



Achievement 2024-25

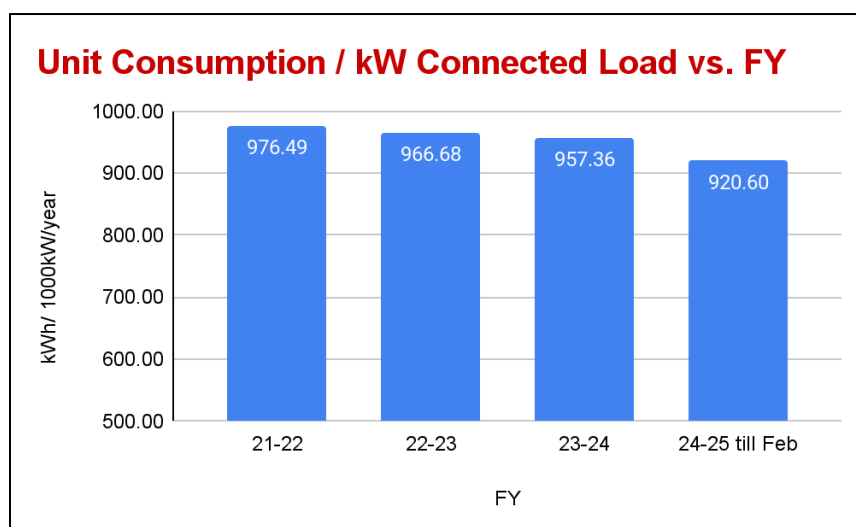
Electrical General Department
Eastern Railway, Sealdah

सियालदह SEALDAH

1. Energy Savings (Non-Traction) :

Electrical Connected Load of division is increasing day by day due to advancement of infrastructure and provision of sufficient quantity of Minimum Essential Amenities (MEA) like- Lifts, Escalators, Water Cooler etc at various stations. Energy consumption is also increasing YoY for this. But unit consumption per kW connected load has decreased YoY due to use of Energy efficient electrical equipment like-BLDC Fan, LED lights, 5 star rated AC Machines, Pump etc and percentage decrease is shown below.

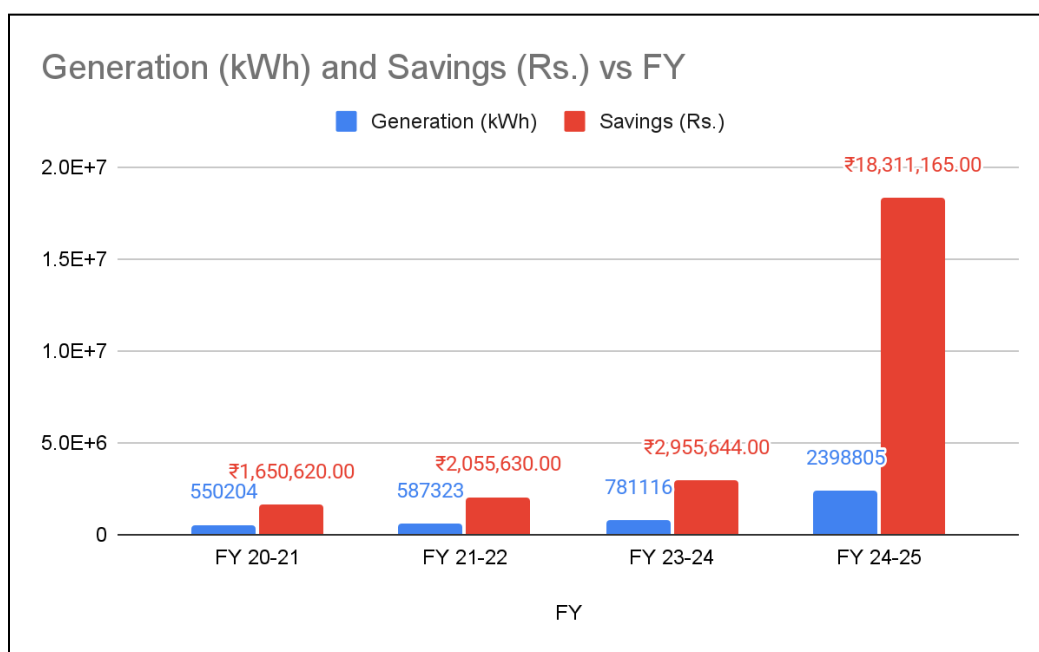
<i>Financial year</i>	<i>Connected Load (kW)</i>	<i>Unit Consumption (Million Unit)</i>	<i>Amount (Cr)</i>	<i>Units/k W/ year</i>	<i>Decrease Percentage YoY</i>
21-22	37256	36.38	31.95	976.49	-
22-23	41658	40.27	35.22	966.68	1.00%
23-24	44560	42.66	36.89	957.36	0.96%
24-25 till Feb	48523	40.65	34.08	920.60	3.84%



