

**DAK BHAWAN**  
**(Patel Chowk Ashoka Road, New Delhi.-1)**

**GENERAL :-**

Dak Bhawan houses the office of MOS C&IT, Secretary Department of Posts and attached offices of the department. Sansad Marg head Post office/Philately museum and inspection quarters is also housed in the same building. The building has ground and five floors.

**MAINTENANCE RETROFIT MEASURES :-**

The building electrical maintenance is carried by the Electrical Engineers of Department of Posts. The energy audit of the building has been carried out in house and the energy wastage points identified and thereafter the energy conservation measures have been initiated from year 2003-04. This has resulted into savings as given in the graphic representation (Annexure B,C). The following steps/measures have been taken up.

- ❖ Four numbers DC drive lifts have been replaced by VVVF AC drive lifts.
- ❖ 2x40 W fittings replaced with 2x11 W energy saver fittings in all stairs and lobby.
- ❖ 4x20 W fittings at lift lobbies on each floor were replaced by 2 nos 2x11 W energy saver fittings.
- ❖ 2x40 W Fittings replaced with 1x40 W fittings in corridors No expenditure incurred as the old fitting were reused.
- ❖ Re-Orientation of fittings has been done in order to reduce the numbers of fittings and old 2x40 W fittings were replaced by 1x40 W fittings.
- ❖ Energy saver T-5 fittings (1x28 W) provided in place of old 2x40 W fitting in newly renovated sections.
- ❖ The ceiling fans installed in the corridors and lift lobbies removed.
- ❖ The old fans in some rooms are replaced by the new fans consuming less electricity.
- ❖ After office hours three out of five lifts installed have been switched off to save the energy.
- ❖ Timers have been provided to switch off half of the total compound light at midnight, thus saving the energy.
- ❖ The load balancing has been done by equalizing the load on all three phases and continuous efforts are being made of maintain the same.
- ❖ Maintenance schedule for effective and timely maintenance have been implemented in order to reduce the losses caused by the loose connections.
- ❖ Switching off one transformer after office hours/holidays.
- ❖ The servicing and preventive maintenance of air conditioners have been taken up time to time in order to get the optimum efficiency.
- ❖ Energy saver Rotary compressors are being used as replacement of reciprocating compressors in the existing units whenever gone faulty along with digital remote controllers.
- ❖ Awareness amongst employees created by providing stickers and conducting training.
- ❖ Energy saver electronic chokes are being used in place of conventional copper choke in existing fittings in a phased manner.
- ❖ All the neon sign boards have been removed in order to save energy.

**DAK BHAWAN**

DEPARTMENT OF POSTS

MAINTENANCE RETROFIT MEASURES

**DAK BHAWAN**  
**( Patel Chowk, Ashok Road, New Delhi-11001)**

Dak Bhawan houses the office of MOS C&IT, Secretary Department of Posts and members of the postal services board and attached offices of department of posts. The building also houses a Head Post Office Parliament street & National Philately Museum.

The Dak Bhawan building was constructed 1954. The building has ground floor and five floors having a total operated area of 25000 Sq. mtr.

The connected electrical load of the building is 1118 Kw and two numbers 800 KVA transformers have been installed The total electric consumption of the building during the year 2002-03 is 13.6 Lakhs units The energy audit of the building carried out in house and energy wastage points identified. The maintenance-retrofitted measures have also been carried out in house without involving energy service company (ESCO).

