

Baseline calculations for KSPL WHR CPP

Total installed capacity of the WHRB Captive Power Plant	10	MW
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Baseline emission factor (from two alternatives)

steam required per MWh as per manufacturer	4000	kgs
steam enthalpy at 67 bara and 490 deg C	3391.48	kJ/kg
boiler feed water temperature	120	degC
boiler feed water enthalpy from ISI steam tables	506	kJ/kg
enthalpy added in boiler per kg of steam	2885.48	kJ/kg
enthalpy added per MWh power generation	11541920	kJ
enthalpy added per MWh power generation	2761224.88	Kcal
NCV of coal	4500	Kcal/Kg
NCV of coal	4500000	Kcal/tonne
Generation per tonne of coal	1.62971152	MWh/tonne of coal
Carbon dioxide emission factor	1.779426	tCO ₂ e/Tonne of coal
Baseline emission factor per MWh	1.09186563	tCO ₂ e/MWh
Baseline emission factor per GWh	1091.86563	tCO ₂ e/GWh

Baseline emission factor per GWh (Grid as baseline)	927.19	tCO ₂ e/GWh
Baseline emission factor per GWh (Coal as baseline)	1091.87	tCO ₂ e/GWh