2. Solar Energy:

Solar Power plant of 1245 kWp has been installed during FY 2024-25 and cumulative capacity of solar power plant stands now 3.6 MWp in Sealdah Division as of now which resulted around Rs. 73.5 Lakh savings towards energy generation.

Sl. No.	FY	Capacity available	Generation (kWh)	Savings (Rs.)
1	FY 20-21	620	550204	₹1,650,620.00
2	FY 21-22	1040	587323	₹2,055,630.00
3	FY 23-24	2340	781116	₹2,955,644.00
4	FY 24-25	3735	2398805	₹18,311,165.00



3. Achievement in capital Expenditure:

As nodal department of PH -36, successfully achieved expenditure target crossing in the extent of 107.91% before completion of FY 2024-25 as under:

Plan Heads	RG 2024-25 (Rs. in Cr)	Modified RG 2024-25 (w.e.f. 10.03.2025) (Rs. in Cr)	Exp. (As on 29th March'25) (Rs. in Cr)	% utilization on Modified RG
36- OTHER ELECT. WORKS INCLD. TRD	33.09	40.71	43.93	107.91

4. Sealdah Station Façade Light:

As inspired by Hon'ble DRM sir, a major project has taken its final shape through augmentation of façade lighting at Sealdah Station with a dynamic console control system - DMX.



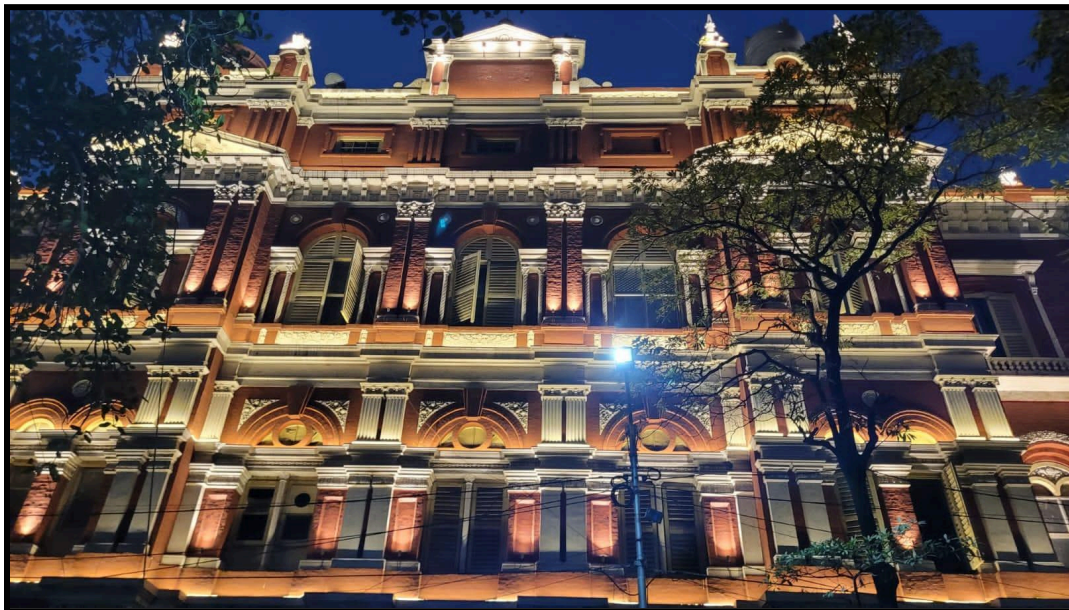
5. **DRM Building Façade Lights:**

Electrical General Department, Sealdah has successfully uplifted night look of Old Koilaghat Building by commissioning 'LED Façade Light' through utilisation of sponsored initiative by Non-Governmental Organisation under ambit of Railway Board Guideline.



6. **Old Koilaghat Building (OKG) Building Façade Lights:**

Similarly, years long Track Side Façade of DRM building has got its night look uplifted with LED Facade Lights illumination through sponsored initiative by Non-Governmental Organisation.



