

**Additional Information to the petition filed by TGSPDCL for Aggregate Revenue Requirement (ARR) of Retail Supply Business, Filing of Proposed Tariff & CSS proposals for FY2025-26:**

**A. General:**

- 1. The replies to be submitted in Eight (8) nos. printed copies and digital copy (word/pdf/excel)**

**Reply:** TGSPDCL will submit the requisite printed and digital copies to Hon'ble Commission.

- 2. It is observed that the Tariff Formats are linked to External files, TGSPDCL to submit Tariff Formats with all the linked files in a separate Folder.**

**Reply:** TGSPDCL complied the data.

**B. Sales Forecast:**

- 3. TGSPDCL to submit the justification for adopting 5 year CAGR of 30.34% for projection of Energy Sales from 33kV : HT-IV(A): Lift Irrigation & Agriculture Category.**

**Reply:** The growth trend in this category HT-IV(A): Lift Irrigation & Agriculture Category tends to be volatile due to variations in the operation of Lift Irrigation pumps based on rainfall, water levels in reservoirs, etc. At 11kV voltage level, the manual growth rate of 5% is adopted for estimating the sales in H2 of FY2024-25 and 10% is adopted for projecting the sales in FY2025-26.

At 33kV voltage level, growth rate of 67.41%(2 year CAGR) is adopted for estimating the sales in H2 of FY2024-25 & 30.34% (5 years) least out of (1,2,3,4,and 5 years CAGR) is adopted for estimating the sales for FY2025-26. Also the actual energy sales is 17.04 MU for FY 2022-23 and 43.42 MU for FY 2023-24 respectively which is 154.81% increase in sales.

1,2 and 3 year CAGRs for HT-IV(A) category are very high. Looking at the composition of service applications received and pending applications the composition of service requests for this category are comparatively low. Therefore 5 year CAGR was taken into consideration.

4. **TGSPDCL to submit the justification for considering higher growth rates for 132 kV : HT-II(A): Others during FY 2024-25 (H2), FY 2025-26.**

**Reply:** In comparison of actual sales of H1 of FY 2023-24 and H1 of FY 2024-25, a higher growth rate is observed, and similar trend is expected to be followed for FY 2024-25 (H2), FY 2025-26.

5. **TGSPDCL to submit the justification for considering higher growth rates for 132 kV : HT-V(A): Railway Traction and HT-V(B): HMR Traction & during FY 2024-25 (H2), FY 2025-26.**

**Reply :** The projections for HT-V(A) category are formulated by analyzing the additional load information provided by the railways department which is enclosed herewith and growth rates are adjusted accordingly to align with this data.

The projections for HT-V(B) category are considered by analyzing the additional load information provided by the HMR department during 5<sup>th</sup> control period of MYT filing for FY 2024-25 to FY 2028-29, which is enclosed in Annexure-5.

6. **It is observed that TGSPDCL claimed Energy Sales of 17,123.99 MU for LT-V: Agricultural Category, against 11,673.21 MU approved in the MYT Order dated 28.10.2024. TGSPDCL to provide justification for the same.**

**Reply :** The energy sales figure of 11,673.21 million units (MU) approved by the commission in the Multi Year Tariff (MYT) order has been determined based on a nominal growth rate of 2%. However, it is evident from the actuals of the previous FY 2023-24 & H1 of 2024-25 that this 2% growth assumption may not accurately reflect the actual energy consumption.

Additionally, there are 90,186 nos. pending applications for agricultural connections till February 2025 with contracted load of 457816.5 HP, which, once approved, will be connected to the network. The addition of these new connections will increase the overall load on the distribution system. This expansion in services and load capacity needs to be taken into account when evaluating the projected energy sales and ensuring the adequacy of infrastructure to cater to the increased demand.

Keeping these factors in mind the DISCOMs have forecasted sales consumption by taking relevant historical growth rates.

For FY 2024-25, the new agricultural loads added till January 2025 is 239311 HP.

The actual sales till December 2024 are 9386.12 MUs.

The actual sales during Q4 of FY 2023-24 are 5523.18 MUs.

By considering 19% growth rate on sales of Q4 for FY 2023-24, the projected sales for Q4 of FY 2024-25 are 6572.58 MUs ( As per 19.7% growth rate from actuals of Q4 of FY 2022-23 to Q4 of FY 2023-24 ).

Hence, the total Agricultural sales for FY 2024-25 will be 15958 MUs, which is more than the approved agricultural sales of 11444.33 MUs for FY 2024-25.

