

Appendix D

Energy Calculations

Construction Energy Consumption

Construction Fuel Usage Summary

Off-Road Heavy-Duty Construction Equipment	
919,452	Diesel Consumption (gal)
44,818	Annual Diesel Consumption (gal/year)
On-Road Construction Equipment	
Haul Trucks	
612,700	Diesel Consumption (gal)
29,866	Annual Diesel Consumption (gal/year)
Vendor Trucks	
187,550	Diesel Consumption (gal)
9,142	Annual Diesel Consumption (gal/year)
Workers	
650,255	Gas Consumption (gal)
31,696	Annual Gas Consumption (gal/year)
Total On-Road	
800,250	Total Diesel Consumption (gal)
39,008	Annual Diesel Consumption (gal/year)
650,255	Project Gas Consumption (gal)
31,696	Annual Gas Consumption (gal/year)
1,719,702	Total Gallons Diesel
650,255	Total Gallons Gasoline
2,369,956	Total Gallons Fuel (Gas and Diesel)

20.5 Estimated Project Construction Duration (years)

83,826 Annual Average Gallons Diesel
 31,696 Annual Average Gallons Gasoline

Los Angeles County Fuel Consumption (2017) ¹			Percent of Annual Project Compared to County
Source	Fuel Type	Gallons	
Off-Road/Vendor/Haul Trucks	Diesel	590,196,078	0.014%
Workers	Gasoline	3,659,000,000	0.00087%

Notes:

- California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017. Available at: http://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html. Accessed October 2018. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales

Off-Road Equipment

Equipment ≤ 50 hp

pounds fuel/hp-hr (OFFROAD2011 model, ≤ 50 hp): 0.408 lb/hp-hr
 diesel pounds/gallon (CARB density assumption): 7.07 lb/gal
 diesel gallons/hp-hr: 0.0577 gal/hp-hr
 Total <50 1,203,718 hp-hr
 Total diesel gallons: 69,465 gal

Equipment > 50 hp

pounds fuel/hp-hr (OFFROAD2011 model, > 50 hp): 0.367 lb/hp-hr
 diesel pounds/gallon (CARB density assumption): 7.07 lb/gal
 diesel gallons/hp-hr: 0.0519 gal/hp-hr
 Total >50 16,374,402 hp-hr
 Total diesel gallons: 849,987 gal

Total diesel gallons (off-road equipment): 919,452 gal

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
S2-Demolition	Air Compressors	1	8	78	0.48	39	11,681
S2-Demolition	Dumpers/Tenders	2	8	16	0.38	39	3,794
S2-Demolition	Excavators	1	8	158	0.38	39	18,732
S2-Demolition	Forklifts	1	8	89	0.2	39	5,554
S2-Demolition	Generator Sets	1	8	84	0.74	39	19,394
S2-Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	39	22,395
S2-Grading/Excavation	Air Compressors	1	8	78	0.48	52	15,575
S2-Grading/Excavation	Bore/Drill Rigs	1	8	221	0.5	52	45,968
S2-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	52	5,059
S2-Grading/Excavation	Excavators	2	8	158	0.38	52	49,953
S2-Grading/Excavation	Forklifts	1	8	89	0.2	52	7,405
S2-Grading/Excavation	Generator Sets	1	8	84	0.74	52	25,859
S2-Grading/Excavation	Other Construction Equipment	1	2	172	0.42	52	7,513
S2-Grading/Excavation	Plate Compactors	1	4	8	0.43	52	716
S2-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	52	12,247
S2-Grading/Excavation	Tractors/Loaders/Backhoes	2	8	97	0.37	52	29,860
S2-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	26	7,788
S2-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	26	2,529

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
S2-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	26	3,702
S2-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	26	0
S2-Foundations/Concrete Pour	Plate Compactors	1	4	8	0.43	26	358
S2-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	26	8,112
S2-Continuous Concrete Pour	Pumps	2	8	84	0.74	2	1,989
S2-Building Construction	Air Compressors	2	8	78	0.48	299	179,113
S2-Building Construction	Cranes	0	8	231	0.29	299	0
S2-Building Construction	Dumpers/Tenders	3	8	16	0.38	299	43,630
S2-Building Construction	Forklifts	1	8	89	0.2	299	42,578
S2-Building Construction	Generator Sets	0	8	84	0.74	299	0
S2-Paving	Pavers	1	8	130	0.42	26	11,357
S2-Paving	Paving Equipment	1	8	132	0.36	26	9,884
S2-Architectural Coatings	Air Compressors	2	8	78	0.48	131	78,474
S2-Architectural Coatings	Cranes	0	8	231	0.29	131	0
S2-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	131	19,116
S2-Architectural Coatings	Forklifts	1	8	89	0.2	131	18,654
S2-Architectural Coatings	Generator Sets	0	8	84	0.74	131	0
S1-Demolition	Air Compressors	2	8	78	0.48	39	23,363
S1-Demolition	Dumpers/Tenders	2	8	16	0.38	39	3,794
S1-Demolition	Excavators	2	8	158	0.38	39	37,465
S1-Demolition	Forklifts	1	8	89	0.2	39	5,554
S1-Demolition	Generator Sets	1	8	84	0.74	39	19,394
S1-Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	39	44,791
S1-Grading/Excavation	Air Compressors	1	8	78	0.48	155	46,426
S1-Grading/Excavation	Bore/Drill Rigs	1	8	221	0.5	155	137,020
S1-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	155	15,078
S1-Grading/Excavation	Excavators	2	8	158	0.38	155	148,899
S1-Grading/Excavation	Forklifts	1	8	89	0.2	155	22,072
S1-Grading/Excavation	Generator Sets	1	8	84	0.74	155	77,078
S1-Grading/Excavation	Other Construction Equipment	1	2	172	0.42	155	22,394
S1-Grading/Excavation	Plate Compactors	2	4	8	0.43	155	4,266
S1-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	155	36,506
S1-Grading/Excavation	Tractors/Loaders/Backhoes	3	8	97	0.37	155	133,511
S1-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	145	43,430
S1-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	145	14,106
S1-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	145	20,648
S1-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	145	0
S1-Foundations/Concrete Pour	Plate Compactors	1	4	8	0.43	145	1,995

