

ELECTRICITY EXPENSE REDUCTION IN SHELTER BTS & SMALL CAPACITY EXCHANGES WITH DC FANS/FREE COOLING UNITS

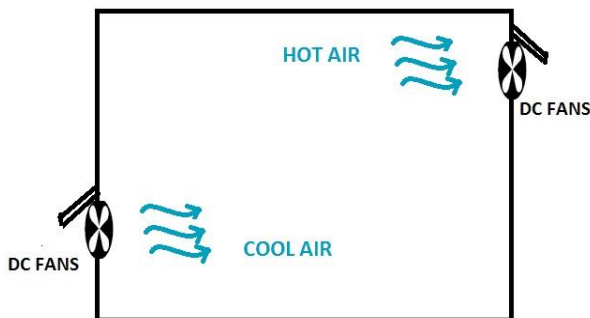
APPROXIMATE POWER CONSUMPTION:

AC TYPE	CAPACITY	W/HR	UNITS/DAY AVG 15 HRS	UNITS/MONTH UNITX30DAYS
SPLIT	1.5T	1500	22.5	675 UNITS
WINDOW	2T	1700	25.5	765 UNITS

ON AN AVERAGE 9/- PER UNIT APPROXIMATELY SPENDING
6000/- TO 7000/- PER AC UNIT/MONTH

FOLLOWING STEPS FOR REDUCTION

1. The basic air circulation in shelter for fitting DC fans for maintaining Shelter Temperature with Ambient/Outside Temperature & completely switching off AC is given in below sketch.



FREE COOLING OF
SHELTERS WITH DC FANS

2. DC Fans are abundantly available in Huawei 1800BTS dummy cabinets which are about to be scrapped.

3. Each DC fans consumes Max 2A DC , with 2 Fans approx additional DC load 3-4A.
4. If 1 FCU(Free cooling Unit) is already fitted in BTS shelter, additional Exhaust Fan may be fitted, that is sufficient.
5. For avoiding dust entry to shelter a filter is required wherever necessary.



6. After 1 month of DC fan installation in various NBSNL shelter BTS of Mysore in 10 sites the reduction in Electricity bill is approximately 75000/- per month. Annually Approx 8lakh is reduced further Power sanctioned load may be reduced as per requirement.

SL NO	SITE NAME	AUGUST-19 BILL AMOUNT	No of units	NOVEMBER-19 BILL AMOUNT	No of units	DIFFERENCE
1	Railway Layout	48349	4279	34576	3276	13773
2	BALAJI GLASS AND PLYWOODS	29469	2850	19828	1781	9641
3	A T I (K C LAYOUT)	29181	2806	22285	2020	6896
4	G S ASHRAM	27518	2680	14179	1330	13339
5	SHARADA DEVI NAGARA	27213	2605	21459	1963	5754
6	ASHRAYAHOTEL	24143	2306	17118	1546	7025
7	RAMA PRATHANA MADIRA	23850	2262	14578	1370	9272
8	JP Nagara DS	22865	2192	19867	1835	2998
9	NILAGIRI ROAD	21257	2032	18979	1800	2278
10	J C NAGAR (OPP)	17349	1612	12726	1125	4623
TOTAL EXPENDITURE REDUCTION			25624		18046	75599/- (7578 units)

Cost per site for Installation:

Onetime Purchase of Grinder/Shelter Cutter Tool costing around 1500/-

Purchase of Screw, Washer, and Iron Mesh around 100 /-per site.

Filters are available on BTS doors.

Note:

1. Avoid direct air blow to any Transmission equipments.
2. Care should be taken with Slant Bent of Outside sheet to avoid rain water entry.
3. Microcontroller Based timer can be used to further control running Hrs of DC fan.
4. It can be used in Shelter(2g&3g) , Anrax/small exchanges.

Any suggestions/Improvements pls nwocmmysore@gmail.com.