

General Services wing of Electrical Department Guntur Division



SUMMARY OF ELECTRICAL ASSETS OF POWER LIGHTING AND TL & AC

A. ELECTRICAL POWER LIGHTING:

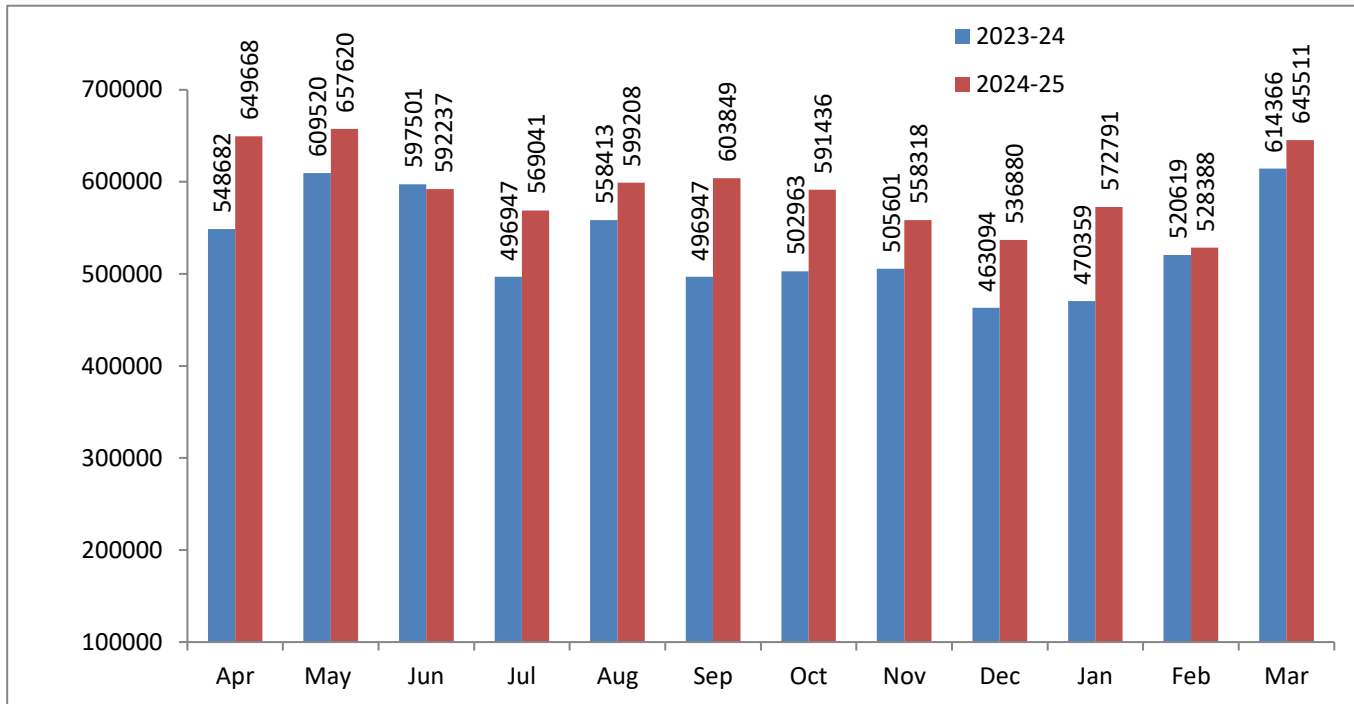
❖ Maintenance Depots	:5
❖ Stations	:77 (All are extended with power supply)
❖ OFF Grid Solar Plants	:31 (93.67Kwp in 0.25 KWp to 15 KWp capacities)
❖ ON Grid Solar Plants	:38 (575Kwp in 5 KWp to 70 KWp capacities)
❖ Lifts	:33
❖ Escalators	:5
❖ Air Conditioners	:345 (Total Capacity: 526.5TR)
❖ Pump Sets	:177 (Total Capacity: 591HP)
❖ Sub stations	:12 nos of 11kV/415V substations
❖ Number of LT Connections	:220 (Domestic -18, Pumps (LT-3) -15 Commercial -187)
❖ Total Connected load	:9587 KW
❖ Running Rooms	:6
❖ Water Coolers	:53
❖ DG Sets	:39 (Total Capacity: 2935.5 kVA)
❖ Solar power at manned LC gate	:111
❖ Solar Pumps	:13
❖ Solar Water Heaters(Total capacity)	:10500 LPD
❖ No.of High Mast Lighting system	:61

B. TRAIN LIGHTING & AIR CONDITIONING

❖ Depots	:1
❖ Primary Maintenance Rakes	:14
❖ TL Coaches	:293
❖ AC Coaches	:20
❖ Battery Chargers	:54
❖ AC Pre-Cooling Points	:74

ENERGY CONSUMPTION

A. CONSUMPTIONPATTERN:



- Total Consumption units (Discom + DG + Solar) during the year up to Mar-25 are 7.10 MKwh with a total connected load of 9527 kW where as consumption for the same of last year up to Mar-25 is 6.38 M Kwh units with a connected load of 8111 KW.
- Consumption has increased by 11.28% in comparison with 2023-24 for the same period, with an increase of 17.45 % of connected load.

