

Appendix IS-5

Energy

1811 Sacramento

MND FOR THE PROPOSED 1811 SACRAMENTO PROJECT

Appendix 5

Energy Analysis Spreadsheets

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1811 Sacramento

Summary of Energy Use During Construction

Electricity	
Water Consumption	811 kWh
Temporary Power (lighting, tools)	23,386 kWh
Electric Equipment	6,350 kWh
Total:	30,546 kWh
Gasoline	
On Road	42,046 Gallons
Off Road	0 Gallons
Total:	42,046 Gallons
Diesel	
On Road	86,920 Gallons
Off Road	48,566 Gallons
Total:	135,486 Gallons
Total Mobile	177,532

Summary of Energy Use During Operations

	Baseline (Buildout)	Buildout Without Project Features	Buildout With Project Features	Percent Reduction due to Project Features	Project Without Project Features - Baseline (Buildout)	Project (Buildout - Baseline (Buildout))	Reduction (%)	Units
Electricity								
Electricity (building)	209,987	7,268,390	6,633,056	-9%	7,058,403	6,423,069	-9%	kWh/year
Electricity (water)	104,076	519,913	466,760	-10%	415,837	362,685	-13%	kWh/year
EV Charging	0	118,478	118,478	-	118,478	118,478	0%	kWh/year
Mechanical Parking Lift	0	960,480	960,480	-	960,480	960,480	0%	kWh/year
Electricity Total	314,063	8,867,261	8,178,775	-8%	8,553,198	7,864,712	-8%	kWh/year
Natural Gas	610,503	0	0	#DIV/0!	-610,503	-610,503	0%	cu ft/year
Mobile								
Gasoline	7,967	432,924	285,167	-34%	424,957	277,200	-35%	Gallons/year
Diesel	1,322	71,836	47,318	-34%	70,514	45,996	-35%	Gallons/year
Mobile Total	9,289	504,760	332,485	-34%	495,471	323,196	-35%	Gallons/year

Construction Electricity Usage

Construction Electricity Usage

Caterpillar 40-C4.4 Generator^a

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)	464
Total Construction (kWh)	23,386
Total Construction (MWh)	23.4

