

**BEFORE THE TELANGANA STATE ELECTRICITY
REGULATORY COMMISSION**

5th Floor Singareni Bhavan, Red Hills, Hyderabad – 500 004

OP No. 21& 22 of 2017

IN THE MATTER OF

Petition requesting the Commission

1. To review the power surplus situation in Telangana State.
2. To decide upon an action plan to bring down electrical accidents and take stringent action.
3. To evaluate power requirement estimate of agriculture submitted by TSDISCOMs.
4. To direct TSDISCOMs to provide consumer category-wise arrears and related action taken reports.
5. To discuss and finalise a compensation package for farmers, whose lands are used for transmission and distribution lines, with government and power utilities.
6. To allow the objector to be heard in person before the Commission takes any decision on this application of the DISCOMs.

IN THE MATTER OF

Name and full address of the petitioner:

M.Kodanda reddy
Chairman, Kisan keth mazdur congress
Gandhi Bhavan, Hyderabad-500001

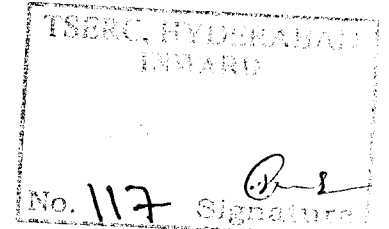
Represented by

M.Kodanda reddy
Chairman, Kisan keth mazdur congress
Gandhi Bhavan, Hyderabad-500001

And

Name and address of the Respondents:

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



**BEFORE THE TELANGANA STATE ELECTRICITY REGULATORY
COMMISSION**

5th Floor Singareni Bhavan, Lakdi-ka-pool, Red Hills, Hyderabad – 500 004

IN THE MATTER OF

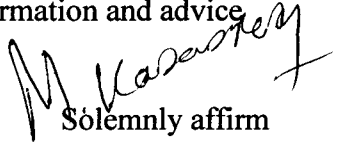
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AFFIDAVIT VERIFYING THE MEMORANDUM OF OBJECTIONS

I, D. Narasimha Reddy, son of Late D. Nagi Reddy, do hereby solemnly affirm and state as under:

The statements made in the paragraphs of the accompanying memorandum of objections now shown to me are true to my knowledge, derived from TSGENCO's application for determination of generation tariff and new stations' capital cost for FY 2014-19 and the material gathered by me and made available to me and are based on information and advice received which I believe to be true and correct.


Solemnly affirm
Deponent

17-01-2018
Hyderabad

BEFORE THE TELANGANA STATE ELECTRICITY REGULATORY COMMISSION

* 5th Floor Singareni Bhavan, Lakdi-ka-pool, Red Hills, Hyderabad – 500 004

1.1 The following comments are being submitted on TSDISCOMs' ARR and tariff proposals for the FY 2018-19 in response to the Public Notice published in the Newspapers on 28th December, 2017.

Electricity Demand Assessment

2.1 According to ARRs of TSDISCOMs during the FY 2018-19 electricity requirement in Telangana would be 64,291 MU. An examination of UDAY Document signed by both the DISCOMs and GoTS with GoI shows that during this FY electricity requirement would be 61, 588 MU. ARR estimate of electricity requirement during FY 2018-19 appears to be higher by 2,700 MU entailing an additional power purchase expenditure of Rs. 1,171 Crore (at average power cost of Rs. 4.34/U). It is important to review electricity requirement estimate arrived at by the TSDISCOMs in their ARRs.

2.2.1 TSDISCOMs in their ARR filings explained that their sales projections/consumption estimates of electricity are based on Trend Method and End User Method. An analysis of electricity consumption figures for the FY 2017-18 shows that this method might be giving rise to over estimated consumption figures. In the present ARR filings the figures for consumption estimates for FY 2017-18 are available at two places – Energy Balance (2.1.1 – p.10 of NPDCL and p.11 of SPDCL) and in the Section on Sales Forecast (3.2.4 – p.24 of NPDCL and p.42 of SPDCL). Figures in Sales Forecast are based on Trend Method and End User Method. Details are given in the following table:

DISCOM	Energy Balance (MU)	Sales Forecast (MU)
TSNPDCL	15,830	16,336
TSSPDCL	36,811	38,664
Total	52,641	55,000

2.2.2 From the above table it is clear that power consumption estimates for FY 2017-18 based Trend Method and End User Method are higher by 2,359 MU compared to the figures provided in the Energy balance Section of ARRs of both the DISCOMs. This shows that the Trend Method and End User Method is leading to over estimation of electricity consumption. From this one may infer that the electricity consumption estimate for the FY 2018-19 is similarly over estimated. The same need to be revised.

