

BEFORE THE TELANGANA STATE ELECTRICITY REGULATORY COMMISSION

Vidyut Niyamtran Bhavan, G.T.S. Colony, Kalyan Nagar, Hyderabad – 500 045

Petition requesting the Hon'ble Commission

1. To kindly condone the delay in submitting these objections, and take these on record.
2. To review the sales forecast and power purchase plans of TGDISCOMs.
3. Consider initiating a committee to review and finalise the method for LT agriculture sales estimation
4. Direct the DISCOMs to periodically provide data on Open access
5. Direct the DISCOMs to improve the public reporting of consumer Quality of Supply & Service
6. To make the available reports public and take measurable actions to bring down electrical accidents.
7. Regarding the petitions on wheeling tariff, review the uniform wheeling charge for all DISCOMs
8. Review the DISCOM petition on Smart Metering of all non-agriculture consumers
9. To permit the objector to make additional submissions.
10. To permit the objector to be heard in person before the Commission takes any decision on this application of the DISCOMs.

Name and full address of the petitioner:

Prayas (Energy Group)
Unit III A&B, Devgiri, Joshi Rail Museum Lane
Kothrud, Pune, Maharashtra, 411038,India

Represented by

Srihari Dukkupati (Fellow and Member, SAC of TGERC) and Sreekumar Nhalur (Member)
Prayas (Energy Group)

And

Name and address of the Respondents:

Chairman and Managing Directors of
Northern Power Distribution Company of Telangana Ltd, Warrangal
Southern Power Distribution Company of Telangana Ltd, Hyderabad

Submission by Prayas (Energy Group) to the Hon'ble TGERC on the ARR/Tariff petitions of TG DISCOMs

1. Process suggestions

Limitation of time

Eight petitions are to undergo a public regulatory process in a short period of 90 days.¹ Petitions were available on the website in mid-September, objections are to be filed by 11/10/2024 and public hearing is proposed in the 4th week of October and the term of the current Honourable Commission ends in end October. The relevant MYT Regulation (2 of 2023) was issued on 31/12/2023 and petitions were to be filed by 31/01/2024. From the available documents, it appears that petitions have been submitted from Jul 2024 onwards, but, after iterations including those with Hon'ble TGERC, the public process has started only in mid-September.

Utilities have given reasons for the delay and requested to condone the delay. But it is impossible for the public to provide quality inputs to so many petitions in such a short time. Fresh petitions for FY26 are due on 30/11/2024, which is only 2 months away.

We do hope that this is not repeated in future by the DISCOMs and in case of delay, Hon'ble TGERC would initiate Suo-motu tariff revision process, with available data. **license conditions

Petitions

Petitions are expected to be prepared as per the 2023 MYT Regulations and there are some welcome improvements. Utilities have provided spreadsheet files for supply, wires, transmission and GENCO submissions. A few observations based on a quick study:

- The DISCOM RSB & DB formats have 30+ sheets listed, but Form 15 to Form 22 are not available for TGNPDCL
- There is difference in the way both DISCOMs have provided data in the ARR/FPT petition. For example, in the performance parameters, TGSP provides consolidated accident data for two years (FY23 and FY24) and gives break up across public, department staff and contract staff. TGNP gives FY23 and FY24 data separately, but does not give such a break-up. TGNP, in response to Directives (pp 96-97 of the supply petition), provides causes of electrical accidents of FY24. TGSP does not provide such data. TGNP DISCOM business petition has Additional information has

¹ These are: 4 petitions of TGDISCOMs – covering wires and supply; TGTRANSCO, TGGENCO, TGSLDC and CESS petitions.

Annexures, giving details of Smart metering plan for next 5 years. TGSP does not have this.

Request the response from the DISCOMs on these observations.

2. ARR and tariff petitions of DISCOMs

Power purchase – improving the energy mix

Telangana power mix is heavily based on coal-based generation. Table 1 gives the proposed mix as per the TGERC Resource Plan order (dated 29/12/2023) and Table 2 is a summary based on the current DISCOM supply petitions. It can be seen that there is no proposed plan to increase the proportion of Renewable energy, as is the national trend, to address climate challenges and reduce power purchase cost.

