%
<b>Total (Gallons):</b>	<b>496,228</b>	<b>100,501</b>	<b>612,279</b>	<b>102,758</b>

**Energy by Land Use - Natural Gas**

<i>Total</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
<b>Total</b>	<b>2,749,872</b>	<b>2,618,926</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
<b>Total</b>	<b>3,331,476</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 (Mgal)</i>	<i>Use (kWh/yr)</i>
<b>Total</b>	<b>10.85</b>	<b>0.37</b>		<b>124,218</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).

**Sunset Western - Buildout Operations Without Project Features/MXD  
Los Angeles-South Coast County, Annual**

<i>Total</i>	<i>Average Daily Trip Rate</i>			<i>Annual VMT</i>
	<i>Weekday</i>	<i>Saturday</i>	<i>Sunday</i>	
	15,440	22,238	22,238	

**Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	29.1	11.6
<i>% Fleet Mix</i>	92.5%	7.5%
<b>Total (Gallons):</b>	<b>1,002,288</b>	<b>202,994</b>

**Energy by Land Use - Natural Gas**

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
<b>Total</b>	<b>7,946,730</b>	<b>7,568,314</b>

**Energy by Land Use - Electricity**

<i>Land Uses</i>	<i>kWH/yr</i>
<b>Total</b>	<b>7,117,674</b>

**Water Detail (Unmitigated)**

<i>Land Uses</i>	<i>Indoor Use (Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Electricity Use (kWh/yr)</i>
<b>Total</b>	<b>58.32</b>	<b>31.63</b>	<b>955,691</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).

**Sunset Western - Buildout Operations with Project Fetures and MXD (No MMs)  
Los Angeles-South Coast County, Annual**

**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>	
<b>Total</b>	11,519	16,591	16,591	22,388,392

**Mitigated Gasoline and Diesel Usage**

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	29.1	11.6
<i>% Fleet Mix</i>	92.5%	7.5%
<b>Total (Gallons):</b>	<b>711,061</b>	<b>144,012</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>
<b>Total</b>	7,911,045	<b>7,534,329</b>

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

<i>Land Uses</i>	<i>kWH/yr</i>
<b>Total</b>	<b>6,574,024</b>

Note: Reduction in electricity usage reflects implementation of CalGreen and GHG-PDF-1 (Exceed Title 24, Part 6, CEC baseline requirements by 10 percent for energy efficiency, based on 2016 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>
<b>Total</b>	46.66	25.31	<b>764,553</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

### Project Electricity Demand (Operational)

	Baseline (Existing)	Project
<b>Peak Load Calculation</b>		
Peak Load (kW) <sup>2</sup>	912	11,000
Systemwide Peak Load (MW)		5,854
Percent of Peak		0.188%

<sup>1</sup> Peak Load is conservatively calculated without any reductions from removal of existing uses.