Power consumption in the past:

(MU)

DISCOM	2016-17			2017-18		
	ARR	APERC	Actual	ARR	APERC	Present Estimate
NPDCL	15,592	14,379	14,674	16,323	15,587	15,830

SPDCL	39,292	37,685	34,804	38,433	36,658	36,811
Total	54,884	52,063	49,478	54,756	52,235	52,641

2.3 Past experiences show that actual power procurement by the TSDISCOMs was much less than their ARR proposals. During 2016-17 while TSDISCOMs as part of ARR proposals projected energy requirement of 54,884 MU the actual procurement was only 49,478 MU. Similarly, during 2017-18 while DISCOMs as part of ARR proposals projected energy requirement of 54,756 MU estimated procurement will be 52,641 MU. During 2016-17 the actual power procurement was also less than the quantum approved by the Commission. During 2017-18 estimated procurement is slightly higher than the quantum approved by the Commission. This is largely due to higher expected consumption in the agriculture sector, while metered sales are expected to be lower than the quantum approved by the Commission.

2.4 TSSPDCL projected 10.32% increase in total electricity consumption during 2018-19 while during 2017-18 it increased by 7.07% only. In the case of HT consumers TSSPDCL projected 27.66% increase in electricity consumption during 2018-19 while during the previous year its consumption increased by 5.19% only. Even without new lift irrigation schemes, Mission Bhagiratha and 24 hour power supply to agriculture electricity consumption growth rate during ensuing year (8.38%) will be higher than the current year (6.89%) Similarly, TSNPDCL projected 36.25% increase in total electricity consumption during 2018-19 while during 2017-18 it increased by 9.65% only. In the case of HT consumers TSNPDCL projected 105.51% increase in electricity consumption during 2018-19 while during the previous year its consumption increased by 14.57% only. This trend points to the need to exercise caution while adopting DISCOM's estimate of power consumption and procurement during the ensuing year i.e., 2018-19. Overestimation of HT sales will have adverse impact on the finances of DISCOMs. Lower than projected consumption by high tariff consumers like HT services will lead to under realization of revenue and consequent increase in deficit of DISCOMs.

2.5 ARR filings of both the DISCOMs show that electricity consumption by lift irrigation schemes is going to increase substantially. Under TSSPDCL electricity consumption by lift irrigation schemes is going to increase by 125% and in the case of TSNPDCL it is going to increase by 575% during ensuing year. How many of the listed Lift Irrigation Schemes will become operational need to be examined? Some of these schemes are still under construction. Foundation stone for Tummilla scheme in Gadwal-Jogulamba district was laid only during second week of January. Besides this, electricity consumption by these LIS will be restricted to a short period and will have different consumption dynamics. These aspects need to be taken in to account while assessing electricity consumption by this category.

2.6.1 Agriculture sector is going to account for 26% of the electricity to be supplied in Telangana during the FY 2018-19. Both the DISCOMs have claimed that they are following the ISI methodology stipulated by the Commission in estimating electricity consumption in the agriculture sector. Apart from this assertion no other details about this estimation is made part of the ARR filing. 24 hour supply of electricity is going to present another problem in this regard. TSSPDCL in its filings stated that during the ensuing year electricity consumption in agriculture sector will grow by 2.83% while during the current year (2017-18) it increased by 8.31%. Given 24 hour power supply throughout the year growth rate in consumption would have been higher

during ensuing year compared to the current year. TSSPDCL also stated, “Significant growth rate of 34.52% is observed in FY 2016-17 over FY 2015-16 and 49.12% in H1 of FY 2017-18 over H1 of 2016-17.” All these numbers appear unconvincing.

2.6.2 Similarly, TSNPDCL stated that during FY 2017-18 electricity consumption by the agriculture pump sets will increase by 10.35% and the same will be 14.57% during FY 2018-19. In the ARR for the FY 2017-18 both the DISCOMs stated that electricity consumption by the agriculture pump sets would be increasing by 6.50%. Present estimates by them shows that this increase will be much higher.

2.6.3 Under the given ISI methodology DISCOMs are expected to provide Circle wise information related to number of agriculture services, their connected load and annual electricity consumption.

2.6.4 To improve estimation of electricity consumption by agriculture pump sets these services need to be geo tagged as is being done in Andhra Pradesh. This exercise in AP has shown that more than 10% of these services are not in operation.

2.6.5 Along with this feeder wise electricity consumption data need to be made available to cross check the numbers arrived using the present methodology. **For this to happen, TS DISCOMs have to report progress on feed segregation.**

2.6.6 Given the lack of transparency in estimating electricity consumption in the agriculture sector under the existing system it is better to explore alternative methods. Under UDAY TSDISCOMs are obliged to meter all DTRs including DTRs serving agriculture services by June 2017. We request the Commission to direct the TSDISCOMs to estimate electricity consumption by the agriculture pump sets based on the readings of these meters. In this context we also would like to know the progress in metering DTRs in the state.