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
S1-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	145	45,240
S1-Continuous Concrete Pour	Pumps	2	8	84	0.74	20	19,891
S1-Building Construction	Air Compressors	2	8	78	0.48	396	237,220
S1-Building Construction	Cranes	1	8	231	0.29	396	212,224
S1-Building Construction	Dumpers/Tenders	3	8	16	0.38	396	57,784
S1-Building Construction	Forklifts	1	8	89	0.2	396	56,390
S1-Building Construction	Generator Sets	0	8	84	0.74	396	0
S1-Paving	Pavers	1	8	130	0.42	52	22,714
S1-Paving	Paving Equipment	1	8	132	0.36	52	19,768
S1-Architectural Coatings	Air Compressors	2	8	78	0.48	131	78,474
S1-Architectural Coatings	Cranes	1	8	231	0.29	131	70,206
S1-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	131	19,116
S1-Architectural Coatings	Forklifts	1	8	89	0.2	131	18,654
S1-Architectural Coatings	Generator Sets	0	8	84	0.74	131	0
S3-Demolition	Air Compressors	2	8	78	0.48	39	23,363
S3-Demolition	Dumpers/Tenders	2	8	16	0.38	39	3,794
S3-Demolition	Excavators	2	8	158	0.38	39	37,465
S3-Demolition	Forklifts	1	8	89	0.2	39	5,554
S3-Demolition	Generator Sets	1	8	84	0.74	39	19,394
S3-Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	39	44,791
S3-Grading/Excavation	Air Compressors	1	8	78	0.48	221	66,194
S3-Grading/Excavation	Bore/Drill Rigs	1	8	221	0.5	221	195,364
S3-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	221	21,499
S3-Grading/Excavation	Excavators	2	8	158	0.38	221	212,301
S3-Grading/Excavation	Forklifts	1	8	89	0.2	221	31,470
S3-Grading/Excavation	Generator Sets	1	8	84	0.74	221	109,899
S3-Grading/Excavation	Other Construction Equipment	1	2	172	0.42	221	31,930
S3-Grading/Excavation	Plate Compactors	2	4	8	0.43	221	6,082
S3-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	221	52,050
S3-Grading/Excavation	Tractors/Loaders/Backhoes	3	8	97	0.37	221	190,361
S3-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	166	49,720
S3-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	166	16,148
S3-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	166	23,638
S3-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	166	0
S3-Foundations/Concrete Pour	Plate Compactors	1	4	8	0.43	166	2,284
S3-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	166	51,792
S3-Continuous Concrete Pour	Pumps	2	8	84	0.74	28	27,848
S3-Building Construction	Air Compressors	2	8	78	0.48	392	234,824

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
S3-Building Construction	Cranes	1	8	231	0.29	392	210,081
S3-Building Construction	Dumpers/Tenders	3	8	16	0.38	392	57,201
S3-Building Construction	Forklifts	1	8	89	0.2	392	55,821
S3-Building Construction	Generator Sets	0	8	84	0.74	392	0
S3-Paving	Pavers	1	8	130	0.42	52	22,714
S3-Paving	Paving Equipment	1	8	132	0.36	52	19,768
S3-Architectural Coatings	Air Compressors	2	8	78	0.48	313	187,500
S3-Architectural Coatings	Cranes	1	8	231	0.29	313	167,743
S3-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	313	45,673
S3-Architectural Coatings	Forklifts	1	8	89	0.2	313	44,571
S3-Architectural Coatings	Generator Sets	0	8	84	0.74	313	0
JWCI Demolition	Air Compressors	3	8	78	0.48	78	70,088
JWCI Demolition	Dumpers/Tenders	4	8	16	0.38	78	15,176
JWCI Demolition	Excavators	3	8	158	0.38	78	112,395
JWCI Demolition	Forklifts	1	8	89	0.2	78	11,107
JWCI Demolition	Generator Sets	1	8	84	0.74	78	38,788
JWCI Demolition	Tractors/Loaders/Backhoes	5	8	97	0.37	78	111,977
2I-Demolition	Air Compressors	2	8	78	0.48	77	46,126
2I-Demolition	Dumpers/Tenders	2	8	16	0.38	77	7,491
2I-Demolition	Excavators	2	8	158	0.38	77	73,969
2I-Demolition	Forklifts	1	8	89	0.2	77	10,965
2I-Demolition	Generator Sets	1	8	84	0.74	77	38,291
2I-Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	77	88,433
2I-Grading/Excavation	Air Compressors	1	8	78	0.48	128	38,339
2I-Grading/Excavation	Bore/Drill Rigs	1	8	221	0.5	128	113,152
2I-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	128	12,452
2I-Grading/Excavation	Excavators	3	8	158	0.38	128	184,443
2I-Grading/Excavation	Forklifts	1	8	89	0.2	128	18,227
2I-Grading/Excavation	Generator Sets	0	8	84	0.74	128	0
2I-Grading/Excavation	Other Construction Equipment	1	2	172	0.42	128	18,493
2I-Grading/Excavation	Plate Compactors	2	8	8	0.43	128	7,045
2I-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	128	30,147
2I-Grading/Excavation	Tractors/Loaders/Backhoes	4	8	97	0.37	128	147,005
2I-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	281	84,165
2I-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	281	27,336
2I-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	281	40,014
2I-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	281	0
2I-Foundations/Concrete Pour	Plate Compactors	1	8	8	0.43	281	7,733

