

CO2 emissions from Antea Clinker production (base data)		
	Value and unit	Data source:
Calcinations process	525 kg/t clinker	The Cement CO2 Protocol, WBCSD working group Oct. 2001
Fuel firing	750 kcal/kg clinker = 3.14 GJ/t clinker	Design specifications for Antea plant
Electricity consumption	0.1 MWh/t cement	Design specification for Antea plant
Coal as fuel	96 t CO2/ 1000 GJ	Based on WBCSD latest version
Electricity production	58 kg CO2 / MWh	WBCSD, CO2 Accounting and Reporting Standards for the Cement Industry, June 2005. Albanian national data
CO2 emission from electricity production	58 kg CO2/MWh * 0.1 MWh/t cement = 5.8 kg CO2/ tons cement	
Clinker percentage in cement (base data)		
	Value and unit	Data source:
Cement average blend	78% clinker	Antea operational assumption

Fuel caused CO2 emissions at Antea (clinker based):		
Coal:	$96 * 3.14 =$	301 kg CO2 / t clinker
Combined calcinations and fuel caused CO2 emissions (clinker based):		
Coal	$301 + 525 =$	826 kg CO2 / t clinker
Final emissions per unit cement, including electricity caused emission:		
Coal based,average blend	$0.78 * 826 + 5.8 =$	650 kg CO2 / t cement

Total CO2 emissions based on average blended cement (78% clinker) and a total production of 1.50 M tons of cement per year:		
Coal	$1.50 * 0.650 =$	975,000 tons CO2 / year