24x7 Supply to Agriculture

3.1 ARRs do not show information on what basis TSDISCOMs have taken up this 24x7 power supply for agriculture. It would be important to include a separate section on this and provide all technical, financial data and information. This assessment should include on what basis TSDISCOMs have arrived at a 8.3 percent growth rate. How much is the investment – on generation, transmission and distribution? What would be the impact on tariff? What are the technical concerns and challenges that arise out of this supply?

Power purchase costs:

4.1 Given the surplus power situation power from TSGENCO stations of KTPS VII and BTPS shall not be scheduled. From this step fixed cost burden to the extent of Rs. 709.79 Crore can be reduced. Also PPAs for KTPS VII and BTPS are yet to be approved by the Commission. Power from BTPS and KTPS VII shall not be scheduled without subjecting the related PPAs to public process and regulatory approval.

4.2 PPAs related to TSGENCO Hydel plants Priyadarsini Jurala and Pulichintala shall also go through public process and regulatory approval.

4.3 TSDISCOMs' ARR filings show that power from CSPGCL is proving to be costly. Per MW fixed cost burden of this plant is Rs. 1.87 Crore compared to Rs. 1.26 Crore of Singareni plant. Besides this, because of inter-state transmission 3.2% T&D losses are also to be accounted for. We request the Commission to direct TSDISCOMs to relook at power purchase from this plant.

4.4 According to ARR filings, "The variable cost per unit of KTPS (A,B,C) and KTPS V is based on 15% escalation over approved VC for 2017-18. KTPS VI and RTS B are based on 10% escalation over approved values for 2017-18." (TSSPDCL ARR p.57) No explanation for this escalation in variable cost is provided. This escalation shall not be allowed.

4.6 Variable cost of TSGENCO thermal power plants range From Rs. 2.21 to Rs. 2.70 per unit. Compared to this variable cost of CSPGCL is Rs. 1.20 per unit. Most of TSGENCO thermal plants are pit head based or located near to the coal mines. Due to this variable cost of TSGENCO shall be lower than that quoted by them. We request the Commission to scrutinize variable cost claims of TSGENCO thermal power plants.

4.7 While TSGENCO plants are projected to operate at 70% PLF through their normative PLF is 80% TPCIL is projected to operate at 90% PLF though its normative PLF is 85%. Supply of power over and above threshold PLF involves payment of incentive which will be an additional burden. Given surplus power availability power from TPCIL shall be scheduled up to threshold PLF i.e., 85% only.

4.8 TSDISCOMs projected procurement of 383.46 MU from bilateral/power exchange on short term basis. Given power surplus situation and over estimation of energy requirement procurement from bilateral/power exchange shall not be allowed.

Arrears:

5.1 According to ARR filings at the end of September 2017 both the DISCOMs together are facing arrears to the extent of Rs. 4,575.23 Crore from those who have to pay more than Rs. 50,000. Out of this SPDCL is facing arrears of Rs. 3,773.55 Crore which is equivalent to 16% of the proposed ARR for FY 2018-19. While SPDCL provided arrears consumer category wise NPDCL provided HT and LT category wise only. We request the Commission to direct TSNPDCL to provide consumer category wise arrears. Under SPDCL Rs. 1424.82 Crore are due from HT industrial units, Rs. 1541.17 Crore from street lights and PWS schemes and Rs. 564.17 Crore from lift irrigation schemes. According to Section 1.2 (i) of UDAY MoU "All outstanding dues from the state government departments to DISCOMs for supply of electricity shall be paid by 31.03.2017." According to this document dues from state government departments as on 30.9.2016 were Rs. 2,416.62 Crore. Out of this Panchayat Raj accounted for Rs. 1,644.07 Crore, municipalities Rs. 139.53 Crore, Irrigation department Rs. 73.52 Crore and LIS Rs.235.80 Crore. The present ARR filings show that the situation in fact deteriorated in spite of the UDAY MoU.

Such huge arrears also involve significant financing costs. We request the Commission to direct the DISCOMs to take proactive steps to recover dues expeditiously.

5.2 Government has been promising subsidy for agricultural and other category of electricity consumption. However, this is not being reflected succinctly in the ARR of TSDISCOMS. It would help in understanding the financial realities, if a separate section is devoted for these kind of subsidies. Most often ARR estimates precede TS government budget estimations. Thus, electricity subsidies as reflected in ARRs are at best expectations, and are not absolute. Assumptions of government subsidies in ARRs may not match the State budget allocations presented in TS legislature in later days. In this regard, the Commission has to either ask for an undertaking from the government that responds to the subsidy expectations in ARRs, and/or direct DISCOMs to produce the basis for such expectations.