^a<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	3	8	33	0.73	0.6	35.0	607	
Demolition	Cranes	1	8	367	0.29	0.6	35.0	894	
Demolition	Crawler Tractors	1	8	87	0.43	0.6	35.0	314	
Demolition	Excavators	3	8	158	0.38	0.6	35.0	1,513	
Demolition	Generator Sets	3	8	14	0.74	0.6	35.0	261	
Demolition	Pumps	3	8	11	0.74	0.6	35.0	205	
Demolition	Rubber Tired Loaders	1	8	150	0.36	0.6	35.0	454	
Demolition	Signal Boards	1	8	6	0.82	0.6	35.0	41	
Demolition	Welders	1	8	46	0.45	0.6	35.0	174	
Grading	Air Compressors	1	8	37	0.48	0.6	20.0	85	
Grading	Bore/Drill Rigs	1	8	83	0.5	0.6	20.0	199	
Grading	Crawler Tractors	2	8	87	0.43	0.6	20.0	359	
Grading	Excavators	2	8	36	0.38	0.6	20.0	131	
Grading	Generator Sets	3	8	14	0.74	0.6	20.0	149	
Grading	Graders	1	8	148	0.41	0.6	20.0	291	
Grading	Pumps	3	8	11	0.74	0.6	20.0	117	
Grading	Rollers	1	8	36	0.38	0.6	20.0	66	
Grading	Rubber Tired Loaders	1	8	150	0.36	0.6	20.0	259	
Grading	Signal Boards	1	8	6	0.82	0.6	20.0	24	
Grading	Skid Steer Loaders	1	8	71	0.37	0.6	20.0	126	
Mat Foundation	Air Compressors	2	8	37	0.48	0.6	46.0	392	
Mat Foundation	Aerial Lifts	2	8	46	0.31	0.6	46.0	315	
Mat Foundation	Forklifts	1	8	82	0.2	0.6	46.0	181	
Mat Foundation	Generator Sets	1	8	14	0.74	0.6	46.0	114	
Mat Foundation	Pumps	3	8	11	0.74	0.6	46.0	270	
Mat Foundation	Signal Boards	1	8	6	0.82	0.6	46.0	54	
Mat Foundation	Skid Steer Loaders	1	8	71	0.37	0.6	46.0	290	
Mat Foundation	Welders	1	8	46	0.45	0.6	46.0	229	
Building Foundation	Aerial Lifts	2	8	46	0.31	0.6	16.0	110	
Building Foundation	Forklifts	1	8	82	0.2	0.6	16.0	63	
Building Foundation	Generator Sets	1	8	14	0.74	0.6	16.0	40	
Building Foundation	Pumps	3	8	11	0.74	0.6	16.0	94	
Building Foundation	Signal Boards	1	8	6	0.82	0.6	16.0	19	
Building Foundation	Skid Steer Loaders	1	8	71	0.37	0.6	16.0	101	
Building Foundation	Welders	1	8	46	0.45	0.6	16.0	79	
Demolition	Other Construction Equipment	2	8	82	0.42	0.6	35.0	579	
Demolition	Skid Steer Loaders	1	8	71	0.37	0.6	35.0	221	
Grading	Other Construction Equipment	1	8	82	0.42	0.6	20.0	165	
Building Foundation	Air Compressors	2	8	37	0.48	0.6	16.0	136	
Building Construction	Air Compressors	2	8	37	0.48	0.6	464	3,956	
Building Construction	Aerial Lifts	1	8	46	0.31	0.6	464	1,588	
Building Construction	Cranes	1	8	367	0.29	0.6	464	11,852	
Building Construction	Forklifts	1	8	82	0.2	0.6	464	1,826	
Building Construction	Generator Sets	1	8	14	0.74	0.6	464	1,154	
Building Construction	Signal Boards	1	8	6	0.82	0.6	464	548	
Building Construction	Skid Steer Loaders	1	8	71	0.37	0.6	464	2,925	
Building Construction	Welders	5	8	46	0.45	0.6	464	11,526	
Paving	Cement and Mortar Mixers	1	8	10	0.56	0.6	81.0	109	
Paving	Concrete/Industrial Saws	1	8	33	0.73	0.6	81.0	468	
Paving	Forklifts	1	8	82	0.2	0.6	81.0	319	
Paving	Generator Sets	1	8	14	0.74	0.6	81.0	201	
Paving	Pavers	1	8	81	0.42	0.6	81.0	661	
Paving	Paving Equipment	1	8	89	0.36	0.6	81.0	623	
Paving	Plate Compactors	1	8	8	0.43	0.6	81.0	67	
Paving	Rollers	1	8	36	0.38	0.6	81.0	266	
Paving	Signal Boards	1	8	6	0.82	0.6	81.0	96	
Paving	Skid Steer Loaders	1	8	71	0.37	0.6	81.0	511	
Total Diesel Usage for Construction (Offr								48,566.2	gallons of diesel fuel

gallons of diesel fuel per horsepower-hour=

0.05

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

EMFAC2021 Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Region	Veh_Class	Fuel	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)	Miles per Gallon
South Coast	LDA	Gasoline	Aggregate	3,388,823	134,787,726	15,748,887	4,682	0	28.8
South Coast	LDT1	Gasoline	Aggregate	318,253	11,637,173	1,401,220	483	0	24.1
South Coast	LDT2	Gasoline	Aggregate	1,590,817	65,943,414	7,487,016	2,819	0	23.4
Construction Worker Trip (Composite LDA/LDT1/LDT2):									26.3
South Coast	HHDT	Diesel	Aggregate	53,754	6,853,263	838,229	0	1133.1	6.0

