

Variable Cost

Sl	Item	Cost
1	Oil Consumption: 1 ml per unit is the agreed norm	.001 lit /unit
2	Cost of oil @ INR 10 per ltr (1 X 2)	Rs .01/ unit
3	Calorific value of oil	10,000 Kcal / lit
4	Heat contribution of oil (1 X 3)	10 K cal/ unit
5	Station heat load (as per norm)	2425 K cal /unit
6	Contribution of coal = 2425 – 10 (5 - 4)	2415 K cal /unit
7	Calorific value of coal	4000 K cal /Kg
8	Coal consumption 6/7	.6 Kg /unit
9	Cost of coal (Approx rate 1000 per ton)	INR .6 / unit
10	Total fuel cost 2+ 9	INR .61 / unit

K for kilo ie, 1000

1 calorie is the energy required to raise the temperature of 1 ml of water by 1°C

Calorific value is the heat generated 1 kg of fuel is burnt

APC (Auxiliary power consumption) is the power consumed by the drives like fans, pumps, coal mills etc which accounts to about 6.5 % in a typical 500 MW power plant. The ex – bus (*Generated minus consumed in the plant itself, i.e. available for sale*) fuel cost is adjusted for this APC

$$\text{Adjusted fuel cost} = \frac{\text{Fuel cost}}{1 - .065} = \frac{.61}{.935} = .65 / \text{unit}$$