Specific Energy Consumption 2023-24 Vs 2024-25

Energy Consumption in MU			Connected load in Kw			SEC in KWh/Kw		
Upto Mar-24	Upto Mar-25	% Variation	Upto Mar-24	Upto Mar-25	% Variation	Upto Mar-24	Upto Mar-25	% Variation
6.38	7.10	11.28	8111	9527	17.45	787	745	5.33

SEC improved by 5.33 % despite of increase of 17.45 % Connected Load over the Division

RELIABILITY/IMPROVEMENT MEASURES, ENERGY CONSERVATION MEASURES AND SAFETY MEASURES

A. Reliability/ improvements:

- ❖ LT OH lines for extending supply to station buildings, Staff quarters, LC gates at various stations over the division are getting affected during bad weather conditions and caused to frequent power interruptions. In order to avoid such type failures during bad weather conditions and to improve the reliability of the power supply, all these LT OH lines are proposed to replace by UG cables during the year 2024-25.

B. Energy Conservation measures during the year 2024-25 :

Energy Conservation measures:

- ❖ Total 23 Nos of energy efficient 5 star rated pumps have been provided in place of old non star rated convention pumps over the division in view of energy efficiency.
- ❖ 10 Nos of occupancy sensors have been provided to service buildings (ADEN office- at NLDA station, TPC building- GNT and DRM office/GNT).
- ❖ Total 48 Nos of 1.5 Tonne capacity split AC units have been replaced with 1.5 Tonne, 5 star rated, inverter type ACs over the division.

C.Economical measures: -

Conversion of Commercial category to Domestic category and Dwelling basis billing of LT domestic services:

- ❖ 16 Railway units (railway colonies) at 10 stations have been identified for conversion/segregation from commercial category to Domestic category and availing of the benefit of Discom bills on the basis of no.of dwelling units. Completed in 15 Rly units in which billing was implemented in 14 units thereby achieving savings in monthly bills to the tune of Rs 1.46 lakh (45% savings).

A. Energy conservation awards:

- ❖ In recognition to the achievements in Energy Conservation and Energy Efficiency in the Railway office buildings sector for the year 2024, Andhra Pradesh State Energy Conservation Mission, Government of AP, SDA of Bureau of Energy Efficiency (BEE) has presented the Silver category award to Rail Vikas bhavan (office of the DRM), Guntur on 20.12.2024



B. Energy conservation week Activities by GNT division.

- ❖ National energy conservation day was observed on 14.12.2024, In this connection Energy conservation week was observed from 14.12.2024 to 21.12.2024 throughout the Division.
- ❖ During this week, day wise activities have been planned and implemented as per HQ guidelines.
- ❖ Energy Conservation Pledge, display of banners and slogans at all Railway Stations, Railway Offices. Field staff have taken pledge at their respective depots and stations. Banners, posters have been displayed at various stations, colonies & service buildings for creating awareness on conservation of energy.



- ❖ Painting, Essay writing competitions have been conducted on the Topic “ENERGY CONSERVATION” among the students of Local schools to create awareness among the children on Energy conservation.



- ❖ Door to Door campaign and distribution of pamphlets has been taken up in colonies. During campaign, railway employees have been counselled on the conservation of electrical energy.



- ❖ Energy Conservation Slogans/tips are announced through PA systems at stations.
- ❖ Created awareness to students on energy conservation at schools/colleges/all railway institutions.



- ❖ A seminar was conducted at Coaching depot/GNT for creating Energy Conservation awareness among the staff.



Prize distribution for winners of Painting, Essay writing competitions

- ❖ Mass campaigns like bike rallies, walkathon conducted for awareness to public on Energy conservation.

Green Initiatives:

- ❖ 10 KWp capacity solar plant has been newly provided for new running room at NDL station and 10 KWp solar plant has been newly provided at RAL station.
- ❖ Solar net meters have been provided at 5 stations (NBR, PPM, RAL, GNT C7 W, SAP) and these on grid solar plants have been connected to Discom Grid.
- ❖ Total 10 stations have been awarded with BEE Shunya label, in which KADM, NRDP, NLDA, TPPI, MAG stations were awarded with BEE Shunya award and VNUP, VJA, VMU, RMNP, SRMR were awarded with BEE Shunya plus award.
- ❖ Total 5 Nos of 500 LPD Solar water geysers were installed newly at Running room/GNT, TTEs Rest room/GNT, ORH/RVC, ORH/VKN and ORH/DKD

ACHIEVEMENTS

Achievements

- ❖ 2 Nos of new lifts are commissioned at the DRM office/GNT in the existing place of Non working lifts.