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

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

Phase Name	Daily Worker Trips	Daily Vendor Trips	Daily Haul Trips	Days	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Trip Length (miles)			Total Length (miles)			Avg. Daily Factor (worker and vendor)	Gallons of Fuel	
								Worker	Vendor	Haul	Worker	Vendor	Haul		Gasoline	Diesel
Demolition	80	6	20	35.0	2800	210	700	18.5	10.2	23.1	51800	2142	16170	0.6	1,183.4	2,886.1
Grading	20	6	90	20.0	400	120	1800	18.5	10.2	23.1	7400	1224	41580	0.6	169.1	6,996.5
Grading (Contaminated Soil)	0	0	30	1.00	0	0	30	18.5	10.2	142	0	0	4260	0.6	0.0	704.4
Mat Foundation	30	120	30	46.0	1380	5520	1380	18.5	10.2	20	25530	56304	27600	0.6	583.3	10,149.2
Building Foundation	30	40	10	16.0	480	640	160	18.5	10.2	20	8880	6528	3200	0.6	202.9	1,176.7
Building Construction	200	100	10	464	92800	46400	4640	18.5	10.2	20	1716800	473280	92800	0.6	39,222.3	62,296.5
Paving/Landscape	20	20	4	81.0	1620	1620	324	18.5	10.2	20	29970	16524	6480	0.6	684.7	2,710.7
Architectural Coating	0	0	0	81.0	0	0	0	18.5	10.2	20	0	0	0	0.6	0.0	0.0
Total:															42,045.6	86,920.2

Worker Miles per gallon= 26.26 gasoline
 Vendor/Haul miles per gallon= 6.05 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	35.0	0.5	52,850	514
Grading	20.0	0.5	30,200	294
Grading (Contaminated Soil)	1.00	0.1	302	3
Mat Foundation	46.0	0	0	0
Building Foundation	16.0	0	0	0
Building Construction	464	0	0	0
Paving/Landscape	81.0	0	0	0
Architectural Coating	81.0	0	0	0
Total:			83,352	811

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).

**1811 Sacramento - 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>
Unrefrigerated Warehouse- No Rail	40.5	1000sqft	0.93	40,479	0
Parking Lot	23.6	1000sqft	0.54	23,600	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>	
Total	76.00	76.00	76.00	211,335

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>	25.1	8.8	23.5	8.2
<i>% Fleet Mix</i>	94.5%	5.5%	95.0%	5.0%
Total (Gallons):	7,967	1,322	8,564	1,276

Energy by Land Use - Natural Gas

<i>Land Uses</i>	<i>kBTU/yr</i>	<i>cu ft/year</i>
Unrefrigerated Warehouse- No Rail	641,028	610,503
Parking Lot	0	0
Total	641,028	610,503

Energy by Land Use - Electricity

<i>Land Uses</i>	<i>kWH/yr</i>
Unrefrigerated Warehouse- No Rail	189,313
Parking Lot	20,674
Total	209,987

Water Detail

<i>Land Uses</i>	<i>Indoor Use</i>		<i>Electricity</i>
	<i>(Mgal)</i>	<i>Outdoor Use (Mgal)</i>	<i>Use (kWh/yr)</i>
Unrefrigerated Warehouse- No Rail	9.361	0.007	104,076
Parking Lot	0.000	0.000	0
Total	9.361	0.007	104,076

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).

**1811 Sacramento - 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	277.7	1000sqft	6.38	277,700	0
High Turnover (Sit Down Restaurant)	8	1000sqft	0.18	8,000	0
Strip Mall	5	1000sqft	0.12	5,200	0
Enclosed Parking with Elevator	582	Space	5.24	232800	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>	
Total	4,092	4,092	4,092	11,483,630

Gasoline and Diesel Usage

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	25.1	8.8
<i>% Fleet Mix</i>	94.5%	5.5%
Total (Gallons):	432,924	71,836

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>
General Office Building	0	0
High Turnover (Sit Down Restaurant)	0	0
Strip Mall	0	0
Enclosed Parking with Elevator	0	0
Total	0	0

Energy by Land Use - Electricity

<i>Land Uses</i>	<i>kWH/yr</i>
General Office Building	6,167,092
High Turnover (Sit Down Restaurant)	420,857
Strip Mall	155,966
Enclosed Parking with Elevator	524,475
Total	7,268,390

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	44.134	0.466	494,905
High Turnover (Sit Down Restaurant)	1.943	0.000	21,584
Strip Mall	0.308	0.000	3,424
Unenclosed Parking with Elevator	0.000	0.000	0
Total	46.38	0.47	519,913

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).