Further, it is to submit that as per the actual data received for FY 2023-24, Connected load for AGL is 6767060 HP & Sales are 15703.01 MUs. By considering usage @ 12 hours/day for 15,703.01 MUs of FY 2023-24 as per ISI methodology, the no. of days arrived as 260 days ( $6767060 \text{ HP} \times 0.746 \times 12 \text{ hr} \times 260 \text{ days} = 15750 \text{ MU}$ ).

Hence, Agricultural sales for LT-V Category for **FY 2025-26** are projected to be **17,124 MUs** with a CAGR of **4.41%** on **FY 2024-25** sales. The projected connected load for FY 2025-26 is 7511185 hp, which translates to approximately 5600 MW of connected load. Considering average 12-hour usage for agricultural activities for 255 days (**for FY 2023-24, 260 days are arrived as calculated above on actual figures**) during kharif and rabi seasons that span approximately 8-9 months (averaging it to 8.5 months i.e., 255 days). The electricity consumption calculation comes to  $(5600 \text{ MW} \times 255 \text{ days} \times 12 \text{ hour/day}) / 1000 = 17,139 \text{ MU}$ . This demonstrates alignment between that projected connected load and sales number.

The required information considered for the above explanation is provided in Annexures - 6.1, 6.2, 6.3, 6.4.

**Growth in Power Supply Hours:** The state has progressively enhanced power supply to the agricultural sector. In 2016, the supply was increased from 7 to 9 hours per day, and by 2018, it expanded to 24 hours a day. This substantial improvement has led to a notable rise in electricity consumption for agricultural purposes.

The provision of free, round-the-clock electricity for agricultural purposes has encouraged farmers to cultivate more land. The state has diversified its crop production, including rice, maize, cotton, and pulses, leading to increased cultivation areas due to emerging advanced technology adopted in farming sector.

In Telangana, agriculture is heavily influenced by the monsoon season, but the state also grows various crops during the non-monsoon months, primarily utilizing irrigation sources. These months, mainly the rabi (winter) and summer seasons, support a range of crops that thrive with irrigation. In the absence of water from irrigation sources, farmers are relying on bore wells which lead to increase in the agriculture consumption. .

**Rising Peak Demand:** Telangana's peak power demand has escalated significantly. For instance, on 26 th February 2025 at 8.44 am, the state recorded a peak demand of 16,601 MW. This early and substantial increase in peak demand is attributed to factors such as rising temperatures, intensified agricultural activities, and urban expansion.

**Cultivation Area:** In the 2023-24 agricultural year, Telangana's farmers cultivated rice over 46.85 lakh hectares across both Kharif and Rabi seasons. The state achieved a record rice production of 168.75 lakh metric tonnes (LMT) in 2023-24, accounting for approximately 12.5% of India's total rice output. Telangana is followed by Uttar Pradesh with 159.9 LMT, West Bengal with 156.87 LMT, Punjab 143.56 LMT and Chhattisgarh 97.03 LMT( published in The New Indian Express dt 26.09.2024) .Over the past decade, Telangana has witnessed remarkable growth in paddy cultivation, positioning itself as a leading rice producer in India.

Paddy cultivation requires more water consumption which lead to increase in energy consumption.

The average normal rainfall of North-East Monsoon is 113.20 mm. Actual rainfall received during Oct to Dec., 2024 is 86.6 mm as against normal of 113.20 mm with deviation of - 23.50% expecting dry spells in forthcoming months. Depleting groundwater levels have been posing a threat to farm operations. All Districts recording Dip in Groundwater levels worst hit especially in Nalgonda, Nagarkurnool and Vikarabad.

### **Irrigation Sources for Non-Monsoon Cultivation:**

The increase in irrigation infrastructure, including projects like present Lift Irrigation Project, Mission Bhagiratha, and improvements in tank irrigation systems, has enabled farmers to cultivate crops during non-monsoon months. In conclusion, rabi and summer seasons in Telangana support a diverse range of crops, mainly through irrigation, helping to ensure food and economic security even outside the monsoon months.