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
2I-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	281	87,672
2I-Continuous Concrete Pour	Pumps	2	8	84	0.74	32	31,826
2I-Building Construction	Air Compressors	1	8	78	0.48	365	109,325
2I-Building Construction	Cranes	1	8	231	0.29	365	195,611
2I-Building Construction	Dumpers/Tenders	2	8	16	0.38	365	35,507
2I-Building Construction	Forklifts	1	8	89	0.2	365	51,976
2I-Building Construction	Generator Sets	0	8	84	0.74	365	0
2I-Architectural Coatings	Air Compressors	2	8	78	0.48	105	62,899
2I-Architectural Coatings	Cranes	1	8	231	0.29	105	56,272
2I-Architectural Coatings	Dumpers/Tenders	2	8	16	0.38	105	10,214
2I-Architectural Coatings	Forklifts	1	8	89	0.2	105	14,952
2I-Architectural Coatings	Generator Sets	0	8	84	0.74	105	0
2C-Demolition	Air Compressors	2	8	78	0.48	39	23,363
2C-Demolition	Dumpers/Tenders	2	8	16	0.38	39	3,794
2C-Demolition	Excavators	2	8	158	0.38	39	37,465
2C-Demolition	Forklifts	1	8	89	0.2	39	5,554
2C-Demolition	Generator Sets	1	8	84	0.74	39	19,394
2C-Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	39	44,791
2C-Grading/Excavation	Air Compressors	1	8	78	0.48	91	27,256
2C-Grading/Excavation	Bore/Drill Rigs	1	2	221	0.5	91	20,111
2C-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	91	8,852
2C-Grading/Excavation	Excavators	3	8	158	0.38	91	131,127
2C-Grading/Excavation	Forklifts	1	8	89	0.2	91	12,958
2C-Grading/Excavation	Generator Sets	0	8	84	0.74	91	0
2C-Grading/Excavation	Other Construction Equipment	1	2	172	0.42	91	13,148
2C-Grading/Excavation	Plate Compactors	2	8	8	0.43	91	5,009
2C-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	91	21,432
2C-Grading/Excavation	Tractors/Loaders/Backhoes	4	8	97	0.37	91	104,512
2C-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	203	60,803
2C-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	203	19,748
2C-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	203	28,907
2C-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	203	0
2C-Foundations/Concrete Pour	Plate Compactors	1	8	8	0.43	203	5,587
2C-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	203	63,336
2C-Continuous Concrete Pour	Pumps	2	8	84	0.74	20	19,891
2C-Building Construction	Air Compressors	2	8	78	0.48	678	406,149
2C-Building Construction	Cranes	1	8	231	0.29	678	363,354
2C-Building Construction	Dumpers/Tenders	3	8	16	0.38	678	98,934

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
2C-Building Construction	Forklifts	1	8	89	0.2	678	96,547
2C-Building Construction	Generator Sets	0	8	84	0.74	678	0
2C-Paving	Pavers	1	8	130	0.42	38	16,598
2C-Paving	Paving Equipment	1	8	132	0.36	38	14,446
2C-Architectural Coatings	Air Compressors	2	8	78	0.48	208	124,600
2C-Architectural Coatings	Cranes	1	8	231	0.29	208	111,471
2C-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	208	30,351
2C-Architectural Coatings	Forklifts	1	8	89	0.2	208	29,619
2C-Architectural Coatings	Generator Sets	0	8	84	0.74	208	0
S4-Demolition	Air Compressors	3	8	78	0.48	40	35,942
S4-Demolition	Dumpers/Tenders	4	8	16	0.38	40	7,782
S4-Demolition	Excavators	3	8	158	0.38	40	57,638
S4-Demolition	Forklifts	1	8	89	0.2	40	5,696
S4-Demolition	Generator Sets	1	8	84	0.74	40	19,891
S4-Demolition	Tractors/Loaders/Backhoes	5	8	97	0.37	40	57,424
S4-Grading/Excavation	Air Compressors	2	4	78	0.48	195	58,406
S4-Grading/Excavation	Bore/Drill Rigs	2	8	221	0.5	195	344,760
S4-Grading/Excavation	Dumpers/Tenders	3	8	16	0.38	195	28,454
S4-Grading/Excavation	Excavators	2	8	158	0.38	195	187,325
S4-Grading/Excavation	Forklifts	1	8	89	0.2	195	27,768
S4-Grading/Excavation	Generator Sets	2	8	84	0.74	195	193,939
S4-Grading/Excavation	Other Construction Equipment	2	1	172	0.42	195	28,174
S4-Grading/Excavation	Plate Compactors	3	8	8	0.43	195	16,099
S4-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	195	45,926
S4-Grading/Excavation	Tractors/Loaders/Backhoes	6	8	97	0.37	195	335,930
S4-Foundations/Concrete Pour	Air Compressors	2	4	78	0.48	434	129,992
S4-Foundations/Concrete Pour	Dumpers/Tenders	3	8	16	0.38	434	63,329
S4-Foundations/Concrete Pour	Forklifts	2	8	89	0.2	434	123,603
S4-Foundations/Concrete Pour	Generator Sets	2	8	84	0.74	434	431,639
S4-Foundations/Concrete Pour	Plate Compactors	2	8	8	0.43	434	23,887
S4-Foundations/Concrete Pour	Trenchers	2	8	78	0.5	434	270,816
S4-Continuous Concrete Pour	Pumps	2	8	84	0.74	50	49,728
S4-Building Construction	Air Compressors	2	4	78	0.48	744	222,843
S4-Building Construction	Cranes	2	8	231	0.29	744	797,449
S4-Building Construction	Dumpers/Tenders	3	8	16	0.38	744	108,564
S4-Building Construction	Forklifts	2	8	89	0.2	744	211,891
S4-Building Construction	Generator Sets	2	8	84	0.74	744	739,953
S4-Architectural Coatings	Air Compressors	2	4	78	0.48	366	109,624

