

APPENDIX E

Energy Worksheets

Construction Transportation Energy Worksheet

Emission Source	Emissions (MTCO ₂) ¹	
	Diesel-Powered	Gasoline-Powered
Demolition (2022)		
Off-Road	42.79	--
Hauling	0.90	--
Vendor	0.50	--
Worker	--	1.72
Grading/Excavation (2023)		
Off-Road	82.46	--
Hauling	16.38	--
Vendor	0.57	--
Worker	--	2.67
Building Construction (2023)		
Off-Road	213.50	--
Hauling	0	--
Vendor	37.86	--
Worker	--	76.67
Building Construction (2023)		
Off-Road	127.49	--
Hauling	0	--
Vendor	1.00	--
Worker	--	2.40
Architectural Coating (2023)		
Off-Road	4.04	--
Hauling	0	--
Vendor	0	--
Worker	--	1.42
Paving (2024)		
Off-Road	20.19	--
Hauling	0	--
Vendor	0	--
Worker	--	1.31
<i>Total Emissions in MTCO₂</i>	547.68	86.19
<i>Total Emissions in pounds CO₂²</i>	1,207,634	190,049
Total Fuel Consumption³	54,545 gallons	9,696 gallons
<p><i>MTCO₂ = metric tons of carbon dioxide</i></p> <p>1 <i>MTCO₂ emissions for each phase of construction taken from the CalEEMod "Annual" output sheets prepared for the Project (see Appendix A of the IS/MND).</i></p> <p>2 <i>1 MT of CO₂ = 2,205 pounds of CO₂.</i></p> <p>3 <i>Diesel fuel has a CO₂ factor of 22.14 pounds of CO₂ per 1 gallon of diesel fuel. Gasoline has a CO₂ factor of 19.6 pounds of CO₂ per 1 gallon of gasoline. Source: U.S. Energy Information Administration, Environment Carbon Dioxide Emissions Coefficients, Release date: February 2, 2016.</i></p>		

