



ACTIVE CARBON INDIA PRIVATE LIMITED

Replacement of Incandescent Lights with Fluorescent Lights

SUMMARY OF THE OPTION

Active Carbon India Pvt. Ltd., with a plant capacity of 1500 tons/year is a leading manufacturer of granular activated carbon prepared from coconut shell charcoal by using the steam activation technique. The plant operates two rotary kilns in parallel which are considered to be the heart of the carbon activation process.

The plant has provided 45 housing quarters for the employees and workers. In most of these housing units, inefficient incandescent lamps were used. A total of 50 lamps each of 100 Watts were being used to meet the illumination requirements in these residential quarters. In order to create an awareness of energy efficiency amongst employees, improvement of the lighting system in the residential quarters was carried out by the Team.

KEY WORDS

India, Chemicals, Lighting, Incandescent lights, Fluorescent tube lights

OBSERVATIONS

A total of 50 lamps of 100 Watts each were used for meeting the illumination requirements in the residential quarters of the employees.

OPTIONS

A total of 50 lamps of 100 Watt inefficient incandescent lamps were replaced by more efficient fluorescent tube lights of 20 W each.

RESULTS

Financial benefits:

- Investments: US\$ 1363
- Annual cost savings: US\$ 1243 (= 9650 kWh/yr * Rs.5.67/kWh) (@ Rs.43/ US \$)
- Payback period: 14 months

Environmental benefits:

- Annual electrical energy savings at end use (for 50 tube lights): 9650 kWh
 - Lighting power consumption before installation of fluorescent tube lights =438 kWh (= 100 W X 12 hrs/day X 365 days/yr)
 - Lighting power consumption after installation of fluorescent tube lights= 245 kWh (= 56 W X 12 hrs/day X 365 days/yr)
 - Reduction in annual power consumption: 193 kWh
 - Total reduction: 193 kWh X 50 light bulbs
- Annual GHG reduction: 8.5 Tons of CO₂ (= 9650 kWh * 0.000893 tons of CO₂/kWh) [1]



ACTIVE CARBON INDIA PVT. LTD: *Replacement of Incandescent lights with fluorescent lights*

FOR MORE INFORMATION

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