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
S4-Architectural Coatings	Cranes	1	8	231	0.29	366	196,147
S4-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	366	53,407
S4-Architectural Coatings	Forklifts	2	8	89	0.2	366	104,237
S4-Architectural Coatings	Generator Sets	2	8	84	0.74	366	364,009
S5-Building Construction	Air Compressors	2	8	78	0.48	496	297,124
S5-Building Construction	Cranes	1	8	231	0.29	496	265,816
S5-Building Construction	Dumpers/Tenders	3	8	16	0.38	496	72,376
S5-Building Construction	Forklifts	1	8	89	0.2	496	70,630
S5-Building Construction	Generator Sets	1	8	84	0.74	496	246,651
S5-Architectural Coatings	Air Compressors	2	8	78	0.48	105	62,899
S5-Architectural Coatings	Cranes	1	8	231	0.29	105	56,272
S5-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	105	15,322
S5-Architectural Coatings	Forklifts	1	8	89	0.2	105	14,952
S5-Architectural Coatings	Generator Sets	1	8	84	0.74	105	52,214
2D/E-Demolition	Air Compressors	2	8	78	0.48	39	23,363
2D/E-Demolition	Dumpers/Tenders	2	8	16	0.38	39	3,794
2D/E-Demolition	Excavators	2	8	158	0.38	39	37,465
2D/E-Demolition	Forklifts	1	8	89	0.2	39	5,554
2D/E-Demolition	Generator Sets	1	8	84	0.74	39	19,394
2D/E-Demolition	Tractors/Loaders/Backhoes	4	8	97	0.37	39	44,791
2D/E-Grading/Excavation	Air Compressors	1	8	78	0.48	144	43,131
2D/E-Grading/Excavation	Bore/Drill Rigs	1	8	221	0.5	144	127,296
2D/E-Grading/Excavation	Dumpers/Tenders	2	8	16	0.38	144	14,008
2D/E-Grading/Excavation	Excavators	3	8	158	0.38	144	207,498
2D/E-Grading/Excavation	Forklifts	1	8	89	0.2	144	20,506
2D/E-Grading/Excavation	Generator Sets	0	8	84	0.74	144	0
2D/E-Grading/Excavation	Other Construction Equipment	1	8	172	0.42	144	83,220
2D/E-Grading/Excavation	Plate Compactors	2	8	8	0.43	144	7,926
2D/E-Grading/Excavation	Sweepers/Scrubbers	1	8	64	0.46	144	33,915
2D/E-Grading/Excavation	Tractors/Loaders/Backhoes	4	8	97	0.37	144	165,381
2D/E-Foundations/Concrete Pour	Air Compressors	1	8	78	0.48	175	52,416
2D/E-Foundations/Concrete Pour	Dumpers/Tenders	2	8	16	0.38	175	17,024
2D/E-Foundations/Concrete Pour	Forklifts	1	8	89	0.2	175	24,920
2D/E-Foundations/Concrete Pour	Generator Sets	0	8	84	0.74	175	0
2D/E-Foundations/Concrete Pour	Plate Compactors	1	8	8	0.43	175	4,816
2D/E-Foundations/Concrete Pour	Trenchers	1	8	78	0.5	175	54,600
2D/E-Continuous Concrete Pour	Pumps	2	8	84	0.74	20	19,891
2D/E-Building Construction	Air Compressors	2	8	78	0.48	666	398,961

Construction Phase	Equipment	Number	Hours/Day	HP	Load	Days	Total hp-hr
2D/E-Building Construction	Cranes	1	8	231	0.29	666	356,923
2D/E-Building Construction	Dumpers/Tenders	3	8	16	0.38	666	97,183
2D/E-Building Construction	Forklifts	1	8	89	0.2	666	94,838
2D/E-Building Construction	Generator Sets	0	8	84	0.74	666	0
2D/E-Paving	Pavers	1	8	130	0.42	53	23,150
2D/E-Paving	Paving Equipment	1	8	132	0.36	53	20,148
2D/E-Architectural Coatings	Air Compressors	2	8	78	0.48	209	125,199
2D/E-Architectural Coatings	Cranes	1	8	231	0.29	209	112,007
2D/E-Architectural Coatings	Dumpers/Tenders	3	8	16	0.38	209	30,497
2D/E-Architectural Coatings	Forklifts	1	8	89	0.2	209	29,762
2D/E-Architectural Coatings	Generator Sets	0	8	84	0.74	209	0
						Total >50	16,374,402
						Total <50	1,203,718

On-Road Haul Trucks

EMFAC2014 Diesel Fuel Consumption Factor:¹ 0.1619 gallons/mile 6.2 miles/gallon
 Total Haul Truck VMT: 3,769,680 miles
Total VMT diesel gallons (on-road haul trucks): 610,411

EMFAC2014 Diesel Fuel Consumption Factor:² 0.8096 gallons/hour
 Total Haul Truck Idle-Hours per Year: 7,854 hours
Total Idling diesel gallons (on-road haul trucks): 2,289

Total diesel gallons (on-road haul trucks): 612,700 gal

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; T7 Single Construction; Annual; CY 2019; Aggregate MY; Aggregate Speed)
2. California Air Resources Board, EMFAC2014 (South Coast Air Basin; T7 Single Construction; Annual; CY 2019; Aggregate MY; 5 miles per hour converted to hourly rate)

Phase	Total One-Way Trips	Miles/Trip	VMT	Idle Hours
S2-Demolition	60	20	1,200	5
S2-Grading/Excavation	2,642	20	52,840	220
S2-Foundations/Concrete Pour	0	20	0	0
S2-Continuous Concrete Pour	0	20	0	0
S2-Building Construction	0	20	0	0
S2-Paving	0	20	0	0
S2-Architectural Coatings	0	20	0	0
S1-Demolition	164	20	3,280	14
S1-Grading/Excavation	26,828	20	536,560	2,236
S1-Foundations/Concrete Pour	0	20	0	0
S1-Continuous Concrete Pour	0	20	0	0
S1-Building Construction	0	20	0	0
S1-Paving	0	20	0	0
S1-Architectural Coatings	0	20	0	0

