

CO2 EMISSIONS FROM REFINING DIESEL

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In the following calculation, I will prove how much CO2 will be released from the refining process of one gallon of diesel.

88.5 %	Refining efficiency of one gallon of Diesel (average).	1
0.115 gal	Units of energy burned per unit energy refined	
138095 Btu/gal	Crude Oil Properties	2
18394 Btu/lbs	* 7.08 lbs/gal = 130211 BTU/gal Diesel	3
0.115 gal	* 130211 BTU/gal = 14974 BTU Oil to produce 1 gal Diesel	
14974 Btu/gal	/ 138095 BTU/gal = .1084 gal Oil to produce 1 gal Diesel	
	*	
	20.0559 lbs CO2/gal of oil burned	4
	=	
	2.1741 lbs CO2 to produce 1 gal Diesel	

That's 2.1741 lbs CO2 emitted from refining one gallon of diesel.

¹ www.transportation.anl.gov/modeling_simulation/GREET/pdfs/energy_eff_petroleum_refineries-03-08.pdf

² www.eia.doe.gov/kids/energyfacts/science/energy_calculator.html

³ www.eere.energy.gov/afdc/pdfs/fueltable.pdf

⁴ www.afteroilEV.com/Pub/CO2_Emissions_from_Fuel_Combustion.pdf