Over the year following retrofitting measures for energy conservation have been carried out which has resulted into savings and during the year 2004-05 the reduction in electricity consumption achieved is 4.82 lakhs units which has resulted into saving of annual electricity bill charges of Rs. 38 Lakhs



- DC drive lifts replaced with VVVF AC drive lifts.
- 2 x 40 W fittings replaced with 2 x 11 W energy saver fittings in all stairs & lobby.
- 4 x 20 W fitting at Lift lobbies on each floor were replaced by 2 Nos. 2 x 11 W energy saver fittings.
- 2 x 40 W fittings replaced with 1 x 40 W fittings in corridors. No expenditure incurred as the old fitting were reused.
- Re-orientation of fittings have been done in order to reduce the numbers of fittings and old 2 x 40 W fittings were replaced by 1 x 40 W fittings.
- Energy saver T-5 fittings (1 x 28 W) provided in place of old 2 x 40 W fitting in newly renovated sections.
- The ceiling fans installed in the corridors and lift lobbies removed.
- The old fans in some rooms are replaced by the new fans consuming less electricity
- After office hours three out of five lifts installed have been switched off to save the energy.
- Timers has been provided to switch off half of the total compound light at midnight, thus saving the energy.
- The load balancing has been done by equalizing the load on all three phases and continuous efforts are being made to maintain the same.
- Maintenance schedule for effective and timely maintenance have been implemented in order to reduce the losses caused by the loose connections.
- Switching off one transformer on after office hours/ holidays .
- The servicing and preventive maintenance of air conditioners have been taken up time to time in order to get the maximum efficiency.
- Energy saver Rotary compressors are being used as replacement of reciprocating compressors in the existing units whenever gone faulty with digital remote controllers.
- Awareness amongst employees created by providing stickers and conducting training.
- Energy saver electronics chokes are being used in place of conventional copper chokes in existing fitting in a phased manners.
- All the neon sign boards were removed in order to save energy.

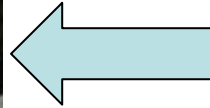








Old DC drive Lifts  
11 KW - Replaced

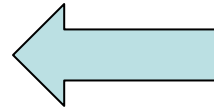


New VVVF AC Drive Lifts of 5 KW Installed.  
Power saved 6 KW / lift





**Old 2x40 w fittings replaced**

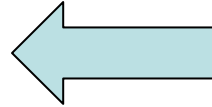


**2x11 W energy saver fitting installed  
In all stairs and lobby**

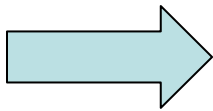




**4x20 w fittings Replaced**

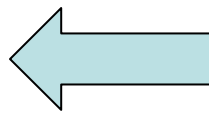


**2x11 W energy saver fitting installed  
In all lift lobbies**





**Old 2x40 w fittings replaced**

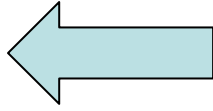


**Energy saver T-5 (28W) fitting installed**





**Old ceiling fans consuming more energy replaced**



**Ceiling fans consuming less energy installed**





*Timers provided to switch off*

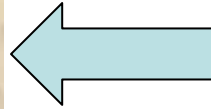
**At mid-night  
Half of the compound light to save energy**



**After office hours and on holidays one transformer is switched off to save energy**



**Old faulty reciprocating  
Compressors in  
Window AC units replaced**

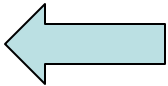


**Energy saver Rotary compressors  
installed**





**Digital remote controllers provided in window AC units**

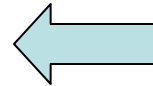


**Smart controller provided for selective / sequential operation of AC units**





Copper chokes are being replaced in a phased manner



Electronic chokes installed





अंत में कमरा छोड़ने वाला व्यक्ति  
यह सुनिश्चित कर ले कि सभी  
लाइटें, पंखे व ए.सी. आदि बंद हैं।

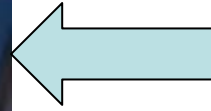
**THE LAST PERSON BEFORE LEAVING THE  
ROOM SHOULD ENSURE THAT ALL LIGHTS,  
FANS & ACs ETC. ARE SWITCHED OFF .**

7 12 2005

To create awareness amongst employees sticker provided



Neon sign display boards replaced

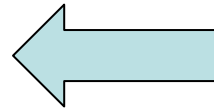


Aluminum composite panel signage installed (not consuming any energy)