7. **Electrical Work at Officer Rest House (ORH) at Sealdah Station:**

Smart Electrical work has been done at 04 number Officers' Rest Houses at Sealdah Station with fitment of all energy efficient electrical equipment like LED light Fittings, Inverter ACs, Occupancy Master Switching systems etc.



8. **Way Leave earning:**

Electrical General Department has been successful in achieving an increase of 600% of Way leave earnings from DISCOMs and Other Power Companies compared to previous year.

2023-24 : Rs. 12 lakh

2024-25 : Rs. 87 lakh

9. **Scrap disposal :**

Increase in scrap disposal is overall 70 % more than previous year.

2023-24 Ferrous 75.62 MT

Non ferrous 28.5 MT

2024-25 Ferrous 95 MT

Non ferrous 80 MT

10. **Substation Renovation:**

❖ HT Panels-

Following HT Panel renovation has been done by replacing old VCB, OCB Panels with new 3 Panel HT VCB (Make: L&T) & 4 Panel HT VCB.

- Gholesapur Colony Substation (3 Panel HT VCB 800 Amps (Make: L&T)
- Belvedere Colony Substation (3 Panel HT VCB 800 Amps (Make: L&T)
- Dumdum Substation (3 Panel HT VCB 800 Amps (Make: L&T)
- New Sick Line Sealdah Substation (4 Panel HT VCB)



Gholesapur Colony Substation



Belvedere Colony Substation



Dumdum Substation



New Sick Line Sealdah Substation

❖ LT Panels-

Following LT Panel renovation has been done by replacing old OCB Panels, ICTPN Main Switch, SFU(Single Fuse Unit) panels with new LT ACB Panels, MCCB etc.

- Lakshmikantapur Substation
- DRM Building (GOB) Substation.
- Mughal Bagan Substation.
- Compressor Room, NCC Yard Sealdah.
- Sick Line Machine Room, Sealdah.

OLD Panels



New Panels



Lakshmikantapur



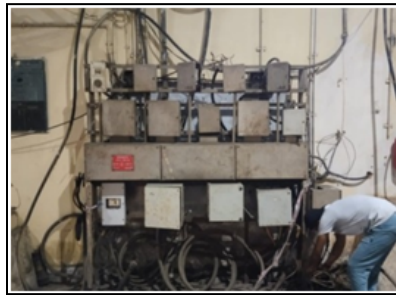
DRM Building (GOB)



Mughal Bagan



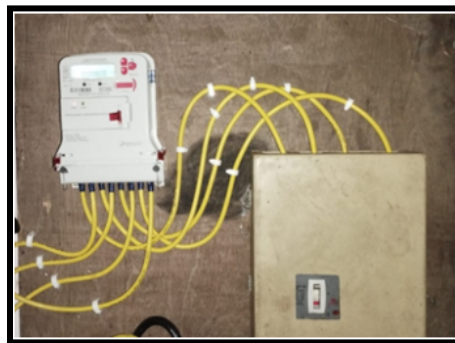
NCC Yard Sealdah



Sick Line Sealdah

❖ **New LT Panel-**

Dakshineswar (DAKE) Colony HT Substation has been successfully converted into Domestic LT Substation which is eventually saving a hefty amount of Demand Charges against previous contract demand.



New LT connection with meter at DAKE Colony

11. Provision of Water Cooler at Stations and other locations:

As a major minimum essential amenities for passengers and staff, total 23 Nos. water coolers have been provided in different locations of Sealdah division, Out of which 20 nos have been provided at stations and the rest 3 Nos. have been installed in service buildings.



Water Cooler at Dakshineswar

12. Provision or Replacement of RDSO CLS Panel:

As a part of system improvement work, a total of 68 Nos. RDSO CLS Panels have been installed at different locations of Sealdah Divisions



Kankurgachi Cabin (KGK) RDSO Panel

6. Provision of Renewable Energy:

- **Solar Power Plant:**

1310 kWp Solar Power Plant has been commissioned in FY 24-25 at different locations of Sealdah Division, out of which 1000 kWp is in PPP Mode commissioned at Sealdah Station and the rest 310 kWp is in Capex mode.



