

T.E. Building Shevapet
SALEM, TAMIL NADU

❖ **UNIT PROFILE:-**

1. General Description of the Building

Telephone Exchange Shevapet, Salem is unique building of that locality having 8 floors with total Floor area admeasuring 7896 Sq.mtrs. This building is situated in the heart of the picturesque city of hills, **SALEM**.

Nearly 150 employees (Technical + Non-Technical) work in the building for 6 days in a week. The Exchange equipments work on 24x7 working pattern. The total built up area of the building is around 7896 Sq.Mtr.

This Exchange, being equipped with 32,261 + 26,000 DELs (Direct Exchange Lines), serves Business centers, Government offices, very important subscribers, VIPs etc., having high Tele Density. Besides, the building houses vital Telecom infrastructure such as Digital TAX Exchange, Internet, Intranet, OCB, STR & Trunk Exchange etc., in 6 Nos. (G+5) Technical floors. There are 8 Nos. (G+7) Non-Technical floors, abutting the Technical floors in contiguity, catering to various services and amenities such as Rest rooms for Technical staff, Post attached Staff Quarters, Inspection Quarters etc.,

The floor wise details are given below.

Name of the Block	Floor	Utilization
Technical Block	Ground Floor	MDF, Power plant, Batteries Gen- Sets, offices for out door staff, Toilet, Lift and Fire fighting (HYDRANTS) equipment, Water pump sets, Sub Stations rooms.
	First Floor	Internet, Broadband, WLL Exchange. Intranet, IMPCS BTS, offices, Lift and Toilets.
	Second Floor	WLL Exchange (proposed) Digital tax Exchange, EWSD Exchange. (Local) Lift and Toilet
	Third Floor	Transmission Room, STR Admin office, Store Room Lift and Toilet.
	Fourth Floor	CTMX, OFC Transmission Room, Store Room Admin office Lift and Toilet.
	Fifth Floor	Admin offices, conference Hall, Lift and Toilet

Name of the Block	Floor	Utilization
Non Technical Block	Ground Floor	Test desk, Store Room, Toilet, Lift and Lobby.
	First Floor	Inspection Quarters, Store Room, Toilet, Lift and Lobby.
	Second Floor	Post attached staff Quarters, Store Room, Toilet, Lift and Lobby.
	Third Floor	Dormitory for gents (staff), Hindi class Room, Store Room, Toilet, Lift and Lobby.
	Fourth Floor	Post attached staff Quarters, Store Room, Toilet, Lift and Lobby.
	Fifth Floor	Post attached staff Quarters, Store Room, Toilet, Lift and Lobby.
	Sixth Floor	Dormitory for ladies (staff), Store Room, Toilet, Lift and Lobby.
	Seventh Floor	Inspection Quarters, Toilet, Lift and Lobby.

The building receives Power supply from Tamil Nadu Electricity Board. The Power supply received is fed to the building through 2 Nos. of 500 KVA and 750 KVA Transformer Sub-Stations. Two Nos. of 500 KVA DG Sets are available to cater during Power failures and other emergency requirements.

Total Connected Load of the building is 883.1 KW.