Table 1: Supply mix as per Resource Plan order

Source	FY25	FY29
Thermal	78%	79%
Hydro	3%	3%
NCE	19%	18%
Energy MU	96,641	1,03,534

Source: Compiled from TGERC Resource plan order 2023

Table 2: Supply mix as per DISCOM petitions

Source	FY25	FY29
Thermal	72%	71%
Hydro	7%	5%
NCE	16%	19%
Market	6%	5%
Energy MU	85,235	1,19,060
Surplus MU	11.1%	-
APPC Rs/U	5.27	5.62

Source: Compiled from TG DISCOM ARR/FPT petitions, September 2024

There is a slight reduction in the proportion of thermal (compared to Resource plan), but that could be attributed to the market purchase. As can be seen from Table 2, the Average Power Purchase (APPC) will increase in the coming years, due to coal domination. These are projected costs, and actual cost could be higher. The projected proportion of NCE in FY29 is low at 19% against the MoP's RPPO target of 41.36% in FY29.

The proportion of thermal power would further increase if the proposed 800 MW plant at Ramagundem as a JV between GENCO and SCCL materialises. On the other hand, there have

been news reports of TG renewable energy, proposing addition of 20,000 MW of RE capacity in TG by FY30.²

But as per the petitions, there is expected power surplus in FY25, which is 11% of dispatched energy. Petition also indicates that revenue from surplus sale in FY25 is at Rs. 2.32/Unit, much lower than the APPC. Even though no surplus is indicated in subsequent years, the reason could be the optimistic sales forecast. Planning for such high amounts of costly base capacity which may not be dispatched, will only add to costs.

There is a need to revisit the power purchase plan of DISCOMs, with reasonable sales forecast (as mentioned in the next section). To optimise power purchase cost, it is good to plan for higher proportion of renewable, with required storage for grid balancing. DISCOMs should not enter into long term PPAs with any plants which are not part of an optimised Resource Plan. If needed, the current Resource Plan could be revised through a Regulatory process.

TGGENCO also has to play a significant role in energy transition. Their thermal power plants need to become more flexible and they can also plan renewable energy projects.

Sales forecast

Sales forecast is even higher than the recently finalised Resource Plan order. During the public hearings on Resource Plan, Prayas had submitted that four major categories (LT Domestic, LT Agriculture, HT Industry and HT Commercial) drive sales and had advised close scrutiny of the forecast in these categories. The projections in the petition appear quite optimistic from Table 3, which gives the growth rate adopted for FY25 by TGSPDCL.

Table 3: Growth rate considered by TGSPDCL for FY25

Category	FY25
LT Domestic	5.97
LT commercial	17.7
LT Agriculture	1.39
HT 132 kV comml	36.5
HT 132 Industry	30.99

Source: Compiled from TGSPDCL ARR/FPT petition

The highlighted growth rates appear quite optimistic. Figures are equally high for subsequent years also. From this petition, annual growth rates of HT Agriculture have been reduced, compared to 10%, that was considered in the Resource Plan order. The category-wise growth rates are not that high for TGNPDCL.

² For example, refer to this [news report](#) in The Deccan Chronicle, dated 3/10/2024, quoting the Hon'ble Dy CM, who is also the Energy Minister.

NPDCL Sales: In fact, over the years, proportion of NPDCL appears to be reducing, from 30% in FY18 to 23% in FY29, as seen in Table 4. As per the Resource Plan order, this proportion is 27.5% in FY29.

Table 4: Declining sales proportion of NPDCL

% Sales/Year	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
TGNPDCL	30	30	32	33	30	28	28	27	26	25	24	23
TGSPDCL	70	70	68	67	70	72	72	73	74	75	76	77
Total MU	50,562	57,538	58,522	57,049	61,154	67,791	74,442	75,895	81,409	89,331	97,932	1,07,291

Source: Compiled from DISCOM Annual reports, RP petitions and ARR/Tariff petitions

We request DISCOMs to provide an explanation for this reducing trend of TGNPDCL sales and the deviation from the Resource Plan order.

As for LT Agriculture, the growth rate considered is lower than what was used in Resource Plan order. But it is reported that consumption in FY24 was very high (30% over FY23 figure for TGSP and 20% for TGNP). Issues about Agriculture estimation have been raised many times, and the Hon’ble TGERC had directed DISCOMs to meter all Agriculture DTs to improve the estimate. DISCOMs have been committing to carry out this, but in the petitions this year, they have clearly indicated that DT metering is not in the agenda. This is clear from the response to TGERC’s directive, as shown below.