1811 Sacramento - 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	277.7	1000sqft	6.38	277,700	0
High Turnover (Sit Down Restaurant)	8	1000sqft	0.18	8,000	0
Strip Mall	5	1000sqft	0.12	5,200	0
Enclosed Parking with Elevator	582	Space	5.24	232800	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>	
Total	2,668	2,668	2,668	7,564,260

Mitigated Gasoline and Diesel Usage

	<i>Gasoline</i>	<i>Diesel</i>
<i>Miles/Gallon</i>	25.1	8.8
<i>% Fleet Mix</i>	94.5%	5.5%
Total (Gallons):	285,167	47,318

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>
General Office Building	0	0
High Turnover (Sit Down Restaurant)	0	0
Strip Mall	0	0
Unenclosed Parking with Elevator	0	0
Total	0	0

Energy by Land Use - Electricity (Mitigated)

<i>Land Uses</i>	<i>kWh/yr</i>
General Office Building	5,531,758
High Turnover (Sit Down Restaurant)	420,857
Strip Mall	155,966
Unenclosed Parking with Elevator	524,475
Total	6,633,056

Note: Reduction in electricity usage reflects 2019 Title 24 energy efficiency 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	39.787	0.216	444,178
High Turnover (Sit Down Restaurant)	1.754	0.000	19,491
Strip Mall	0.278	0.000	3,092
Unenclosed Parking with Elevator	0.000	0.000	0
Total	41.82	0.22	466,760

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

1811 Sacramento

All Electric Calculation

CAPCOA Consumption Rate^a

Building Type	Electricity (kWh/yr/KSF)					
	Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc Refrig.
General Office	46	396	9		3103	2714 11
High Turnover (Sit Down Restaurant)	35	268	1279		3254	8965 6236
Strip Mall	24	28	27		1249	2867 162

Project Energy Demand

Project Uses	Amount (DU/KSF)	Electricity (kWh/yr/KSF)							Total
		Water Heater	Primary Heat	Cooking	Dryer	Cooling	Misc	Refrig.	
General Office	277.7	12,774	109,969	2,499	0	861,703	753,678	3,055	1,743,678
High Turnover (Sit Down Restaurant)	8	280	2,144	10,232	0	26,032	71,720	49,888	160,296
Strip Mall	5.2	182	1,394	6,651	0	16,921	46,618	32,427	104,192
Total		13,236	113,507	19,382	0	904,656	872,016	85,370	2,008,167

Electricity Increase

Title 24 (All - Electric)	1,031,399
Non Title 24 (All-Electric)	976,768

1811 Sacramento

Mechanical Parking Lift - Energy Calculations

Calculation based on Cycles per Day

Number of Parking Spaces	582
Total Parking Cycles per day	2668
Parking Elevator Energy consumption per cycle (kWh)	1
Daily Energy Usage (kWh)	2668
Annual Energy Usage (kWh)	960,480
Electricity Generation Carbon Intensity (lbs/MWh)	462
GHG emissions (tons/year)	222

6,844,700

7,805,180

Number of trips per day

<http://pmatik.com/content/110#11>

Use This

LADWP Year 2026 (SB 100)