Phase	Total One-Way Trips	Miles/Trip	VMT	Idle Hours
S3-Demolition	396	20	7,920	33
S3-Grading/Excavation	31,310	20	626,200	2,609
S3-Foundations/Concrete Pour	0	20	0	0
S3-Continuous Concrete Pour	0	20	0	0
S3-Building Construction	0	20	0	0
S3-Paving	0	20	0	0
S3-Architectural Coatings	0	20	0	0
JWCI Demolition	1,066	20	21,320	89
2I-Demolition	746	20	14,920	62
2I-Grading/Excavation	18,374	20	367,480	1,531
2I-Foundations/Concrete Pour	0	20	0	0
2I-Continuous Concrete Pour	0	20	0	0
2I-Building Construction	0	20	0	0
2I-Architectural Coatings	0	20	0	0
2C-Demolition	104	20	2,080	9
2C-Grading/Excavation	15,528	20	310,560	1,294
2C-Foundations/Concrete Pour	0	20	0	0
2C-Continuous Concrete Pour	0	20	0	0
2C-Building Construction	0	20	0	0
2C-Paving	0	20	0	0
2C-Architectural Coatings	0	20	0	0
S4-Demolition	348	20	6,960	29
S4-Grading/Excavation	71,906	20	1,438,120	5,992
S4-Foundations/Concrete Pour	0	20	0	0
S4-Continuous Concrete Pour	0	20	0	0
S4-Building Construction	0	20	0	0
S4-Architectural Coatings	0	20	0	0
S5-Building Construction	124	20	2,480	10
S5-Architectural Coatings	0	20	0	0
2D/E-Demolition	314	20	6,280	26
2D/E-Grading/Excavation	18,574	20	371,480	1,548
2D/E-Foundations/Concrete Pour	0	20	0	0
2D/E-Continuous Concrete Pour	0	20	0	0
2D/E-Building Construction	0	20	0	0
2D/E-Paving	0	20	0	0
2D/E-Architectural Coatings	0	20	0	0

Total Haul Truck VMT: 3,769,680

Total Idle-Hours: 7,853.50

On-Road Vendor Trucks

EMFAC2014 Diesel Fuel Consumption Factor:¹ 0.1494 gallons/mile 6.7 miles/gallon
 Total Vendor Truck VMT: 1,241,610 miles
Total VMT diesel gallons (on-road vendor trucks): 185,486

EMFAC2014 Diesel Fuel Consumption Factor:² 0.7645 gallons/hour
 Total Haul Truck Idle-Hours per Year: 7,498 hours
Total Idling diesel gallons (on-road haul trucks): 2,064

Total diesel gallons (on-road haul trucks): 187,550 gal

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; HHDT and MHDT; Annual; CY 2019; Aggregate MY; Aggregate Speed)
2. California Air Resources Board, EMFAC2014 (South Coast Air Basin; HHDT and MHDT; Annual; CY 2019; Aggregate MY; 5 miles per hour converted to hourly rate)

Phase	Days	Trips/Day	Miles/Trip	VMT	Idle Hours
S2-Demolition	39	6	6.9	1,615	20
S2-Grading/Excavation	52	6	6.9	2,153	26
S2-Foundations/Concrete Pour	26	0	6.9	0	0
S2-Continuous Concrete Pour	2	100	6.9	1,380	17
S2-Building Construction	299	4	6.9	7,304	88
S2-Paving	26	0	6.9	0	0
S2-Architectural Coatings	131	0	6.9	0	0
S1-Demolition	39	6	6.9	1,615	20
S1-Grading/Excavation	155	6	6.9	6,417	78
S1-Foundations/Concrete Pour	145	0	6.9	0	0
S1-Continuous Concrete Pour	20	100	6.9	13,800	167
S1-Building Construction	396	8	6.9	22,840	276
S1-Paving	52	0	6.9	0	0
S1-Architectural Coatings	131	0	6.9	0	0
S3-Demolition	39	6	6.9	1,615	20
S3-Grading/Excavation	221	6	6.9	9,149	111
S3-Foundations/Concrete Pour	166	0	6.9	0	0
S3-Continuous Concrete Pour	28	100	6.9	19,320	233
S3-Building Construction	392	62	6.9	166,732	2,014
S3-Paving	52	0	6.9	0	0
S3-Architectural Coatings	313	0	6.9	0	0

Phase	Days	Trips/Day	Miles/Trip	VMT	Idle Hours
JWCI Demolition	78	6	6.9	3,229	39
2I-Demolition	77	6	6.9	3,188	39
2I-Grading/Excavation	128	6	6.9	5,299	64
2I-Foundations/Concrete Pour	281	0	6.9	0	0
2I-Continuous Concrete Pour	32	100	6.9	22,080	267
2I-Building Construction	365	18	6.9	44,993	543
2I-Architectural Coatings	105	0	6.9	0	0
2C-Demolition	39	6	6.9	1,615	20
2C-Grading/Excavation	91	6	6.9	3,767	46
2C-Foundations/Concrete Pour	203	0	6.9	0	0
2C-Continuous Concrete Pour	20	100	6.9	13,800	167
2C-Building Construction	678	40	6.9	188,622	2,278
2C-Paving	38	0	6.9	0	0
2C-Architectural Coatings	208	0	6.9	0	0
S4-Demolition	40	6	6.9	1,656	20
S4-Grading/Excavation	195	6	6.9	8,073	98
S4-Foundations/Concrete Pour	434	0	6.9	0	0
S4-Continuous Concrete Pour	50	100	6.9	34,500	417
S4-Building Construction	744	90	6.9	464,283	5,607
S4-Architectural Coatings	366	0	6.9	0	0
S5-Building Construction	496	12	6.9	41,566	502
S5-Architectural Coatings	105	0	6.9	0	0
2D/E-Demolition	39	6	6.9	1,615	20
2D/E-Grading/Excavation	144	6	6.9	5,962	72
2D/E-Foundations/Concrete Pour	175	0	6.9	0	0
2D/E-Continuous Concrete Pour	20	100	6.9	13,800	167
2D/E-Building Construction	666	28	6.9	129,624	1,566
2D/E-Paving	53	0	6.9	0	0
2D/E-Architectural Coatings	209	0	6.9	0	0
Total Vendor Truck VMT:				1,241,610	
Total Idle-Hours:					7,498