Contracted M.D: **300 KVA**

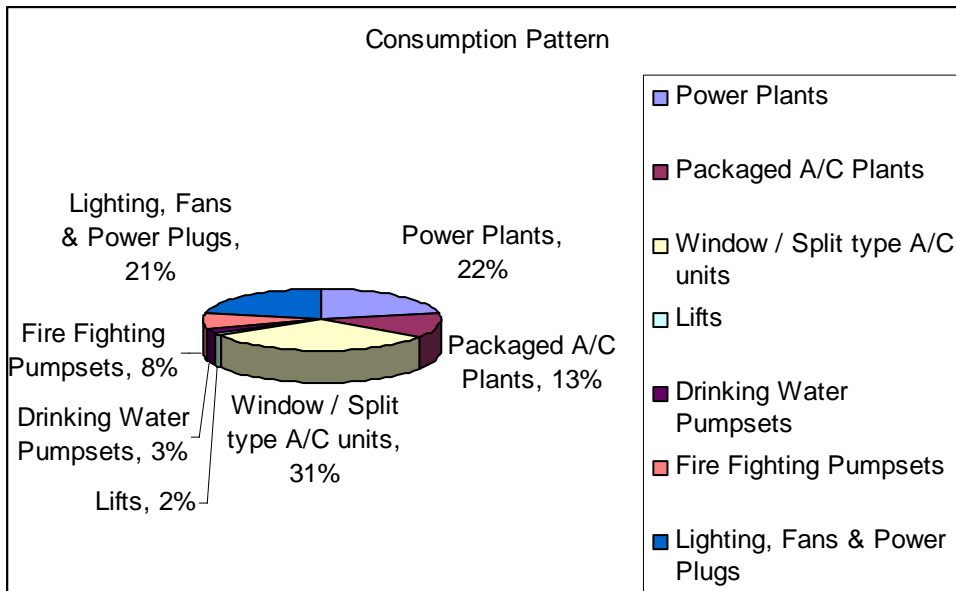
Actual M.D: **207.2 KVA**

The details of Electro-Mechanical Services available in this building are enclosed in Annexure – 'B'.

2. Energy Consumption

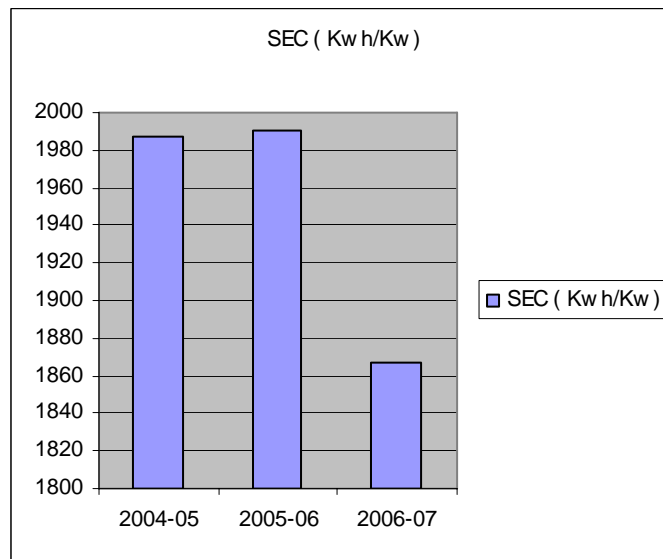
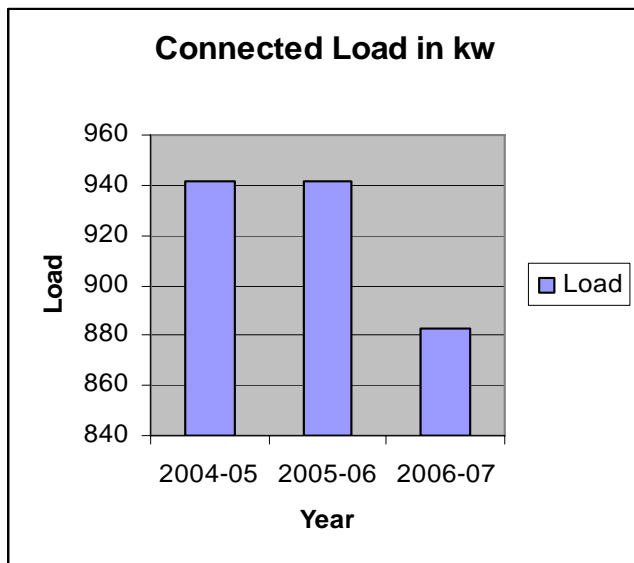
Year	Units (EB) in lakhs	EB bill (Rs. in lakhs)	Units(EA) in Lakhs	Diesel Bill (Rs) in lakhs	Total Cost (Rs.)in Lakhs	Average PF
2004-05	18.71	109.79	0.24	3	112.79	0.99
2005-06	18.74	109.73	0.3	3.75	113.48	0.99
2006-07	16.49	97.2	0.53	6.62	103.82	1.00

- The Total connected load of the building is shown below.