EMFAC2021 Emissions Inventory

Region Type: County

Region: Los Angeles

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)		
Los Angeles	2026	Annual	HHDT	Diesel	Aggregated	Aggregated	56,774	7,075,238	888,983	0.00	1,137.39		
Los Angeles	2026	Annual	HHDT	Gasoline	Aggregated	Aggregated	32	2,556	636	0.60	0.00		
Los Angeles	2026	Annual	LDA	Diesel	Aggregated	Aggregated	7,604	223,728	31,267	0.00	5.43		
Los Angeles	2026	Annual	LDA	Gasoline	Aggregated	Aggregated	3,294,447	129,517,422	15,284,837	4,348.93	0.00		
Los Angeles	2026	Annual	LDT1	Diesel	Aggregated	Aggregated	92	1,780	254	0.00	0.08		
Los Angeles	2026	Annual	LDT1	Gasoline	Aggregated	Aggregated	309,047	11,251,578	1,361,992	452.49	0.00		
Los Angeles	2026	Annual	LDT2	Diesel	Aggregated	Aggregated	5,512	235,023	26,497	0.00	7.36		
Los Angeles	2026	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,657,464	68,121,910	7,802,414	2,800.01	0.00		
Los Angeles	2026	Annual	LHDT1	Diesel	Aggregated	Aggregated	63,748	2,790,672	801,871	0.00	134.85		
Los Angeles	2026	Annual	LHDT1	Gasoline	Aggregated	Aggregated	126,346	5,055,908	1,882,373	358.04	0.00		
Los Angeles	2026	Annual	LHDT2	Diesel	Aggregated	Aggregated	29,199	1,249,448	367,282	0.00	71.32		
Los Angeles	2026	Annual	LHDT2	Gasoline	Aggregated	Aggregated	19,134	715,698	285,068	58.26	0.00		
Los Angeles	2026	Annual	MCY	Gasoline	Aggregated	Aggregated	157,750	1,027,979	315,500	24.78	0.00		
Los Angeles	2026	Annual	MDV	Diesel	Aggregated	Aggregated	11,515	444,014	54,012	0.00	18.51		
Los Angeles	2026	Annual	MDV	Gasoline	Aggregated	Aggregated	983,860	37,575,422	4,569,223	1,895.54	0.00		
Los Angeles	2026	Annual	MH	Diesel	Aggregated	Aggregated	5,962	62,775	596	0.00	6.30		
Los Angeles	2026	Annual	MH	Gasoline	Aggregated	Aggregated	15,047	152,784	1,505	31.54	0.00		
Los Angeles	2026	Annual	MHDT	Diesel	Aggregated	Aggregated	63,106	2,623,565	776,162	0.00	291.63		
Los Angeles	2026	Annual	MHDT	Gasoline	Aggregated	Aggregated	14,163	775,954	283,382	147.17	0.00		
Los Angeles	2026	Annual	OBUS	Diesel	Aggregated	Aggregated	2,251	170,564	29,511	0.00	24.28		
Los Angeles	2026	Annual	OBUS	Gasoline	Aggregated	Aggregated	3,514	134,350	70,309	26.17	0.00		
Los Angeles	2026	Annual	SBUS	Diesel	Aggregated	Aggregated	1,845	37,527	26,720	0.00	5.06		
Los Angeles	2026	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,491	68,409	5,964	7.54	0.00		
Los Angeles	2026	Annual	UBUS	Diesel	Aggregated	Aggregated	36	5,942	142	0.00	0.93		
Los Angeles	2026	Annual	UBUS	Gasoline	Aggregated	Aggregated	435	30,712	1,741	6.65	0.00		
Los Angeles	2026	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	105,578	2,259,417	436,567	82.30	0.00		
Los Angeles	2026	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	902	19,115	3,731	0.70	0.00		
Los Angeles	2026	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	19,023	402,642	78,660	14.79	0.00		
Los Angeles	2026	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	11,552	227,852	47,769	8.49	0.00		
											MPG	Gallons Per Mile	
							Totals	272,259,980.06		10,263.99	1,703.12	22.8	0.04
							Total (GAS)	257,339,706.19	0.95			25.1	0.04
							Total (DSL)	14,920,273.88	0.05			8.8	0.11