On-Road Workers (LDA, LDT1, LDT2)

EMFAC2014 Gasoline Fuel Consumption Factor:¹ 0.0386 gallons/mile 25.9 miles/gallon
 Total Worker VMT: 16,849,228 miles
Total VMT gasoline gallons (workers): 650,255

1. California Air Resources Board, EMFAC2014 (South Coast Air Basin; LDA, LDT1, LDT2; CY 2019; Aggregate MY; Aggregate Speed)

Phase	Days	One-Way Trips/Day	Miles/Trip	VMT
S2-Demolition	39	16	14.7	9,173
S2-Grading/Excavation	52	20	14.7	15,288
S2-Foundations/Concrete Pour	26	24	14.7	9,173
S2-Continuous Concrete Pour	2	24	14.7	706
S2-Building Construction	299	120	14.7	527,436
S2-Paving	26	16	14.7	6,115
S2-Architectural Coatings	131	40	14.7	77,028
S1-Demolition	39	28	14.7	16,052
S1-Grading/Excavation	155	28	14.7	63,798
S1-Foundations/Concrete Pour	145	48	14.7	102,312
S1-Continuous Concrete Pour	20	48	14.7	14,112
S1-Building Construction	396	160	14.7	931,392
S1-Paving	52	16	14.7	12,230
S1-Architectural Coatings	131	56	14.7	107,839
S3-Demolition	39	24	14.7	13,759
S3-Grading/Excavation	221	28	14.7	90,964
S3-Foundations/Concrete Pour	166	60	14.7	146,412
S3-Continuous Concrete Pour	28	60	14.7	24,696
S3-Building Construction	392	250	14.7	1,440,600
S3-Paving	52	24	14.7	18,346
S3-Architectural Coatings	313	64	14.7	294,470

Phase	Days	One-Way Trips/Day	Miles/Trip	VMT
JWCI Demolition	78	40	14.7	45,864
2I-Demolition	77	24	14.7	27,166
2I-Grading/Excavation	128	28	14.7	52,685
2I-Foundations/Concrete Pour	281	110	14.7	454,377
2I-Continuous Concrete Pour	32	110	14.7	51,744
2I-Building Construction	365	140	14.7	751,170
2I-Architectural Coatings	105	28	14.7	43,218
2C-Demolition	39	16	14.7	9,173
2C-Grading/Excavation	91	24	14.7	32,105
2C-Foundations/Concrete Pour	203	60	14.7	179,046
2C-Continuous Concrete Pour	20	60	14.7	17,640
2C-Building Construction	678	220	14.7	2,192,652
2C-Paving	38	16	14.7	8,938
2C-Architectural Coatings	208	56	14.7	171,226
S4-Demolition	40	16	14.7	9,408
S4-Grading/Excavation	195	40	14.7	114,660
S4-Foundations/Concrete Pour	434	90	14.7	574,182
S4-Continuous Concrete Pour	50	90	14.7	66,150
S4-Building Construction	744	360	14.7	3,937,248
S4-Architectural Coatings	366	110	14.7	591,822
S5-Building Construction	496	130	14.7	947,856
S5-Architectural Coatings	105	48	14.7	74,088
2D/E-Demolition	39	24	14.7	13,759
2D/E-Grading/Excavation	144	24	14.7	50,803
2D/E-Foundations/Concrete Pour	175	60	14.7	154,350
2D/E-Continuous Concrete Pour	20	60	14.7	17,640
2D/E-Building Construction	666	220	14.7	2,153,844
2D/E-Paving	53	16	14.7	12,466
2D/E-Architectural Coatings	209	56	14.7	172,049
Total Worker VMT:				16,849,228

Haul Fuel Factors

Row Labels	Sum of VMT	Sum of Fuel_Consumption
South Coast	405411.228	65.64683523
T7 single construction	405411.228	65.64683523
DSL	405411.228	65.64683523
Grand Total	405411.228	65.64683523

Diesel

VMT	Fuel Consumption (gal/day)	Annual VMT	Annual Fuel Consumption	gal/mi
405411.228	65.64683523	147975098	23961094.86	0.1619

Vendor Fuel Factors

Row Labels	Sum of VMT	Sum of Fuel_Consumption
South Coast	19621973.9	2931.360247
2021	19621973.9	2931.360247
HHDT	12125606.5	2073.183975
DSL	12125606.5	2073.183975
MHDT	7496367.42	858.176272
DSL	7496367.42	858.176272
Grand Total	19621973.9	2931.360247

Diesel

VMT	Fuel Consumption (gal/day)	Annual VMT	Annual Fuel Consumption	gal/mi
19621973.9	2931.360247	7162020481	1069946490	0.1494

Worker Fuel Factors

Row Labels	Sum of VMT	Sum of Fuel_Consumption
South Coast	308063985	11888.97778
2021	308063985	11888.97778
LDA	210280085	7396.917481
GAS	210280085	7396.917481
LDT1	17365475.4	727.8425977
GAS	17365475.4	727.8425977
LDT2	80418424.3	3764.217699
GAS	80418424.3	3764.217699
Grand Total	308063985	11888.97778

Gasoline

VMT	Fuel Consumption (gal/day)	Annual VMT	Annual Fuel Consumption	gal/mi
308063985	11888.97778	1.1244E+11	4339476889	0.03859256