New Directive 5:

“The Commission directs the TGDISCOMs to achieve 100% Agricultural DTR metering within a period of twelve (12) months and to furnish the quarterly progress on the status of implementation in this regard.”

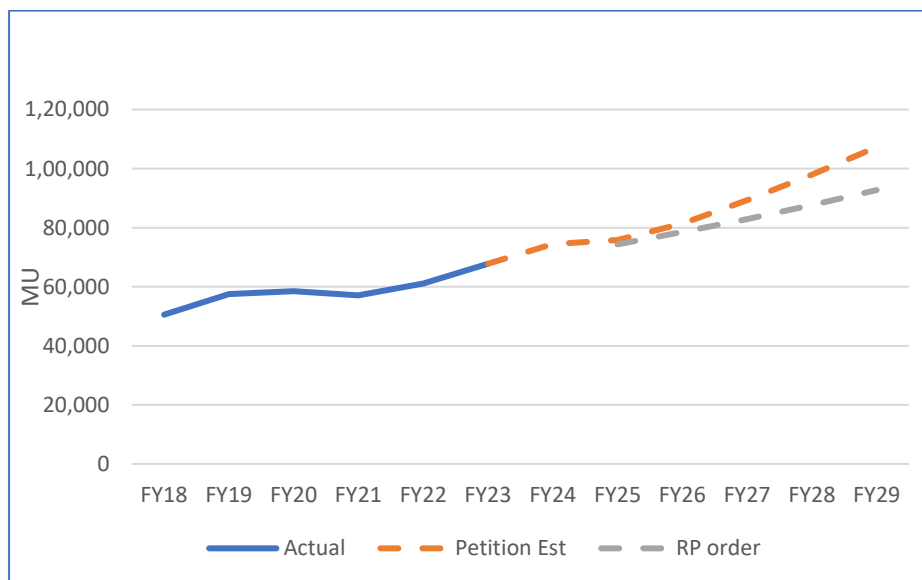
TGSPDCL Response: “Under RDSS, MoP has laid emphasis on Segregation of Agriculture feeders through which all the agriculture loads will be segregated onto separate feeders. All the feeders in TGSPDCL were already equipped with feeder meters (DLMS). Now that under RDSS, all feeder meters are to be metered with communicable & AMI/AMR meters. If we take up segregation of Agriculture feeders under RDSS, we can assess the agriculture consumption with feeder meter data itself without fixing meters to agriculture DTRs” (Report is submitted to Hon’ble TGERC on 19/8/2023)

It is unfortunate that the DISCOMs are backing up from the relatively easy task of metering DTs. RDSS proposals will need approval from GoI and feeder separation will take many years to be implemented.

As has been requested last year too, Hon’ble TGERC could consider setting up a committee to revise the current methods of estimation of agriculture consumption, since this has a significant bearing on subsidy and DISCOM AT&C losses.

Open access: There is another important related point about open access in TG. From the petitions, we gather that there is low or no growth in OA consumption or revenue. Hon'ble TGERC may wish to review the implementation of its Open Access and Green Open Access Regulations in the state. Tracking and reporting of Open Access consumption in the state is important from a DISCOM planning perspective. Going forward, with the notification of Green Energy Open Access regulations, reporting of RE and non-RE based sales migration will also be integral, across varying ranges of contracted demand. Separate reporting of RE and non-RE OA, along with their tenure, is already a practice that Maharashtra and Rajasthan ERC follow as part of their tariff formats. Bihar ERC also reports the number of applications received and processed, along with the total quantum of power availed by OA in the year (in MUs). Given these good practices being followed in other states, TS DISCOMs are requested to submit data as per the following suggested format given in Annexure 1.