Baseline Year

Calendar Year: 2022

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Fuel_Gas (1000 gallons/day)	Fuel_DSL (1000 gallons/day)		
Los Angeles	2022	Annual	HHDT	Diesel	Aggregated	Aggregated	50,253	6,584,300	777,260	0.00	1,119.64		
Los Angeles	2022	Annual	HHDT	Gasoline	Aggregated	Aggregated	63	3,549	1,266	0.92	0.00		
Los Angeles	2022	Annual	LDA	Diesel	Aggregated	Aggregated	10,357	316,148	43,007	0.00	8.02		
Los Angeles	2022	Annual	LDA	Gasoline	Aggregated	Aggregated	3,492,277	138,838,027	16,264,993	4,986.05	0.00		
Los Angeles	2022	Annual	LDT1	Diesel	Aggregated	Aggregated	150	3,072	443	0.00	0.13		
Los Angeles	2022	Annual	LDT1	Gasoline	Aggregated	Aggregated	328,949	11,907,335	1,447,068	510.94	0.00		
Los Angeles	2022	Annual	LDT2	Diesel	Aggregated	Aggregated	4,420	193,960	21,414	0.00	6.48		
Los Angeles	2022	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,526,624	62,593,839	7,170,946	2,797.09	0.00		
Los Angeles	2022	Annual	LHDT1	Diesel	Aggregated	Aggregated	51,192	2,199,516	643,937	0.00	109.63		
Los Angeles	2022	Annual	LHDT1	Gasoline	Aggregated	Aggregated	125,867	4,864,859	1,875,224	382.22	0.00		
Los Angeles	2022	Annual	LHDT2	Diesel	Aggregated	Aggregated	22,589	963,687	284,146	0.00	57.39		
Los Angeles	2022	Annual	LHDT2	Gasoline	Aggregated	Aggregated	19,347	711,929	288,236	63.52	0.00		
Los Angeles	2022	Annual	MCY	Gasoline	Aggregated	Aggregated	143,563	930,986	287,127	22.88	0.00		
Los Angeles	2022	Annual	MDV	Diesel	Aggregated	Aggregated	10,661	424,706	50,627	0.00	18.79		
Los Angeles	2022	Annual	MDV	Gasoline	Aggregated	Aggregated	939,734	35,466,374	4,339,505	1,941.72	0.00		
Los Angeles	2022	Annual	MH	Diesel	Aggregated	Aggregated	5,298	54,199	530	0.00	5.43		
Los Angeles	2022	Annual	MH	Gasoline	Aggregated	Aggregated	17,156	161,515	1,716	33.39	0.00		
Los Angeles	2022	Annual	MHDT	Diesel	Aggregated	Aggregated	59,448	2,536,529	726,578	0.00	287.05		
Los Angeles	2022	Annual	MHDT	Gasoline	Aggregated	Aggregated	15,640	846,617	312,928	168.17	0.00		
Los Angeles	2022	Annual	OBUS	Diesel	Aggregated	Aggregated	2,067	166,997	26,799	0.00	24.34		
Los Angeles	2022	Annual	OBUS	Gasoline	Aggregated	Aggregated	3,974	164,696	79,520	33.29	0.00		
Los Angeles	2022	Annual	SBUS	Diesel	Aggregated	Aggregated	2,050	42,578	29,680	0.00	5.81		
Los Angeles	2022	Annual	SBUS	Gasoline	Aggregated	Aggregated	1,346	61,993	5,383	6.97	0.00		
Los Angeles	2022	Annual	UBUS	Diesel	Aggregated	Aggregated	46	7,306	185	0.00	1.19		
Los Angeles	2022	Annual	UBUS	Gasoline	Aggregated	Aggregated	438	31,090	1,751	6.79	0.00		
Los Angeles	2022	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	78,552	1,923,360	324,812	70.07	0.00		
Los Angeles	2022	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	175	4,372	725	0.16	0.00		
Los Angeles	2022	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	8,466	211,817	35,005	7.77	0.00		
Los Angeles	2022	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	5,058	116,993	20,914	4.35	0.00		
											MPG	Gallons Per Mile	
							Totals	272,332,347.81		11,036.30	1,643.90	21.5	0.05
							Total (GAS)	258,839,349.57	0.95			23.5	0.04
							Total (DSL)	13,492,998.24	0.05			8.2	0.12