**EMFAC Emission inventories for County**

EMFAC2017 Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2022** (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	2022	HHDT	Aggregatec	Aggregatec	DSL	0.00	1762.99
Los Angeles	2022	HHDT	Aggregatec	Aggregatec	GAS	1.88	0.00
Los Angeles	2022	LDA	Aggregatec	Aggregatec	DSL	0.00	47.39
Los Angeles	2022	LDA	Aggregatec	Aggregatec	GAS	7989.70	0.00
Los Angeles	2022	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.39
Los Angeles	2022	LDT1	Aggregatec	Aggregatec	GAS	1003.18	0.00
Los Angeles	2022	LDT2	Aggregatec	Aggregatec	DSL	0.00	16.65
Los Angeles	2022	LDT2	Aggregatec	Aggregatec	GAS	3339.89	0.00
Los Angeles	2022	LHDT1	Aggregatec	Aggregatec	DSL	0.00	217.11
Los Angeles	2022	LHDT1	Aggregatec	Aggregatec	GAS	583.23	0.00
Los Angeles	2022	LHDT2	Aggregatec	Aggregatec	DSL	0.00	92.89
Los Angeles	2022	LHDT2	Aggregatec	Aggregatec	GAS	110.13	0.00
Los Angeles	2022	MCY	Aggregatec	Aggregatec	GAS	54.92	0.00
Los Angeles	2022	MDV	Aggregatec	Aggregatec	DSL	0.00	47.80
Los Angeles	2022	MDV	Aggregatec	Aggregatec	GAS	2704.45	0.00
Los Angeles	2022	MH	Aggregatec	Aggregatec	DSL	0.00	11.12
Los Angeles	2022	MH	Aggregatec	Aggregatec	GAS	62.96	0.00
Los Angeles	2022	MHDT	Aggregatec	Aggregatec	DSL	0.00	720.16
Los Angeles	2022	MHDT	Aggregatec	Aggregatec	GAS	259.39	0.00
Los Angeles	2022	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.46
Los Angeles	2022	OBUS	Aggregatec	Aggregatec	GAS	47.77	0.00
Los Angeles	2022	SBUS	Aggregatec	Aggregatec	DSL	0.00	26.42
Los Angeles	2022	SBUS	Aggregatec	Aggregatec	GAS	11.27	0.00
Los Angeles	2022	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.25
Los Angeles	2022	UBUS	Aggregatec	Aggregatec	GAS	18.40	0.00
						5,908,313,954	1,087,928,967
Fuel Usage for Project Construction						162,744	447,607
Percentage of County for Construction						0.0028%	0.041%

**EMFAC Emission inventories for County**

EMFAC2017 Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2026** (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	2026	HHDT	Aggregatec	Aggregatec	DSL	0.00	1706.12
Los Angeles	2026	HHDT	Aggregatec	Aggregatec	GAS	1.98	0.00
Los Angeles	2026	LDA	Aggregatec	Aggregatec	DSL	0.00	49.43
Los Angeles	2026	LDA	Aggregatec	Aggregatec	GAS	7181.31	0.00
Los Angeles	2026	LDT1	Aggregatec	Aggregatec	DSL	0.00	0.27
Los Angeles	2026	LDT1	Aggregatec	Aggregatec	GAS	965.17	0.00
Los Angeles	2026	LDT2	Aggregatec	Aggregatec	DSL	0.00	18.48
Los Angeles	2026	LDT2	Aggregatec	Aggregatec	GAS	2984.26	0.00
Los Angeles	2026	LHDT1	Aggregatec	Aggregatec	DSL	0.00	230.79
Los Angeles	2026	LHDT1	Aggregatec	Aggregatec	GAS	530.41	0.00
Los Angeles	2026	LHDT2	Aggregatec	Aggregatec	DSL	0.00	99.61
Los Angeles	2026	LHDT2	Aggregatec	Aggregatec	GAS	102.88	0.00
Los Angeles	2026	MCY	Aggregatec	Aggregatec	GAS	58.10	0.00
Los Angeles	2026	MDV	Aggregatec	Aggregatec	DSL	0.00	51.68
Los Angeles	2026	MDV	Aggregatec	Aggregatec	GAS	2344.22	0.00
Los Angeles	2026	MH	Aggregatec	Aggregatec	DSL	0.00	11.23
Los Angeles	2026	MH	Aggregatec	Aggregatec	GAS	57.32	0.00
Los Angeles	2026	MHDT	Aggregatec	Aggregatec	DSL	0.00	713.12
Los Angeles	2026	MHDT	Aggregatec	Aggregatec	GAS	240.62	0.00
Los Angeles	2026	OBUS	Aggregatec	Aggregatec	DSL	0.00	37.71
Los Angeles	2026	OBUS	Aggregatec	Aggregatec	GAS	42.00	0.00
Los Angeles	2026	SBUS	Aggregatec	Aggregatec	DSL	0.00	25.74
Los Angeles	2026	SBUS	Aggregatec	Aggregatec	GAS	12.79	0.00
Los Angeles	2026	UBUS	Aggregatec	Aggregatec	DSL	0.00	0.14
Los Angeles	2026	UBUS	Aggregatec	Aggregatec	GAS	16.60	0.00
						5,306,248,478	1,074,676,685
Net Fuel Usage for Project Operation						214,834	43,510
Percentage of County for Operation						0.0040%	0.0040%