- ❖ 10 Nos of Lifts were installed and commissioned on PF No :1and 2&3 at (NDKD, PGRL,MRK,NRT and CBM), it became more convenient for old age people & Divyangjan to cross over from one platform to another in view of passenger amenities.



NDKD Lifts



MRK Lifts

- ❖ As a part of station redevelopment, Façade lighting, bollard lighting and profile lighting have been improving in ABSS stations over the division.
- ❖ Rewiring to staff quarters has been completed in 28 units at NLDA, MRGA, DKD, NRT and NDL stations.
- ❖ 116 Nos of octagonal poles with 80 Nos of 30 W LED street lights have been provided at the parade ground/NLPD, West circulating area /GNT, Sub –ordinate rest house / GNT, Loco colony/GNT, NRDP, RMNP, MRGA, TMLU, GID, stations.

- ❖ Total 5 Nos of DG sets were newly provided over division, in which 4 Nos of 82.5 KVA DG sets were installed and commissioned at GID, CBM, MRK, SAP and 1 No of 125 KVA DG set is installed at MAG stations.
- ❖ Total 18 Nos of new bore wells were provided with new submersible pumps (DRM office-5 HP, RVcolony-5 HP, PPM -2 HP and PRCA-1.5 HP, DMT-3 HP, NDL-1 HP, Children's park/NDL-5 HP, SDV-1 Hp, RVC colony-NLPD-7.5 HP, Running Room-NLPD-2 HP, LC gates- 1 HP).
- ❖ Total 6 Nos of 60 W Outdoor LED lights were provided at PQRS siding at DKD station.
- ❖ Total 30 Nos of LT OH aluminum conductor spans have been removed. Supply extended with LT UG cables over division.
- ❖ Total 28 quarters were rewired to ensure electrical safety at NDL, DKD, and NRT stations in this year.
- ❖ CTYL, MRGA, NDKD and NDL stations lighting arrangements was done as a part of goods shed improvement works.
- ❖ As per reference of Member of Parliament /GNT Lighting have been provided with 6 Nos of 100 W LED flood lights at LC No; 7 RUB near Kanteru Village between NBR-MAG stations.



- ❖ 14 Nos of Split 1.5-ton AC units were provided newly at Railway Hospital/GNT an DRM office /GNT, DSP/GRP chamber, Applicants advocate room/RCT, Asst PP/Railway court, crew lobby, conference Hall and coaching depot at GNT station.
- ❖ As a part of Amrit Bharat station scheme for aesthetic appearance of station circulating are, 23 Nos of 80 W decorative light posts are newly erected in west circulating are of GNT station.

- ❖ 8 Nos of High masts (8x400 W) were newly provided (SAP-1 No, NDKD-1 No, PGRL - 1No, VKN-1No and NLDA -2 Nos, MAG-2 Nos) at stations over division.

On demand from MP/NRT Total 4 Nos of 80 Liters additional water coolers have been installed. (One water cooler additionally provided at each station in PGRL, MCLA, VKN and NRT stations.)

- ❖ Temporary decorative lighting arrangements have been provided for illumination of the Guntur Railway station building (east side & west side) to have festive & patriotic mood for celebrations of 78th Independence Day on 14th & 15th & 16th August 2024. Temporary decorative lighting arrangements have been arranged to DRM office (Rail Vikas Bhavan)/GNT on eve of celebrations of 78th Independence Day.



GNT station



DRM office/GNT

- ❖ Temporary decorative lighting arrangements have been provided for the illumination of the Guntur Railway station building (west side), Rail Vikas bhavan (DRM office)/GNT, NDL, NRT and NLDA stations to have a festive & patriotic mood for celebrations of Republic Day from 25th Jan to 29th Jan -2025.



GNT station



DRM office/GNT

Scrap:

- ❖ 25.47 MT of Ferrous & 32.80 MT of Non-Ferrous of scrap of released, unserviceable, defective electrical assets against the HQ target of 10.0T & 8.0T respectively have been disposed to scrap depot, NLPD during the year 2024-25 so far (i.e up to 31.03.2025).

Special drives conducted during the year 2024-25:

- ❖ Electrical Safety Week was observed from 01-05-2024 to 07-05-2024 at all the Electrical (GS) depots, at all major & way side stations of the division and at Rail Vikas Bhavan (DRM office), GNT. Wide publicity was given on the importance of Electrical Safety awareness, to reach the staff & public by displaying banners & posters at all strategic locations and also through PA system at stations. During this week, staff has been Counseled through campaigns & seminars.



Conducted seminar at SSE/E/M/GNT depot at GNT station.

- ❖ A special cleanliness drive “ Swachh ta Hi seva Campaign (SHS-2024) from 14th September to 01st October 2024 over Indian Railways ” was conducted various programmes in all Electrical depots over Guntur division as per guide lines received from Railway board of EnHM.



DRM office/GNT