**Halogen dichroic 50 W lamps in Philatelic Museum replaced**

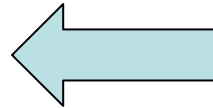


**8 W CFL lamps in philatelic Museum installed**

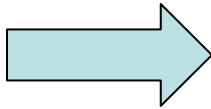




400 W halogen / HPSV lamps replaced



250 W metal halide lamps installed





- **Balancing of load**
- **Equalisation of load in 3 phases**

- **Adherence of maintenance schedule**

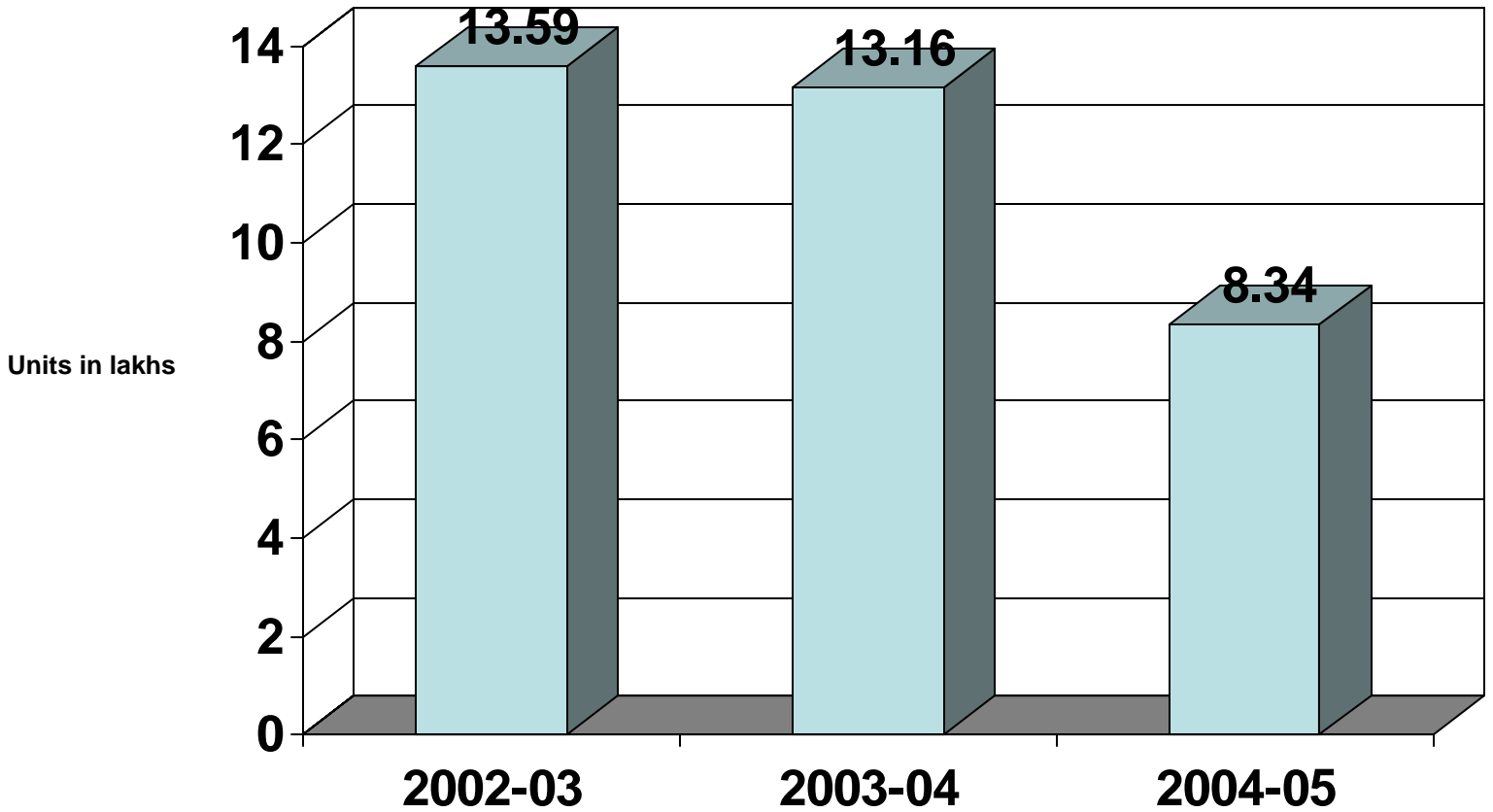


➤ Energy conservation measures incorporated in dak bhawan building resulted into savings of **4.82 lakh units** (kwh) and electricity bill charges reduction of **Rs. 38 lakh**

➤ Specific energy consumption (sec) reduction achieved.

