



Appendix H

Energy Documentation

Construction Fuel Consumption

On-Site Diesel ¹ (off-road construction Equipment)	MTCO ₂ e	Gallons of Fuel ⁴	San Bernardino County Fuel (Start of Construction)	Percent
Demolition	17	1,652		
Site Preparation	20	1,945		
Grading	81	7,988		
Construction/Installation	133	13,072		
Architectural Coating	0	0		
Total	250	24,657	281,399,849	0.0088%

Off-Site Diesel ¹ (on-road construction trips)				
Demolition	17	1,652		
Site Preparation	11	1,071		
Grading	13	1,277		
Construction/Installation	52	5,136		
Architectural Coating	0	0		
Total	93	9,137	281,399,849	0.0032%

Off-Site Gasoline ²				
Demolition	6	628		
Site Preparation	9	1,021		
Grading	11	1,218		
Construction/Installation	19	2,160		
Architectural Coating	0	0		
Total	44	5,028	828,612,797	0.0006%

Total Diesel Fuel		33,794	281,399,849	0.0120%
Total Gasoline Fuel		5,028	828,612,797	0.0006%
Total Construction Fuel	387	38,822		

Construction Phase ³	Demolition			Site Preparation			Grading		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2025	25	17	6	20	11	9	81	13	11
Total	25	17	6	20	11	9	81	13	11

Construction Phase ³	Construction/Installation, PV Vendor Trips ⁵			Paving					
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2025	133	52	19	1		3			
Total	133	52	19	1	-	3	-	-	-

Notes:

¹ Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

² Fuel used for worker trips assumed to be gasoline.

³ MTCO₂e rates from CalEEMod (3.0 Construction Details).

⁴ For CO₂e emissions, see Chapter 13 (page 94): Conversion Ratios: Climate Registry, General Reporting Protocol, 2016.

⁵ Construction/Installation vendor trips include PV panel deliveries.

Construction Water Energy

Water Energy Intensity ¹	2,701	kWh/MG
Total Construction Water ²	4.24	million gallons
Construction Water Energy	11,452	kWh
San Bernardino County Annual	10,327,755,820	kWh
Energy (GWh)		
Percentage of County	0.000001	

Notes:

¹ Water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343.

² Total Construction Water based on applicant input.

Electricity/Natural Gas Energy

	Mitigated Project Annual Energy	San Bernardino County Annual Energy ³	Percentage Increase
Electricity (kWh/yr)	0	10,327,755,820	0.0000000%
Natural Gas (kBTU/yr)	0	0	NA
Natural Gas (therms/yr)	0	0	NA

Land Use	Electricity ¹ (kWh/yr)		Natural Gas ² (kBTU/yr)	
	Unmitigated	Mitigated	Unmitigated	Mitigated
	0	0	0	0
Total Energy	0	0	0	0

Notes:

¹ Electricity use per CalEEMod (5.3 Energy by Land Use).

² Natural Gas use per CalEEMod (5.2 Natural Gas by Land Use).

³ County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov. (year 2020)

Operational Water Energy

Mitigated Indoor	0.00	million gallons
Indoor Energy Intensity Factor ¹	2,701	kWh/MG
Mitigated Outdoor	0.10	million gallons
Outdoor Energy Intensity Factor ²	3,472	kWh/MG
Operational Water Energy	347	kWh
San Bernardino County Annual Energy (GWh)	10,327,755,820	kWh
Percentage Increase	0.00000003	

Notes:

¹ Indoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply

² Outdoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply

³ Operational water use values per CalEEMod (7.2 Water by Land Use).

Operational Fuel

Vehicle Type	Annual VMT ¹	MPG ²	Annual Fuel (Gallons)	Fuel Type	San Bernardino Gallons ³	RS Percent
Passenger Cars	0	21.6	0	Gas	828,612,797	0.00000%
Light/Medium Trucks	0	17.2	0	Diesel	281,399,849	0.00000%
Heavy Trucks/Other	111	6.1	18	Diesel	281,399,849	0.00001%
Trucks Total			18		281,399,849	0.00001%
Total	111					

Notes:

¹ Total annual operational VMT based on mitigated annual VMT from CalEEMod (4.2 Trip Summary Information).

² Average fuel economy derived from Department of Transportation.

³ Total annual county fuel per EMFAC 2021 model of projected operational fuel usage.