Peak Electricity Demand Calculations

Electrical Load Factor Equation

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

Load Factor (%)¹ **52%**

Project Electricity Demand (Operational)

	Baseline (Existing)	Project	Net Increase
Annual Demand			
Building (MWh)	210	6,752	6,542
Water (MWh)	104	467	363
Total (MWh)	314	7,218	6,904

Average Daily Demand

Building (kWh)	575	18,497	17,922
Water (kWh)	285	1,279	994
Total (kWh)	860	19,776	18,916

Average Load

Building (kW)	24	771	747
Water (kW)	12	53	41
Total (kW)	36	824	788

Peak Load Calculation

Peak Load (kW)	58	1,535	1,535
Systemwide Peak Load (MW)	5,820	5,820	5,820
Percent of Peak			0.026%

¹2017 Report: System Efficiency of California's Electric Grid. California Public Utilities Commission 2017. Page 11, Figure 6. Visual estimate.

EMFAC Emission inventories for County

EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: **2024** (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	2024	HHDT	Aggregatec	Aggregatec	Diesel	0.00	1133.15
Los Angeles	2024	HHDT	Aggregatec	Aggregatec	Gasoline	0.73	0.00
Los Angeles	2024	LDA	Aggregatec	Aggregatec	Diesel	0.00	6.72
Los Angeles	2024	LDA	Aggregatec	Aggregatec	Gasoline	4681.69	0.00
Los Angeles	2024	LDT1	Aggregatec	Aggregatec	Diesel	0.00	0.11
Los Angeles	2024	LDT1	Aggregatec	Aggregatec	Gasoline	483.30	0.00
Los Angeles	2024	LDT2	Aggregatec	Aggregatec	Diesel	0.00	7.06
Los Angeles	2024	LDT2	Aggregatec	Aggregatec	Gasoline	2819.14	0.00
Los Angeles	2024	LHDT1	Aggregatec	Aggregatec	Diesel	0.00	125.04
Los Angeles	2024	LHDT1	Aggregatec	Aggregatec	Gasoline	372.61	0.00
Los Angeles	2024	LHDT2	Aggregatec	Aggregatec	Diesel	0.00	65.75
Los Angeles	2024	LHDT2	Aggregatec	Aggregatec	Gasoline	61.32	0.00
Los Angeles	2024	MCY	Aggregatec	Aggregatec	Gasoline	24.08	0.00
Los Angeles	2024	MDV	Aggregatec	Aggregatec	Diesel	0.00	18.90
Los Angeles	2024	MDV	Aggregatec	Aggregatec	Gasoline	1933.82	0.00
Los Angeles	2024	MH	Aggregatec	Aggregatec	Diesel	0.00	5.92
Los Angeles	2024	MH	Aggregatec	Aggregatec	Gasoline	32.40	0.00
Los Angeles	2024	MHDT	Aggregatec	Aggregatec	Diesel	0.00	290.83
Los Angeles	2024	MHDT	Aggregatec	Aggregatec	Gasoline	158.20	0.00
Los Angeles	2024	OBUS	Aggregatec	Aggregatec	Diesel	0.00	24.69
Los Angeles	2024	OBUS	Aggregatec	Aggregatec	Gasoline	29.68	0.00
Los Angeles	2024	SBUS	Aggregatec	Aggregatec	Diesel	0.00	5.46
Los Angeles	2024	SBUS	Aggregatec	Aggregatec	Gasoline	7.33	0.00
Los Angeles	2024	UBUS	Aggregatec	Aggregatec	Diesel	0.00	0.98
Los Angeles	2024	UBUS	Aggregatec	Aggregatec	Gasoline	6.75	0.00
Los Angeles	2024	LDA	Aggregatec	Aggregatec	Plug-in Hybrid	78.58	0.00
Los Angeles	2024	LDT1	Aggregatec	Aggregatec	Plug-in Hybrid	0.40	0.00
Los Angeles	2024	LDT2	Aggregatec	Aggregatec	Plug-in Hybrid	11.72	0.00
Los Angeles	2024	MDV	Aggregatec	Aggregatec	Plug-in Hybrid	6.42	0.00
						3,908,489,119	614,882,113
Fuel Usage for Project Construction						42,046	135,486
Percentage of County for Construction						0.0011%	0.022%