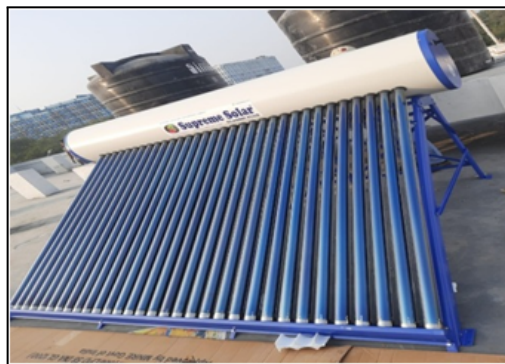
RHA Station(260kWp)



SDAH Station (700 kWp)

- **Solar Water Heater:**

One no 500 LPD solar water heater has been installed at ladies R.P.F. barrack (30 beds)/KOAA. (Make-Supreme solar)



7. Reduction of Contract Demand:

Maximum Demand & Connected Load of all 46 nos. substations have been analysed on yearly basis and based on that analysis Contract Demand of 5 no. HT Supply points of CESC & WBSEDCL have been successfully reduced and it will save around Rs. 12 Lakhs against demand charges per year.

- ❖ Nursing college 130kW to 80 kW
- ❖ Kanchrapara Workshop 250kVA to 70 kVA
- ❖ Nigelnagar Eastern Railway Naihati 225 kVA to 150 kVA
- ❖ Naihati Riverside Pump house 125 kVA to 100 kVA
- ❖ NigelnagarNaihati 350 kVA to 230 kVA

- ❖ Ranaghat Station 494 kVA to 260 kVA
- ❖ Naihati Railway Station 500 KVA to 350 KVA
- ❖ KNJ Rly. Qrs 75 kVA to 50 kVA

8. Provision or Replacement of Pumps and Pump Panel renovation work:

23 Nos. Energy efficient pumps have been provided at different locations of Sealdah division.

In view of safety and energy efficiency improvement measures with better control of the machineries, several old over aged Pump Control Panels have been replaced with new Pump Control Panels at Judges Court Rail Minar Officers' Colony.



New Pump control panel at JJC

9. Improvement of Illumination work:

Huge initiatives have been taken to improve the illumination level at all areas station, Yards and other locations of this division. Total of 44 Nos. stations having over and above 2000 footfalls have been improved by providing additional energy efficient lighting arrangements. Foundation work for 30 numbers High Mast Tower is completed and it is targeted to install the HMTs by 31.03.2025.

Along with stations, illumination NCC Yard/SDAH and CP yard also have been improved by providing 1596 nos 10 watt LED Bulkhead, 450 nos pit light at NCC Yard, 102 nos 20W LED catwalk light and 171 nos 10W LED dock light at Pit No. 4 of CP yard.



Trunking light arrangement at DDJ



Pit light at CP yard



Yard lighting at NCC Yard



Facade Light at Old Koilaghat Building



Trunking light arrangement at SDAH



GHPR Swimming Pool lighting



Lighting arrangement at extension of SDAH station

10. Overhead Crossing conversion:

Work done for 33 kV/11 kV overhead crossings of DISCOMs have been executed at 07 locations. Locations are BNJ-STBB, BB-REJ, BEB-BFT, FLU-BTKV, RHA-PDX, SMX-CDH, JNM-MPRD.

11. Dismantlement of old fabricated tower:

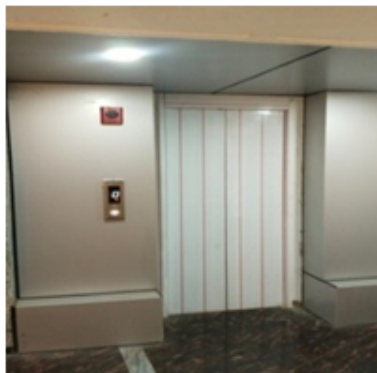
Old fabricated illumination towers (02 nos) were critically standing almost idle causing a safety concern in between yard lines and mainlines at Naihati station (SDAH End) and Kankinara yard. Dismantling of the same was done overnight utilizing shadow blocks to ensure safety of train running.



Dismantling of (HMT) Tower has been done at Naihati (NH) yard and Kankinara(KNR)

12. Provision of new lift at Service Building:

(i) Installation, testing and commissioning of one no Lift (Machine Room Less, MRL type) of capacity: 05 Persons (340 kgs), Make-Bharat Elevator have been done at Building no-210 (Sagar, Manthan) at Sealdah.



(ii) One number Lift of capacity 10 Persons, Make-LT Elevator has been installed at Cossimbazar station Platform No. 2-3.