Figure 1: Sales trend of TG DISCOMs



Source: Compiled from RP petition, RP order and DISCOM ARR/FPT petitions

To summarise, sales forecast of DISCOMs appear highly optimistic. The CAGR of total sales in TG in the period FY18-23 was 6% and the CAGR for FY25-29 as per the Resource Plan order (issued as recently as December 2023) was close to it, at 5.7%. DISCOM petitions submitted as part of the Resource plan process also had CAGR for FY25-29 as 5.87%. But as per the DISCOM petitions, CAGR for FY25-29 is 9%. Figure 1 plots the sales trends – actuals for FY18-23, Resource Plan order for FY25-29 and DISCOM petition for the same period. There is a need for DISCOMs to rigorously review the sales forecast. We request the Hon'ble TGERC to direct the DISCOMs to undertake this within a specified time and if needed revise the Resource Plan.

Tariff proposals

Petitions propose upward revision of Fixed Charges (FC) for high domestic (> 300 Units/month), and many other categories. Percentage increase of FC is higher for LT, compared to HT. The basis for such an increase could be provided.

Time of the Day tariff

DISCOMs have proposed to continue the existing ToD framework, which gives 1 Rs energy charge penalty during eight (supposedly peak) hours (0600-1000, 1800-2200) and 1 Rs energy charge rebate during eight (supposedly non-peak) hours (2200-0600). There is a need to revise this approach, based on a study of the daily and seasonal load and supply patterns to expand the scope and base of ToD. We give some suggestions in the following paragraphs.

A framework for ToD Tariffs was detailed in the recently notified Electricity (Rights of Consumers) Amendment Rules, 2023³. The relevant section of these Rules, under the Electricity Act are quoted below:

“(8A) Time of Day Tariff

*The Time of Day tariff for **Commercial and Industrial consumers having maximum demand more than ten Kilowatt** shall be made effective from a date not later than **1st April, 2024** and for **other consumers** except agricultural consumers, the Time of Day tariff shall be made effective not later than **1st April, 2025** and a Time of Day tariff shall be made effective immediately after installation of smart meters, for the consumers with smart meters:*

*Provided that, the Time of Day Tariff specified by the State Commission for **Commercial and Industrial consumers** during **peak period** of the day shall not be less than **1.20** times the normal tariff and for other consumers, it shall not be less than 1.10 times the normal tariff:*

*Provided further that, tariff for **solar hours of the day**, specified by the State Commission shall be **atleast twenty percent less** than the normal tariff for that category of consumers:*

*Provided also that the Time of Day Tariff shall be applicable on **energy charge component** of the normal tariff:*

*Provided also that the duration of **peak hours shall not be more than solar hours** as notified by the State Commission or State Load Despatch Centre.” **(emphasis added)***

This framework is reflective of recent changes in demand and supply profiles in states, where low-cost renewable energy (RE), especially solar is available during day-time.

³https://powermin.gov.in/sites/default/files/webform/notices/30_d_Electricity_Rights_of_Consumers_Amendment_Rules_2023..pdf

Provision of rebates to encourage consumption in these periods, aids load balancing and effective grid integration of RE. It also can be beneficial to consumers who are able to shift their load to avail rebates.

ToD tariffs reflective of demand-supply profiles also assist with cost reflective pricing for DISCOMs. In the long-run, if tariffs are reflective of costs in peak and off-peak periods, ToD tariffs can also help smoothening demand and reducing the requirement for additional investments and capacity.

However, the national framework should ideally be adapted to suit state context, demand supply profiles and existing metering infrastructure.

In this context, the following framework is suggested for Telangana:

- **Applicability:** ToD should be applicable on all HT consumers and LT Commercial and Industrial consumers with load > 20 kW. Within 2 years, ToD tariffs should be levied on all consumers with MD > say 2 kW using smart meters and consumers with RTPV especially net metering.
- **Framework:** Based on trends in Telangana’s demand, net demand (demand minus solar and wind generation), the following slots and rates (expressed as a % of energy charges) are proposed, as shown in Table 5:

Table 5: Suggestions on ToD tariff for Telangana

Time-Slot	05:00-10:00	10:00-15:00	15:00- 20:00	20:00 -05:00
Rebate		20%		
Surcharge	20%		20%	

In the proposed structure, there is no penalty between 20:00 to 05:00 which might also change with increase in demand and increased open access, captive, RTPV and banking requirements over time. Further seasonal variations in tariff are also likely. A seasonal increase in base tariff or a ToD slot-based mark-up based on a detailed study could also be considered.

We request Hon’ble TGERC to consider taking up an exercise to revise the current ToD design to suit the interests of the DISCOMs and the consumers.