Operational Transportation Energy Worksheet

Source: EMFAC2021 (v1.0.1) Emissions Inventory

Region Type: County

Region: Los Angeles

Calendar Year: 2024

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/year for CVMT and EVMT, trips/year for Trips, kWh/year for Energy Consumption, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Fuel Consumption	MPG
Los Angeles	2024	HHDT	Aggregate	Aggregate	Diesel	2138217940	353542.7179	6.04797619
Los Angeles	2024	LDA	Aggregate	Aggregate	Diesel	93785850.82	2332.477117	40.2086906
Los Angeles	2024	LDT1	Aggregate	Aggregate	Diesel	850865.2138	36.86936932	23.0778348
Los Angeles	2024	LDT2	Aggregate	Aggregate	Diesel	75858778.92	2450.932433	30.9509874
Los Angeles	2024	LHDT1	Aggregate	Aggregate	Diesel	836838983.6	40887.19811	20.4670171
Los Angeles	2024	LHDT2	Aggregate	Aggregate	Diesel	370815358.5	21500.92132	17.2464869
Los Angeles	2024	MDV	Aggregate	Aggregate	Diesel	152691946.9	6557.461097	23.2852235
Los Angeles	2024	MH	Aggregate	Aggregate	Diesel	19330213.56	1937.106336	9.97891195
Los Angeles	2024	MHDT	Aggregate	Aggregate	Diesel	808797477.5	90738.73357	8.91347549
Los Angeles	2024	OBUS	Aggregate	Aggregate	Diesel	49722688.4	7208.978834	6.89732756
Los Angeles	2024	SBUS	Aggregate	Aggregate	Diesel	13158807.91	1785.746114	7.36880109
Los Angeles	2024	UBUS	Aggregate	Aggregate	Diesel	2043363.748	319.848708	6.38853213
Los Angeles	2024	HHDT	Aggregate	Aggregate	Electricity	5332844.922		0
Los Angeles	2024	LDA	Aggregate	Aggregate	Electricity	2887233144		0
Los Angeles	2024	LDT1	Aggregate	Aggregate	Electricity	12254925.04		0
Los Angeles	2024	LDT2	Aggregate	Aggregate	Electricity	135548305.9		0
Los Angeles	2024	LHDT1	Aggregate	Aggregate	Electricity	12808923.33		0
Los Angeles	2024	LHDT2	Aggregate	Aggregate	Electricity	3141201.189		0
Los Angeles	2024	MDV	Aggregate	Aggregate	Electricity	147813556.6		0
Los Angeles	2024	MHDT	Aggregate	Aggregate	Electricity	3631183.032		0
Los Angeles	2024	OBUS	Aggregate	Aggregate	Electricity	198498.7441		0
Los Angeles	2024	SBUS	Aggregate	Aggregate	Electricity	127641.6514		0
Los Angeles	2024	UBUS	Aggregate	Aggregate	Electricity	3460465.766		0
Los Angeles	2024	HHDT	Aggregate	Aggregate	Gasoline	970620.5334	239.4037812	4.05432416
Los Angeles	2024	LDA	Aggregate	Aggregate	Gasoline	46771340855	1624547.57	28.7903794
Los Angeles	2024	LDT1	Aggregate	Aggregate	Gasoline	4038098956	167706.4418	24.0783772
Los Angeles	2024	LDT2	Aggregate	Aggregate	Gasoline	22882364592	978243.2251	23.3912835
Los Angeles	2024	LHDT1	Aggregate	Aggregate	Gasoline	1646057474	121844.0485	13.5095435
Los Angeles	2024	LHDT2	Aggregate	Aggregate	Gasoline	236565986.2	20050.57488	11.798464
Los Angeles	2024	MCY	Aggregate	Aggregate	Gasoline	344477993.3	8357.054605	41.2200242
Los Angeles	2024	MDV	Aggregate	Aggregate	Gasoline	12790845644	671036.9517	19.0613134
Los Angeles	2024	MH	Aggregate	Aggregate	Gasoline	51318722.2	10594.77164	4.84377804
Los Angeles	2024	MHDT	Aggregate	Aggregate	Gasoline	266806703.8	51731.56744	5.15752213
Los Angeles	2024	OBUS	Aggregate	Aggregate	Gasoline	48870040.79	9706.981815	5.03452481
Los Angeles	2024	SBUS	Aggregate	Aggregate	Gasoline	21534384.51	2395.942818	8.98785411
Los Angeles	2024	UBUS	Aggregate	Aggregate	Gasoline	10131910.28	2208.412104	4.5878712
Los Angeles	2024	HHDT	Aggregate	Aggregate	Natural Gas	113731609.8	19446.69193	
Los Angeles	2024	MHDT	Aggregate	Aggregate	Natural Gas	13272123.13	1631.721819	
Los Angeles	2024	OBUS	Aggregate	Aggregate	Natural Gas	5775807.967	670.4544983	
Los Angeles	2024	SBUS	Aggregate	Aggregate	Natural Gas	12374711.15	2955.634123	
Los Angeles	2024	UBUS	Aggregate	Aggregate	Natural Gas	136625585.8	44547.49265	
Los Angeles	2024	LDA	Aggregate	Aggregate	Plug-in Hybri	1522666298	27266.16527	
Los Angeles	2024	LDT1	Aggregate	Aggregate	Plug-in Hybri	8525303.14	138.8924857	
Los Angeles	2024	LDT2	Aggregate	Aggregate	Plug-in Hybri	238493370.1	4066.683851	
Los Angeles	2024	MDV	Aggregate	Aggregate	Plug-in Hybri	126448181	2226.490729	

Total VMT	Diesel VMT	Gasoline VMT	Average Diesel MPG*	Average Gasoline MPG*
99,060,959,838	4,562,112,275	89,109,383,883	12	25
Percent of Total	4.61	89.95		

* weighted by percentage of VMT for each vehicle category