

Second Prize

Hospitals

(Less than 10 lac kWh/year consumption)

DIVISIONAL RAILWAY HOSPITAL

Bhavnagar (Gujarat)

Unit Profile

The Divisional Railway Hospital, Bhavnagar Para is a 107 bedded hospital which is more than 59 years old. This building has its historical value as it was inaugurated by COMMODORE HIS HIGHNESS THE MAHARAJA SIR KRISHNAKUMARSINHJI BHAVSINHJI, K.C.S.I., MAHARAJA OF BHAVNAGAR, UPARAJPRAMUKH OF SAURASHTRA on 15th August 1956. This hospital is currently serving Railway staff from different Health units in Dholka, Botad, Dhola, Mahuva, Jetalsar, Junagadh, Gondal, Veraval, Porbandar and the Broad Gauge workshop, Bhavnagar Para.

The Hospital caters to about 8000 employees and their families and also about 5000 retired employees and their dependents. The Railway Hospital has cadre strength of 14 doctors, 104 Paramedical staff headed by Chief Medical Superintendent. It has one Ambulance and one Road mobile van-cum-ambulance.

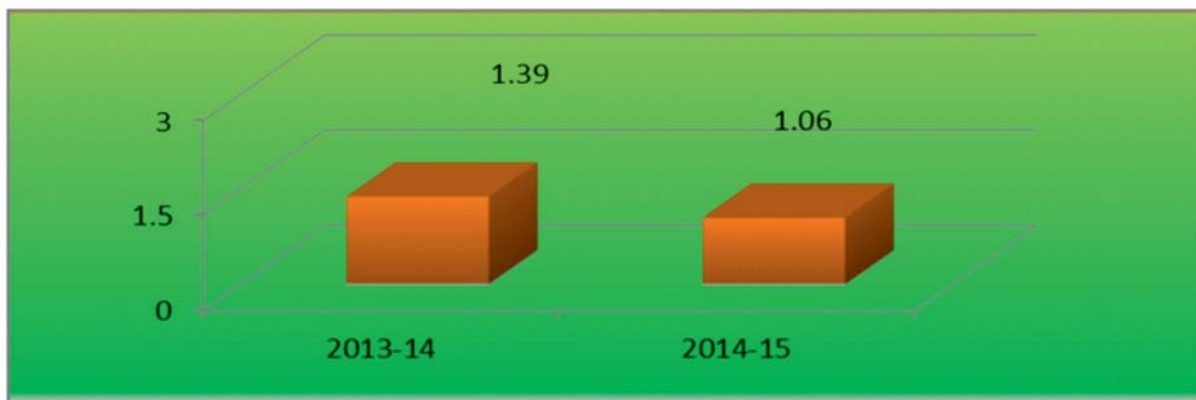
The total built-up area of the Divisional Railway hospital is 3181 sq.m with Air-conditioned and non air conditioned area of 626.94 sq.m and 3808 sq.m respectively. The connected load of the building is 94.5 KW, with annual consumption of 3.064 lac units during 2014-15. The power supply is availed from PGVCL(GEB) at 11 KV 3 phase AC which is stepped down to 415 V 3 phase AC. The contract demand of the building complex is 120 KVA.



Energy Conservation

Sr No	Energy used	Units	2013-14	2014-15
1	Electricity purchased	Lac kWh	1.35	1.05
2	Self generated	Lac kWh	0.04	0.012
3	Total Electricity Consumption	Lac kWh	1.39	1.06
4	Energy saving	Lac kWh		0.328
5	Saving over previous year	% age		23.5

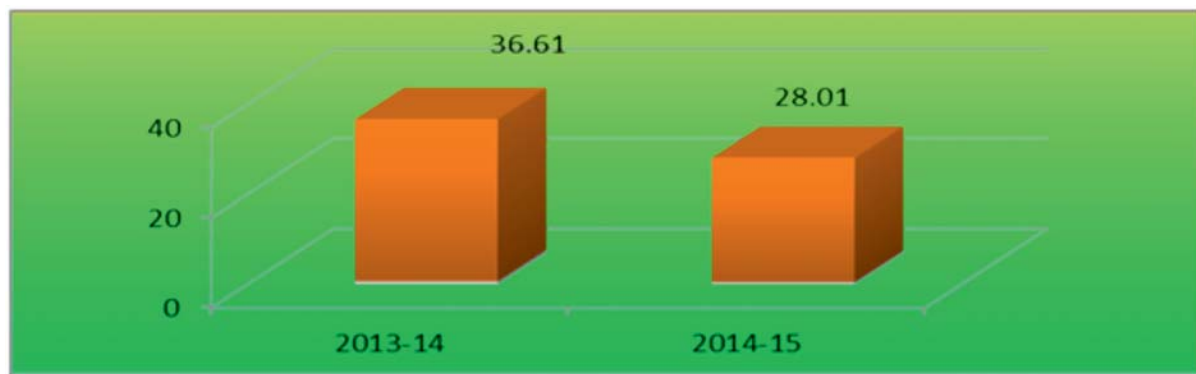
Comparative Energy Consumption in Lac Unit:



Specific Energy Consumption Reduction:

Item	2013-14	2014-15
Connected load in(kW	94.5	94.5
Consumption in lac(kWh	1.39	1.06
Built up area in sq mtrs	3808	3808
Consumption per built up area in(kWh /sq m	36.61	28.01
Reduction over previous year		23.48%

Comparative specific consumption in kWh/sq meter



Energy Conservation Measures at Bhavnagar Divisional Hospital:

Due to implementation of various Energy Conservation measures like provision of energy efficient fans and T5 & CFL lights, the Railway Hospital has been able to save 0.966 lacs units resulting in a recurring saving of Rs. 5.998 lacs achieved by investing Rs. 9.98 lacs during the year 2014-15.

S. No.	Energy Conservation Measure	Saving in lac unit
1	Replacement of T-81T-12 fitting by T-5 fitting	0.164
2	Replacement of Old fans (75 W) by New fans (50 W)	0.163

Energy policy of Indian Railway

1. Saving up to **15 %** of energy through improved energy efficiency in both traction as well as Non traction use.
2. Sourcing at least **10%** of energy used from Renewable energy sources such as Solar power and Biomass.
3. Energy audits to improve energy efficiency on thousands of its Stations and offices and adoption of **LED** lighting and Energy conservation Building Code (**ECBC**).
4. Procurement of only **3 star and above** higher rated products for achieving energy efficiency.
5. Annual reduction of **0.14 million tones of CO2** emissions through free distribution of 4 CFLs per family of Railway employees in replacement of energy inefficient incandescent lights.