## **C. Intra State Transmission Charges:**

- 7. TGSPDCL to submitted that Intra-State Transmission Charges are claimed in accordance with the TGTransco filings for 2025-26. TGSPDCL to submit the justification for the Contracted Capacity of the Intra-State**

**Transmission Capacity of 16,610.88 MW is claimed, against 16,467 MW estimated for TGSPDCL in filings of TGTransco.**

**Reply:** The Licensee has considered Intra-State Transmission capacity for FY 2025-26 derived from 70.55% of 23,544.83 MW of the ARR of Transmission Business indicated in Page 31 of TGTRANSCO's ARR Filing for Proposed Tariff (FPT) under Multi Year Tariff (MYT) Frame Work for Annual Tariff Petition for FY 2025-26.

**D. Demand Estimation:**

**8. TGSPDCL to submit the Block-wise Demand considered for projection of FY 2025-26 and actual block-wise demand data of FY 2023-24 in excel format (with all the linkages and formulas).**

**Reply:** Hourly Demand considered for projection of FY 2025-26 has been provided as Annexure 8.1 and actual block-wise demand for FY 2023-24 has been provided in Annexure 8.2. The hourly demand for FY 2025-26 has been projected basis the below:

1. The actual 15 min block-wise demand data for FY 2023-24 is averaged to arrive at hour-wise data for a typical day. This is done by averaging the 4 15 min blocks of the hour, for all the days of the selected month.
2. A correction factor was calculated to correct the total MUs (obtained by adding the 15 minute block demand for the entire year divided by 4) to the MUs reported by SLDC for FY 2023-24.
3. Subsequently, correction factor is calculated to scale up the peak demand (MW) for FY2023-24 SLDC data to the expected peak demand for FY2025-26 (18138 MW).
4. Correction factors are also calculated to adjust the total MUs of the FY 2023-24 SLDC data to the total energy MUs expected as per the sales projections for FY 2025-26.
5. Finally, monthly correction factors are calculated to adjust the monthly MUs to match the monthly MUs requirement as per the sales projections for FY 2025-26. As per the Explanation on Escalation Rates published by CERC

(<https://cercind.gov.in/2024/escalation/Evaluation%20Explanation%20for%20the%20Notification%20-%20April%202024.pdf>), the escalation for domestic coal is 3.59% and imported coal is 3.05%. Basis the above references, a nominal escalation rate of 3% has been considered for escalating variable cost.

9. **Regarding share allocation from Central Generating Stations to TGSPDCL/State, TGSPDCL to submit the Share Allocation orders of RLDC/RPC for considered for projection of Energy Availability from Central Generating Stations for FY 2025-26.**

**Reply:** The share allocation from Central Generating Stations to Telangana State has been considered as per the approved allocation in the ARR of RSB for the control period (FY 2024-25 to FY 2028-29) and RST for FY 2024-25 Tariff Order dated 28.10.2024.

However, The share allocation order of SRPC letter dated 04.11.2024 as communicated by the TGPCC is enclosed as Annexure-I.

**E. Power Purchase:**

10. **Regarding Installed Capacities of NCE projects in the state for FY 2023-24 and FY 2024-25 to FY 2025-26, the following are observed**

**(i) Installed Capacity of Biomass is increased from 6 MW in FY 2023-24 to 18 MW in FY 2025-26.**

**(ii) Installed Capacity of Bagasse Cogeneration reduced from 46.7 MW to 37 MW in FY 2025-26**

**(iii) Installed Capacity of Municipal Waste to Energy reduced from 26.4 MW to 20 MW in FY 2025-26**

**(iv) Installed Capacity of Industrial Waste based to Energy reduced from 18.5 MW to 15 MW in FY 2025-26.**

**(v) Installed Capacity of Mini Hydel increased from 2.55 MW to 4 MW in FY 2025-26.**

In support of the above, the TGSPDCL submit the detailed list of the existing projects, list of the projects to be added/to be retired, energy procured by the TGSPDCL during the year, cost incurred for the project as per format mentioned below,

Actuals of FY 2023-24
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Sr.No.	Name of the project	Date of addition of project/Retirement of project	Installed capacity of project	Energy procured from the project	Cost incurred for procurement of such energy	Avg Rate (Rs./kWH)
A. List of existing project						
1						
2						
3						
...						
B. List of project added during the Year						
1						
2						
3						
...						
C. List of project retired during the year						
1						
2						
3						
...						
Projections of FY 2025-26						
Sr.No	Name of the project	Date of addition of project/Retirement of project	Installed capacity of project	Energy Availability projected	Expected cost of Power Purchase	Avg Rate (Rs./kW H)
A. List of existing project						
1						
2						
3						
...						
B. List of project added during the Year						
1						
2						
3						
...						
C. List of project retired during the year						
1						
2						
3						
...						