LOAD AND SPECIFIC CONSUMPTION: 2004 - 2007

Year	Load	Kwh in lakhs	SEC
2004-05	941.4	18.71	1987.465
2005-06	941.4	18.74	1990.652
2006-07	883.1	16.49	1867.286



There has been a reduction of 6.19% in Specific Energy Consumption as compared to 2005-06 as a result of various energy conservation measures adopted.

3. Energy Conservation Achievements

1. RATIONALISATION OF DC LOAD

4 Nos. 400A and 2 Nos. 200A Conventional type thyristor controlled power plant catering Both E10B and EWSD exchanges. After decommissioning of the E10B exchange, loads were diverted to EWSD exchange, thereby reducing the energy consumption by 20 KW. (There was no reduction in connected Telephone lines). (Details available at page no 1 of Annexure-A)

2. RATIONALISATION OF CMD

The existing CMD being 400 KVA was reduced to 300 KVA. This recommendation was implemented by the users immediately which resulted in savings of Rs. 3.60 Lakhs per annum. (Details available at page no 2 of Annexure-A)

3. IMPROVEMENT IN POWER FACTOR

By switching off the excess lighting / inductive loads and frequently monitoring the loads, the Power Factor has been improved to unity. (Details available at page no 3 of Annexure-A)

By way of reducing the Energy consumption this building has reduced the emission of CO₂ by 337.5Kg.

Rain Water harvesting:

Concerned with the depletion of water sources and to abide the ordinance of State Government Rain Water harvesting has carried out in this building.

Organizational setup:

Tamilnadu circle is responsible for maintaining and providing Telecom services in the entire state of Tamilnadu headed by Chief General Manager (HAG level officer), Tamil Nadu Circle, Chennai with 16 Secondary Switching Area located at district level are headed by General Managers (SAG level officer).

The energy conservation programme has been given a major thrust in Tamil Nadu as can be seen from the following setup available for implementing monitoring and review of various energy conservation measures.

At State Level – Energy core group consisting of following members

Chief General Manager (Telecom) Tamilnadu Circle	-	Chairman
Principle Chief Engineer (E) Tamilnadu Zone	-	Member
Principle General Manager (O) Tamilnadu Circle	-	Member
General Manager (Finance) Tamilnadu Circle	-	Member

At SSA/ District Level - Energy core group consisting of following members

PGM / GM in charge of SSA	-	Chairman
SE (E) / EE (E)	-	Member
IFA of SSA	-	Member

In order to create adequate awareness among the executives slogans are displayed various places in the buildings and energy conservation seminars/presentations are conducted at district level.

ENERGY POLICY:

BSNL Electrical Wing, Tamil Nadu is committed to conserve energy in all its operations. We shall transform energy conservation into a strategic business goal and make it as a way of life.

ENERGY OBJECTIVES:

- ❖ Energy auditing of
 - All buildings once in a year having connected load of 500 KW or more.
 - One building per quarter per sub division with sub station or AC plant of 30 Ton and above.
 - 6 buildings per quarter per sub division not covered in the above category.
- ❖ 3 Core Energy management group meeting/programme for each SSA in a year.
- ❖ Maintaining the Power factor above 0.95.

The Electrical wing placed under CGM, TN circle, headed by Principal Chief Engineer(E) responsible for implementing the energy conservation measures in Tamil Nadu. The Electrical Wing is an ISO: 9001-2000 Certified unit and has 2 Superintending Engineers located at Chennai and Madurai and 6 Executive Engineers at Chennai, Salem, Trichy, Coimbatore, Madurai and Tirunelveli with field Sub-Divisional Engineers located with each SSA's. Following Certified Energy Auditors are available in Tamilnadu Telecom Circle.

- 1) V.P. Gupta
- 2) V.Jeyapal
- 3) S.P. Singh Nimrana
- 4) S.S. Jain
- 5) S. Sathyanarayanan

Following Certified Energy Manager are available in Tamilnadu Telecom Circle.

- 1) R. Venkatesh

All buildings having connected load of more than 500 KW Connected load in Tamil Nadu have been energy audited in the year 2006-2007 and the remaining 2010 buildings having less than 500 KW connected load.1108 buildings have been energy audited by the field Engineers.