13. Drive for removal of Unauthorized connection:

In connection with unwanted fire hazard at different stations, massive drives have been taken for disconnecting unauthorized power connections at different stations over Sealdah Division.



14. Provision of new transformer:

One (01 no.) additional 500 KVA, 6 KV/415V Transformer (Make :Eastern Transformer) have been installed at Belvedere Substation for strengthening as well as reliability of Power supply.



15. Provision of Energy Efficient BLDC Fans:

1530 Nos energy efficient BLDC fans have been installed at different locations of Sealdah division in FY 24-25.

COACHING AND COACHING DEPOT

16. Achievements: Electrical Coaching Wing

☐ Zero Non-AC Cases in Train Service

The Division has successfully achieved a milestone of having zero non-AC cases in train service. This remarkable feat is a testament to our commitment to enhancing passenger comfort and safety.

17. Provision of SS Tray over SBC as modification:

In addition to the designated modifications prescribed by the Railway Board/RDSO, the Division has initiated a new modification in LHB AC coaches to prevent water from dripping onto the SBC. A stainless steel (SS) tray with a drainage pipe is being installed above the SBC to prevent short-circuiting due to the ingress of water droplets on live bus bars and contact points. This proposed modification will enhance fire safety as well as electrical safety during the journey. Total 27 nos. Coaches have been modified.

18. Significant Reduction in Railmadad Complaints:

Coaching wing has acquired the achievement in enhancing passenger satisfaction and service quality. This financial year, we have seen a significant reduction in Railmadad complaints, with an overall decrease of 7.8% at SDAH division against hike of 13.9% in Eastern Railway.

19. Improved Punctuality with New Fueling Infrastructure at SDAH Depot

We are proud to announce a significant achievement in enhancing punctuality at the SDAH depot. Previously, there were issues due to a lack of fueling infrastructure for power cars. To address this, new infrastructure has been constructed at the SDAH platform area, allowing for the fueling of power cars for secondary trains and round trip trains without the need for additional shunting. This development has streamlined operations, reduced delays, and significantly improved the overall punctuality of our train services. Our commitment to efficiency and passenger satisfaction remains steadfast, and

this achievement is a testament to our continuous efforts to improve the travel experience for all.



Fuel Point at SDAH PF area

20 Significant Fuel Savings through CSS Utilization

We are excited to announce a noteworthy achievement in fuel efficiency and sustainability. By utilizing the CSS power supply, instead of using DA sets of Power car, we have successfully saved a substantial quantity of High-Speed Diesel (HSD) oil every month. On the basis of CSS unit consumption, this year the volume of HSD oil is equivalent to 357.6 KL (approx). This innovative approach has not only reduced our fuel consumption but also contributed to environmental conservation and operational cost savings.



21. RDSO modification in Power cars

RDSO defined modifications in Power cars are in verge of completion. RA/OMS modification has been completed. Provision of AEROSOL cartridge in SBC of SDAH based Power cars in verge of completion, only 03 nos. Left. Modification of Control transformer 750V/415V from 100VA to 200VA is almost completed only 02 nos. Of SDAH base is left. OVP modification of 45 nos. Power cars have been completed.

22. Microprocessor Test Bench

A microprocessor test bench has been developed in-house at both the SDAH and CP Coaching Depots to diagnose faulty microprocessors and sensors. This development will greatly enhance the ability to identify and address faults efficiently.

23. HOG Test Unit

A HOG testing unit has been set up at both the Chitpur and Sealdah Coaching Depots for testing power cars at the sick line. This unit ensures that power cars undergo thorough testing before attachment, thereby improving the reliability of train services.

24. Sick Marking of Coaches

Despite an increase in coach holdings compared to the previous year, there has been a reduction in sick marking on electrical unscheduled accounts. This improvement is due to better monitoring of critical units during trip maintenance and prompt rectification at earlier stages.

25. Reduction in SG AC Coach Failures through Battery Replacement

Previously, old low-capacity batteries provided by the POH shop in SG AC coaches led to frequent enroute failures which affected the AC system and caused several complaints. To mitigate this, old batteries of 07 nos coaches

were replaced at the depot with new 1100 VA battery sets, effectively reducing the occurrence of failures.

26. Redundancy of CSS Power supply at CP maintenance yard

One CSS was operational at CP depot, and the second CSS has been made operational from this month (Mar'25).

27. Pit Lights for better illumination at deep pits:

A massive development of coaching pit lights has been made during this FY. Like addition of deep Pit Light, Catwalk Light, gantry light