EMFAC Emission inventories for County

EMFAC2021 (v1.0.1) 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	Diesel	0.00	1137.39
Los Angeles	2026	HHDT	Aggregatec	Aggregatec	Gasoline	0.60	0.00
Los Angeles	2026	LDA	Aggregatec	Aggregatec	Diesel	0.00	5.43
Los Angeles	2026	LDA	Aggregatec	Aggregatec	Gasoline	4348.93	0.00
Los Angeles	2026	LDT1	Aggregatec	Aggregatec	Diesel	0.00	0.08
Los Angeles	2026	LDT1	Aggregatec	Aggregatec	Gasoline	452.49	0.00
Los Angeles	2026	LDT2	Aggregatec	Aggregatec	Diesel	0.00	7.36
Los Angeles	2026	LDT2	Aggregatec	Aggregatec	Gasoline	2800.01	0.00
Los Angeles	2026	LHDT1	Aggregatec	Aggregatec	Diesel	0.00	134.85
Los Angeles	2026	LHDT1	Aggregatec	Aggregatec	Gasoline	358.04	0.00
Los Angeles	2026	LHDT2	Aggregatec	Aggregatec	Diesel	0.00	71.32
Los Angeles	2026	LHDT2	Aggregatec	Aggregatec	Gasoline	58.26	0.00
Los Angeles	2026	MCY	Aggregatec	Aggregatec	Gasoline	24.78	0.00
Los Angeles	2026	MDV	Aggregatec	Aggregatec	Diesel	0.00	18.51
Los Angeles	2026	MDV	Aggregatec	Aggregatec	Gasoline	1895.54	0.00
Los Angeles	2026	MH	Aggregatec	Aggregatec	Diesel	0.00	6.30
Los Angeles	2026	MH	Aggregatec	Aggregatec	Gasoline	31.54	0.00
Los Angeles	2026	MHDT	Aggregatec	Aggregatec	Diesel	0.00	291.63
Los Angeles	2026	MHDT	Aggregatec	Aggregatec	Gasoline	147.17	0.00
Los Angeles	2026	OBUS	Aggregatec	Aggregatec	Diesel	0.00	24.28
Los Angeles	2026	OBUS	Aggregatec	Aggregatec	Gasoline	26.17	0.00
Los Angeles	2026	SBUS	Aggregatec	Aggregatec	Diesel	0.00	5.06
Los Angeles	2026	SBUS	Aggregatec	Aggregatec	Gasoline	7.54	0.00
Los Angeles	2026	UBUS	Aggregatec	Aggregatec	Diesel	0.00	0.93
Los Angeles	2026	UBUS	Aggregatec	Aggregatec	Gasoline	6.65	0.00
Los Angeles	2026	LDA	Aggregatec	Aggregatec	Plug-in Hybrid	82.30	0.00
Los Angeles	2026	LDT1	Aggregatec	Aggregatec	Plug-in Hybrid	0.70	0.00
Los Angeles	2026	LDT2	Aggregatec	Aggregatec	Plug-in Hybrid	14.79	0.00
Los Angeles	2026	MDV	Aggregatec	Aggregatec	Plug-in Hybrid	8.49	0.00
						3,707,562,992	621,640,500
Net Fuel Usage for Project Operation						277,200	45,996
Percentage of County for Operation						0.0075%	0.0074%