

Appendix E

Energy: Fuel Use Calculations

Fountain Wind Project Fuel Use

6/26/2020

CO₂ emissions from AQ Calculations:

		Conversion	1 MT =	1000 kg
Diesel Sources during Construction				
		CO ₂ Emissions		
Off road equipment (year 1)		3301.9331	MT	
Off road equipment (year 2)		1447.4337	MT	
Haul trucks (year 1)		1610.14	MT	
Haul trucks (year 2)		2593.98	MT	
TOTAL Diesel Sources =		8953.48	MT	
Convert to kilograms		8.95E+06	kg	

Diesel fuel combustion^a = 10.21 kg CO₂/gallon

Diesel Combustion Rate = 876,932.81 gallons (over construction period)

Gasoline Sources during Construction				
		CO ₂ Emissions		
Construction workers (year 1)		387.46	MT	
Construction workers (year 2)		378.62	MT	
TOTAL Gasoline Sources =		766.08	MT	
Convert to kilograms		7.66E+05	kg	

Gasoline fuel combustion^a = 8.78 kg CO₂/gallon

Gasoline combustion rate = 87,252.97 gallons (over construction period)

Aviation Gasoline Sources during Construction		CO ₂ Emissions
Transmission Line Connection Stringing		21.30 MT
Overhead Collection System Stringing		106.51 MT
TOTAL Aviation Gasoline Sources =		127.81 MT
Convert to kilograms		1.28E+05 kg

Aviation gasoline fuel combustion^a = 8.31 kg CO₂/gallon

Aviation gasoline combustion rate = 15,380.05 gallons (over construction period)

Diesel Sources during Operation		CO ₂ Emissions
Emergency Generator		10.21 MT
Cranes and other equipment		96.00 MT
TOTAL Diesel Sources =		106.21
Convert to kilograms		1.06E+05 kg

Diesel fuel combustion^a = 10.21 kg CO₂/gallon

Diesel Combustion Rate = 10402.10 gallons (annually during operation)

Gasoline Sources during Operation		CO ₂ Emissions
Employees		136.46 MT
Convert to kilograms		1.36E+05 kg

Gasoline fuel combustion^a = 8.78 kg CO₂/gallon

Gasoline combustion rate = 15541.60 gallons (annually during operation)

Notes: ^a Emissions factors per The Climate Registry 2019 Default Emission Factors (Table 2.1 - US Default CO₂ Emission Factors for Transport Fuels)