Existing Operational Energy Consumption

Existing Operational Energy Analysis

Electricity	kWh/yr	GWh/yr
Day-Care Center	20,412	0.020
Hospital	1,165,080	1.165
Hospital	246,456	0.246
Hospital	61,044	0.061
Total	1,492,991	1.493
Total (including water, see below)	1,625,385	1.625

Project Energy Consumption **1,625,385** **1.63**

Water	Mgal/yr
Day-Care Center	0.528
Hospital	9.640
Total	10.168

Electricity Intensity Factors	kWh/Mgal
Electricity Factor - Supply	9,727
Electricity Factor - Treat	111
Electricity Factor - Distribute	1,272
Electricity Factor - Wastewater Treatment	1,911

Electricity from Water Demand	kWh/yr	GWh/yr
Total	132,394	0.132

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Natural Gas	kBtu/yr	cubic foot (cf)
Day-Care Center	35,858	34,646
Hospital	699,408	675,757
Hospital	173,233	167,375
Hospital	3,306,320	3,194,512
Project Total	4,214,819	4,072,289

Project Net Total **4,214,819** **4,072,289**

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Conversion factor of 1,035 Btu per cubic foot based on United States Energy Information Administration data (see: USEIA, Natural Gas, Heat Content of Natural Gas Consumed, February 28, 2018, https://www.eia.gov/dnav/ng/ng_cons_heat_a_EPGO_VGTH_btucf_a.htm. Accessed September 2018.)

Mobile Fuel Usage

Annual VMT (All): 4,266,264 miles/year (from CalEEMod)
 (With trip and VMT reductions from land use characteristics and proximity to public transit.)

Fuel Type: ¹	GAS	DSL	ELEC
Percent:	95.84%	3.57%	1.62%
Miles per Gallon Fuel:	20.67	7.85	-
Annual VMT by Fuel Type (miles):	4,088,931	152,417	69,052
Annual Fuel Usage (gallons):	197,809	19,417	-
Project Fuel Consumption	197,809	19,417	
Annual Fuel Savings from Electric Vehicles: ²	-	-	3,341

	Los Angeles County Fuel Consumption ³	
	Gasoline	Diesel
Los Angeles County:	3,659,000,000	590,196,078
Project Annual:	197,809	19,417
Percent Net Project of Los Angeles County:	0.0054%	0.0033%

Notes:

1. California Air Resources Board, EMFAC2014 (Los Angeles County; Annual; 2018, Aggregate Fleet).
2. Assumes electric vehicles would replace traditional gasoline-fueled vehicles.
3. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017.
 Available at: http://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.
 Accessed October 2018. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales

Row Labels	Sum of Population	Sum of VMT	Sum of Fuel_Consumption
Los Angeles	6672928.949	236111188	12545.13584
2018	6672928.949	236111188	12545.13584
DSL	238397.3206	15313777.62	1950.849182
ELEC	38971.48086	1801840.465	0
GAS	6395560.147	218995569.9	10594.28665
Grand Total	6672928.949	236111188	12545.13584

Fleet Average Fuel Factors

Los Angeles	Population	VMT (mi/day)	Fuel Consumption (1000gal/day)	Fuel Type	gal/mile	mile/gal
2018	6672928.95	236111187.99	12545.14			
DSL	238397.32	15313777.62	1950.85	3.6%	0.127392	7.849801
GAS	6395560.15	218995569.90	10594.29	95.8%	0.048377	20.6711

Project Operational Energy Consumption

Operational Energy Analysis

Electricity	kWh/yr	GWh/yr
Apartments Low Rise	40,520	0.041
Apartments Mid Rise	132,486	0.132
Convenience Market (24 Hour)	31,260	0.031
Convenience Market (24 Hour)	46,890	0.047
Convenience Market (24 Hour)	57,310	0.057
Convenience Market (24 Hour)	85,444	0.085
Day-Care Center	19,063	0.019
Enclosed Parking with Elevator	2,276,350	2.276
General Office Building	90,652	0.091
High Turnover (Sit Down Restaurant)	196,750	0.197
High Turnover (Sit Down Restaurant)	31,480	0.031
High Turnover (Sit Down Restaurant)	35,415	0.035
High Turnover (Sit Down Restaurant)	59,025	0.059
High Turnover (Sit Down Restaurant)	70,830	0.071
Hospital	1,377,120	1.377
Hospital	2,042,880	2.043
Hospital	2,152,320	2.152
Hospital	3,289,580	3.290
Hospital	465,120	0.465
Medical Office Building	524,000	0.524
Total	13,024,494	13.024
Total (including water, see below)	14,292,840	14.293
Existing Energy Consumption	1,625,385	1.625
Net Project Energy Consumption	12,667,455	12.667

Electricity	GWh/yr
SCE 2017 Electricity Sales	85,879
Project Annual	14.29
Existing Annual	1.63
Net Project Annual	12.67
Percent Net Project of SCE	0.00015

Source: Southern California Edison

[2017 Financial and Statistical Report](#)

Water		Mgal/yr	
Apartments Low Rise		1.062	
Apartments Mid Rise		3.612	
Convenience Market (24 Hour)		2.533	
Day-Care Center		0.635	
Enclosed Parking with Elevator		-	
General Office Building		2.482	
High Turnover (Sit Down Restaurant)		3.229	
Hospital		76.386	
Medical Office Building		7.469	
	Total	97.408	
Electricity Intensity Factors		kWh/Mgal	
Electricity Factor - Supply		9,727	
Electricity Factor - Treat		111	
Electricity Factor - Distribute		1,272	
Electricity Factor - Wastewater Treatment		1,911	
Electricity from Water Demand		kWh/yr	GWh/yr
	Total	1,268,346	1.268