Grid support and standby charges

DISCOMs have proposed introduction of Grid Support Charges (GSC) or Parallel Operation Charge (POC) for all captives – renewable or otherwise, co-located or otherwise. The proposal to calculate based on apportionment of R&M of network is reasonable, with the

charge of Rs.19.37/kW/Month amounting to less than 5% of the FC for HT consumers and 15% for LT. Many states have been implementing a similar charge for captive.

DISCOMs should indicate the revenue expected from GSC, which we estimate to be quite low as of now. We request Hon'ble TGERC to consider a lower GSC for RE captive plants.

DISCOMs have proposed Standby charges for GEOA consumers, as temporary tariff or market price, whichever is higher. While this is reasonable, Hon'ble TGERC may wish to explore other more cost-reflective methods of implementing Standby charge, followed by states like Punjab and Maharashtra. In these states, GEOA consumers pay a commitment charge if they plan to depend on DISCOM, in addition to a high energy charge for use.

Punjab: Punjab ERC has introduced a commitment charge framework, where OA consumers are required to pay monthly commitment charges (ranging from Rs. 35 to Rs. 60 per kVA, depending on the number of days for which standby power is availed) regardless of whether standby power is used. For unplanned, standby power, the charge is 1.25 times of the tariff. With day ahead notice, the charge is the same as the tariff.

Maharashtra: Maharashtra ERC employs a four-tier differential standby charge system for captive consumers: i) 25% of the monthly demand charges when standby is not used, ii) 100% of the demand charges when standby is requested but not utilised, iii) 150% of the demand charges if recorded demand exceeds the contracted demand, and iv) 200% of the demand charges if standby is not opted for, but service is still provided.

Quality of supply & service

Performance reports in the DISCOM petition provide some details about quality of supply and service indicators. While these are good, providing spreadsheets for these Tables will ease study and analysis. As we have repeatedly pointed out, what matters is the trend of these parameters over the years, and analysis of the data to arrive at key aspects that affect the consumers.

Accident information is given by both DISCOMs, and as mentioned before, TGSP gives consolidated data for 2 years. We request the DISCOMs to provide data for past 3 years to check if the trend in accidents. Since there have been many directives and efforts by the DISCOMs, there should be gradual reduction of accidents.

TGNPDCL has given cause wise list of human and animal accidents in FY24 (pp 97 of TGNP petition). From a cursory analysis, of the 338 fatal human accidents, it appears that TGNPDCL is responsible for nearly 30%. This needs detailed explanation. Hon'ble TGERC had directed DISCOMs to conduct Root cause analysis of accidents, as per Earlier Directive 8. In their reply, TGSP has stated that: *"The report on the root cause analysis of electrical accidents during the second half H2 (i.e.Oct'2023 to Mar'24) of FY-2023-24 and the*

preventive measures adopted has been submitted to the Hon'ble Commission vide Lr.No.CGM (RAC)/SE (RAC)/ DE (RAC)/ F.C31/ D.No.191/24, Dated: 22.06.2024."

We request the Hon'ble TGERC to make such reports of TGSP and TGNP available to the public by publication on website. This would help to get professional and local organisations involved in the efforts of DISCOMs to reduce accidents.

From FY21, REC has been publishing Annual Consumer Service Rating (CSR) reports of DISCOMs, with the latest [report available for FY23](#). These reports cover feeder outages, DT failures, Metering, Billing & Collection (MBC) complaints, Fuse out complaints etc. CSR reports are based on detailed inputs provided by the respective DISCOMs. Some DISCOMs have been uploading these detailed inputs on their websites. For example, [APCPDCL website](#) has spreadsheet versions of these inputs circle-wise & month-wise, such as Fuse out call details with summary, urban, industrial & rural feeder outage with hours of supply/interruptions/ SAIFI/SAIDI calculation, MBC complaint data etc. We request Hon'ble TGERC to direct the TG DISCOMs to provide similar information on their websites. Tracking such granular data over the years is important to ensure that there is ensure improvement of consumer quality of supply & service.

Since there are many complaints regarding quality of supply and service, Hon'ble TGERC could consider revising the SoP Regulations of 2016. Considering the advances in metering and information technology, it is now possible to monitor violations of standards in a more granular fashion. There should be efforts to tighten the performance benchmarks, based on analysis of SoP reports submitted by DISCOMs, especially since a portion of RoE is now linked to performance.