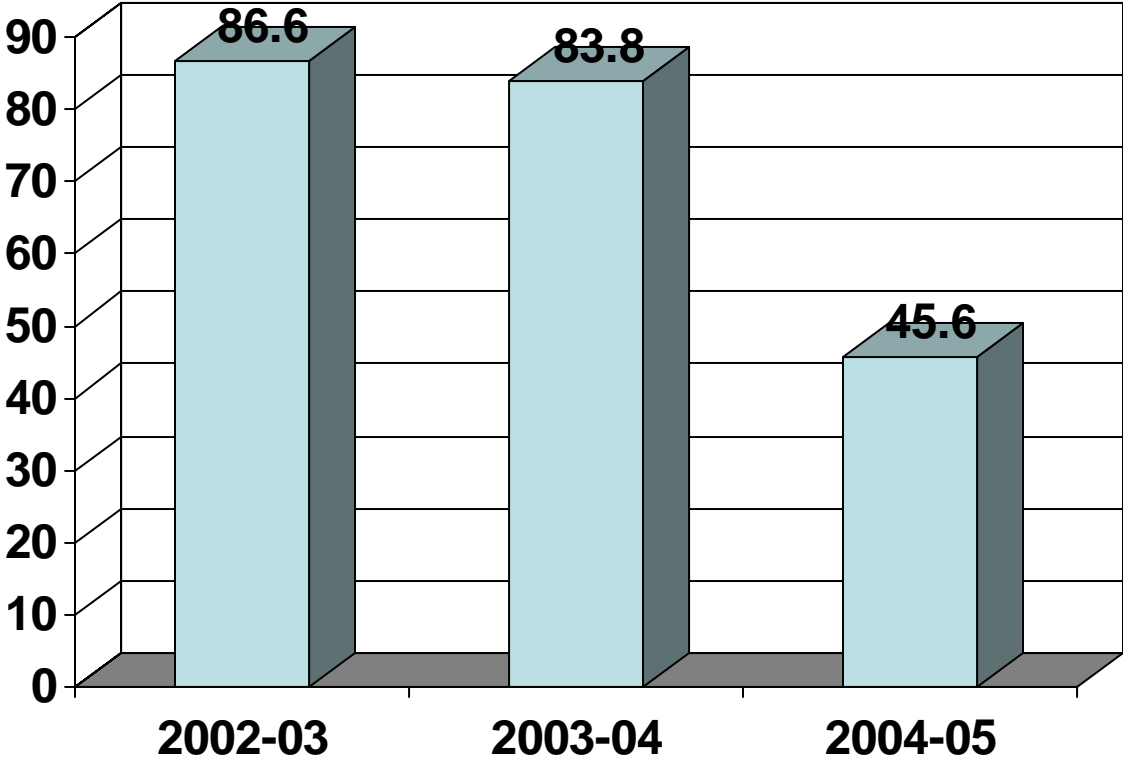
<b>YEAR</b>	<b>SEC</b>
2002-03	1216
2003-04	1182
<b>2004-05</b>	<b>782</b>

# ANNUAL ENERGY CONSUMPTION OF DAK BHAWAN BUILDING



Saving in energy consumption during 2004-05 is 4.82 lakh units

**ANNUAL ELECTRICITY BILL CHARGES OF DAK BHAWAN BUILDING**



**SAVING ACHIEVED DURING 2004-05 IS**

**Rs. 38 lakhs**