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Natural Gas	kBtu/yr	cubic foot (cf)	Per day Usage	Natural Gas	million cubic foot (cf)
Apartments Low Rise	134,661	129,856		SoCalGas 2017 Sales	913,960
Apartments Mid Rise	302,937	292,128		Project Annual	43.78
Convenience Market (24 Hour)	10,660	10,280		Existing Annual	4.07
Convenience Market (24 Hour)	3,900	3,761		Net Project Annual	39.71
Convenience Market (24 Hour)	5,850	5,641		Percent Net Project of SoCalGas	0.004%
Convenience Market (24 Hour)	7,150	6,895		Source: California Gas and Electric Utilities, 2018 California Gas Report, p. 101, 2018.	
Day-Care Center	31,359	30,240		https://www.socalgas.com/regulatory/documents/cgr/2018_California_Gas_Report.pdf	
Enclosed Parking with Elevator	0	-			
General Office Building	64,010	61,726			
High Turnover (Sit Down Restaurant)	1,089,350	1,050,482			
High Turnover (Sit Down Restaurant)	174,296	168,077			
High Turnover (Sit Down Restaurant)	196,083	189,087			
High Turnover (Sit Down Restaurant)	326,805	315,145			
High Turnover (Sit Down Restaurant)	392,166	378,174			
Hospital	1,231,140	1,187,213			
Hospital	3,645,140	3,515,082			
Hospital	5,407,360	5,214,426			
Hospital	5,697,040	5,493,770			
Hospital	8,707,300	8,396,625			
Medical Office Building	370,000	356,798			
Cogen Engine	17,607,600	16,979,364			
Project Total	45,404,807	43,784,770	119,958.28		
Existing Total	4,214,819	4,072,289			
Project Net Total	41,189,988	39,712,481	119,958		

Source: California Air Resources Board, CalEEMod, Version 2016.3.2.

Conversion factor of 1,037 Btu per cubic foot based on United States Energy Information Administration data

<https://www.eia.gov/tools/faqs/faq.php?id=45&t=8>

Mobile Fuel Consumption

Annual VMT (All): 24,944,100 *Based on Traffic Study's VMT Analysis*

Fuel Type:¹	GAS	DSL
Percent:	83.28%	8.62%
Miles per Gallon Fuel:	32.02	8.87
Annual VMT by Fuel Type (miles):	20,772,514	2,148,976
Annual Fuel Usage (gallons):	648,669	242,352
Annual Fuel Usage with Emer.Gen. (gallons):		258,464
Project Fuel Consumption	648,669	258,464

Los Angeles County Fuel Consumption²		
	Gasoline	Diesel
Los Angeles County:	3,659,000,000	590,196,078
Project Annual:	648,669	258,464
Existing Annual:	197,809	19,417
Net Project Annual:	450,860	239,047
Percent Net Project of Los Angeles County:	0.012%	0.041%

Notes:

1. California Air Resources Board, EMFAC2014 (Los Angeles County; Annual; 2041, Aggregate Fleet).
2. California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2017.
Available at: http://www.energy.ca.gov/almanac/transportation_data/gasoline/piira_retail_survey.html.
Accessed October 2018. Diesel is adjusted to account for retail (51%) and non-retail (49%) diesel sales

Stationary Source Energy Consumption

Total				
Fuel Consumption	MMBTU/yr	Fuel Type		MMscf
Cogen Engine	17607.60	Natural Gas		16.9794
Fuel Consumption	Total CO ₂	Fuel Type	Fuel Factor	Gallons
Emergency Generator	165.30	Diesel	10.26	16,111

Assumptions

10.26 diesel KgCO₂/gallon¹

1 MT = 1,000 kilograms

1037 BTU=1 scf

Notes:

1. [California Climate Action Registry, General Reporting Protocol v2.2, Tables C.3, C.5, and C.6, March 2011](#)
2. Conversion factor of 1,037 Btu per cubic foot based on United States Energy Information Administration data <https://www.eia.gov/tools/faqs/faq.php?id=45&t=8>

Combined Heat and Power¹

CHP	Quantity	Electrical Output (kW)	Thermal Output (MMBtu)	Hours per day	Hours per Year ¹	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/year)	Annual Heat Input (KBtu/year)
2D	1	100	0.67	24	8760	16	5869	5,869,200
2D	1	100	0.67	24	8760	16	5869	5,869,200
2D	1	100	0.67	24	8760	16	5869	5,869,200

CHP	lb/year					
2D-CHP-1	87.60	61.32	175.20	3.45	0.45	0.45
2D-CHP-2	87.60	61.32	175.20	3.45	0.45	0.45
2D-CHP-3	87.60	61.32	175.20	3.45	0.45	0.45
Total	262.80	183.96	525.60	10.35	1.36	1.36

Annual Emissions

CHP	CO2	CH4 MT/year	CO2e
2D-CHP-1	292.85	3.33	1128
2D-CHP-2	292.85	3.33	
2D-CHP-3	292.85	3.33	
Total	878.54	9.98	

Annual Heat Input

CHP	Annual Heat Input (MMBtu/year)	Annual Heat Input (KBtu/year)
2D-CHP-1	5,869	5,869,200
2D-CHP-2	5,869	5,869,200
2D-CHP-3	5,869	5,869,200
Total	17,608	17,607,600

Notes:

- 1 [Operational Hours/Engine Information](#)
- 2 [Tecogen InVerde+ Cogeneration Emission Factors](#)
- 3 [Cogen SO2, PM10, PM2.5, CO2, CH4 Emission Factors from EPA AP-42 Table 3.2-1](#)

Row Labels	Sum of VMT	Sum of Fuel_Consumption
2041	267636800.4	9560.17914
DSL	23057360.1	2600.310551
ELEC	21701514.98	0
GAS	222877925.3	6959.868588
Grand Total	267636800.4	9560.17914

Fleet Average Fuel Factors

Fuel Type	VMT (mi/day)	Fuel Consumption (1000gal/day)	gal/mi	Fleet Distribution	mi/gal
DSL	23057360.1	2600.310551	0.112775727	9%	8.87
GAS	222877925.3	6959.868588	0.031227267	83%	32.02

EMFAC2014