3. MYT petitions on DISCOM network business

Uniform wheeling charge for different voltages

DISCOM has proposed uniform wheeling charge of Rs 440/kVA/month for 33 kV, 11 kV and LT. This is as opposed to voltage based wheeling charge and loss in the previous MYT order. In Section 5 of the petition on Rationale of Wheeling charges, DISCOM has argued that Distributed RE (DRE), storage and wind-solar hybrid would increase network losses, due to reverse power flow. From the Additional information (Replies to TGERC queries), DISCOMs have not given any computation on the extent of reverse power flow and resultant increase in network losses. Conventional wisdom on DRE is that they help to reduce network losses, since they are located closer to consumption points. Are the DISCOMs expecting significant DRE installations, with capacity exceeding contracted load? Are distributed storage facilities being planned, which may increase reverse power flow? As per Net metering regulations, RTS is permitted only to some extent of loading of the DTR (50% to maximum 100%). Therefore it is not clear how the duration and current would increase normal flows to increase losses. We request the DISCOMs to provide detailed calculations on this.

Transmission is an interconnected grid and there is some logic in having similar wheeling charges for all voltages. It is not clear how the same logic is being applied for distribution network.

Smart metering

Capex plans in the petitions of TGSP and TGNP mention the proposed plan to install smart meters for all non-agriculture consumers in the next five years. 42% of the total 28,402 Cr total capex of TGSP from FY25-29 and 30% of the Rs 11,816 Cr total capex of TGNP are earmarked for smart meters. Additional information provided by TGNP gives some details of the smart meter roll out plan, as indicated in Table 6.

Table 6: Smart meter roll-out plan of TGNPDCL

Type of Meter	Unit Rate Rs	Qty Nos	Cost Rs Cr	% of cost
Sph whole current Smart Meter - Consumer Meter	6,000	55,50,500	3,330	94
3ph whole current smart Meter - Consumer Meter	6,000	1,27,496	76	2.1
3Ph LT -CT operated Smart Meter - Consumer Meter	6,000	19,917	12	0
3Ph LT -CT operated Smart Meter - DT Meter	23,000	39,366	91	2.5
3Ph CT/PT operated Smart Meter - Boundary Meter	42,000	152	1	0.0
3Ph CT/PT operated Smart Meter feeder Meter	42,000	11,926	50	1.4
Total		57,49,357	3,560	

Source: Compiled from Annexure IV of Additional information submitted by TGNPDCL

It is clear that the investment is significant and the GoI financial support for smart meter is low. From Table 5, it is also clear that 94% of the cost is for single phase consumer meter. The petition does not provide any cost benefit analysis of this investment, which would have to be made by the DISCOMs, hence borne by the State or consumers. The cost for DT metering is quite low, and it is surprising why the DISCOM is not ready to take it up, without waiting for RDSS project approval. We request response to the following questions:

- a) Is the proposal for Smart metering approved by the Hon'ble TGERC? If so, what is the roll-out plan?
- b) Is the costing under Capex/ Totex? If Totex, what is the framework for cost-passthrough, prudence check and performance evaluation?
- c) Have the DISCOMs provided a cost benefit analysis of the Smart metering proposal? If so, request to share the studies.

- d) Has an Advanced Metering Infrastructure Service Provider (AMISP) been appointed?
If so, can the contract along with the Service Level Agreement (SLAs) be shared?

We are raising these questions, based on our interactions with other DISCOMs, which are in different stages of implementation of Smart Meters.

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Annexure 1: Open access formats

Format A:

	Renewable energy sources (in MUs)			Non-renewable energy sources (in MUs)			Total (in MUs)
	100 to 500 kW	500 kW to 1 MW	More than 1 MW	100 to 500 kW	500 kW to 1 MW	More than 1 MW	
Long-term							
Medium-term							
Short-term							
Total (in MUs)							

Format B:

	Parameters	Actuals	Approved
1	Number of consumers availing Open Access (Nos)		
2	Total Contracted load of consumers availing Open Access (MW)		
3	Number of applications received		
4	Number of applications processed		
5	Average time for approval of Open Access (no. of days)		