**Reply:** The details of NCE Projects existing, added/retired during FY 2023-24 and FY 2025-26 is given in format are enclosed as Annexure-II(A) and Annexure-II(B) as communicated by the TGPCC.

- 11. With regard to increase in Installed Capacities of 1,545 MW claimed for FY 2025-26 towards Solar (NTPC CPSU) Ph-II Tr – III against which 735 MW approved in Order for ARR for FY 2024-25 to FY 2028-29 and RST Order for FY 2024-25 dated 28.10.2024. TGSPDCL to provide the justification for increase in capacity from 735 MW to 1545 MW.**

**Reply:** The Installed capacities of 1,045 MW may be considered instead of 1,545 claimed for FY 2025-26 towards Solar (NTPC CPSU) Ph-II Tr – III which is enclosed in Annexure-11.

Installed Capacities of 1,545 MW claimed is purely a typographical error.

**F. Power Purchase Cost:**

- 12. TGSPDCL to submit the Station-wise & Month-wise, Energy Procured (MU), Fixed Charges, Variable Charges and Total Charges incurred during the FY 2023-24, FY 2024-25 (upto January 2025).**

**Reply:** The required data has been provided in Annexure - 12.1 (for FY 2023-24) and Annexure - 12.2 (for FY 2024-25 till Dec'24).

- 13. TGSPDCL to submit the month-wise details of Power Procured from Short Term Sources (Power Exchanges, Bilateral etc) in format below from FY 2023- 24 and FY 2024-25 (upto January 2025).**

**Reply:** Please refer to Annexure - 13 for the required data till Dec'24.

- 14. TGSPDCL to submit the month-wise details of Sale of Surplus Power from Short Term Sources (Power Exchanges, Bilateral etc) in format below from FY 2023-24 and FY 2024-25 (upto January 2025).**

**Reply:** Please refer to Annexure - 14 for the required data till Dec'24



15. **TGSPDCL claimed 3% escalation in variable Charges of TGGENCO & Central Generating Stations on account of increased coal costs. In this regard, TGSPDCL to submit the basis for considering 3% escalation.**

**Reply:** As per Notification No. Eco-E/2024-CERC published by CERC ([https://www.cercind.gov.in/2024/escalation/Evaluation%20Notification%20\(Annual\)%20-%20April%202024.pdf](https://www.cercind.gov.in/2024/escalation/Evaluation%20Notification%20(Annual)%20-%20April%202024.pdf)), the escalation factor to be considered for domestic coal is 3.59% and imported coal is 3.05%. Basis the above, a nominal escalation rate of 3% has been considered for escalating variable cost.

16. **TGSPDCL to submit source wise station wise details of PPAs/PUAs/PSAs in the below format in MS-excel**

Sl.No.	Name of the Generating Station	CoD	PPAs/PUAs/PSAs date	PPAs/PUAs/PSAs approval date	Term of PPAs/PUAs/PSAs

**Reply:** The required data has been provided in Annexure - 16.1 to 16.5.

17. **TGSPDCL is to submit the details of the maintenance schedules given by the TGGENCO and CGS Stations for FY 2025-26.**

**Reply:** The required data has been provided in Annexure - 17.1 and Annexure - 17.2 as communicated by SLDC.

18. **TGSPDCL to submit the month wise Design Energy (ex-bus) for each of the contracted hydro generating stations (in MS Excel).**

**Reply:** The required data has been provided in Annexure - 18 as communicated by SLDC.

19. **TGSPDCL to submit the MS Excel workings of Merit Order Despatch and the power purchase cost projections for FY 2025-26. (with all the linkages & Formulas).**

**Reply:** The MS Excel workings of Merit Order Despatch and the power purchase cost projections for FY 2025-26 have already been submitted to the Hon'ble Commission.

- G. **Cost of Service (CoS) for FY 2025-26:**

**20. TGSPDCL to substantiate the category wise and voltage wise class load factors and class coincidence factors considered for computing CoS for FY 2025-26.**

**Reply:** The explanation with respect to substantiation the category wise and voltage wise class load factors and class coincidence factors considered for computing CoS for FY 2025-26 is provided in Annexure-20.

**21. TGSPDCL to submit the MS Excel workings of Cross Subsidy Surcharge (CSS) claimed for FY 2025-26.**

**Reply:** The MS Excel workings of Cross Subsidy Surcharge (CSS) claimed for FY 2025-26 have already been submitted to the Hon'ble Commission.