5.3 Nevertheless, there is often a gap between expectations of DISCOMs as reflected in the ARRs and government budgetary allocations, sanction and actual release of funds. This gap, between expectation by TSDISCOMs, budgetary allocations by the TS government and actual release of funds, also needs to be discussed by collating, collecting and presenting such data, from the previous year, in addition to the current Financial Year under discussion.

Electrical accidents

	2013-14	2014-15	2015-16	2016-17	2017-18 H1
SPDCL	251	307	383	349	130
NPDCL	185	147	139	329	173
Total	436	454	522	678	303

6.1 The above table shows that over the period fatal accidents are increasing. Despite DISCOMs' claims about taking precautionary and preventive steps to avert accidents their number is on the rise. In the FY 2016-17 the number of fatal accidents reached 678. During the first half of FY 2017-18 already 303 people died due to electrical accidents.

Circle wise fatal electrical accidents

Circle	2013-14	2014-15	2015-16	2016-17	2017-18 H1
Mahabubnagar	115	124	126	96	40
Medak	7	91	123	101	28
Nalgonda	84	46	64	71	18
Rangareddy South	18	21	32	43	22
Warangal	55	45	41	87	43
Karimnagar	34	56	23	80	47
Nizamabad	37	25	24	59	26
Adilabad	44	10	15	82	45

6.2 Mahabubnagar, Nalgonda, Medak+ Siddipet and Ranga Reddy-South Circles under SPDCL; Karimnagar, Warangal, Nizamabad and Adilabad Circles under NPDCL are recording high fatal accidents. There has to be special attention to analyse and reduce accidents in these circles.

6.3 NPDCL has given circle wise details of accidents and ex-gratia paid. But it has not given the break-up of numbers of public and department staff/contract staff. SPDCL has given these numbers in Form 2. Both DISCOMs should provide data in similar formats.

6.4 In response to directive 9.9.2 to analyse **root cause of electrical accidents** NPDCL submitted that DISCOM had critically analyzed the root cause of the accidents and attributed them to ignorance, negligence and unawareness among the rural people.

6.5 But NPDCL has given causes of accidents and number for each, for 3 years, which is a good step. This analyses 276 of the total 329 reported accidents. Details are given in Table below. As per this data 45% of fatal accidents in 2016-17 are due to department fault and remaining attributed to consumer. Hence it is not true to say that accidents are occurring due to ignorance etc. The main causes at the department side are AB switch, LT/HT line snap and DT. At the consumer side only 18% of the consumer attributed accidents happen in homes, with rest occurring in the field. The main causes at the consumer end are at the bore well, service wire insulation and GI wire. A more detailed analysis with locations, time of accident etc and corresponding action to address them will help to reduce accidents.

	2014-15	2015-16	2016-17
11/6.6 kV jumper	14	8	12
11 kV AB switch pipe/cable insulator	9	9	43
HT/LT line snap	23	15	36
Stay wire	6	3	5
DTR	0	10	28
Total dept	52	45	124
Bore/motor	26	21	35
HG fuse/pole climbing	12	2	17
GI Wire	4	15	37
Tree touching LT line	6	7	4
Service wire insulation	39	35	31
Home appliances	8	14	28
Consumer related	95	94	152
Total	147	139	276

6.6 SPDCL has given a general answer listing the causes, but not given the numbers. Hence it has not complied with the directive of the Commission. SPDCL should also give the break-up as done by NPDCL.

6.7 The Construction, Operation & Maintenance of electrical plant & lines especially at distribution level by DISCOMs is in a very unsafe condition. DISCOMs are not following the basic statutory safety regulations of CEA. The state government and its CEIG are not taking action on DISCOMs.

6.8 At many places especially in rural areas, bare live parts in DTRs and associated bare lines and wires are not kept inaccessible to living beings. Barriers, fences and enclosures and minimum clearances to ground are not maintained so that live parts are out of reach to prevent fatal shocks as required in Regulations 58,17,37(1) and 44(1)(i) of CEA (Measures relating to safety and electric supply) Regulation, 2010

6.9 To the best of our knowledge TSDISCOMS are not implementing the above mandatory regulations. APERC is requested to order TSDISCOMS to submit detailed report and evidence to show their top down commitment to these management level Regulations.

6.10 Public awareness is very important in promoting electrical safety. TSDISCOMS do not have any materials even in their websites for creating awareness in safety among general public and consumers. Recently IEEE Hyderabad Section produced a video film (https://www.youtube.com/watch?v=a_7rRUxhvVs) and designed posters on electrical safety. These may be used by TSDISCOMS in their work on promoting electrical safety.

6.11 Accident statements / statistics are not available to public. These must be kept in public domain and submitted annually to E R C. Many Circles in DISCOMs do not discharge their statutory duty of informing details of accidents to CEIG. Auditing and accident investigations need to be reviewed by an independent agency like E R C. Action is not taken many a time by DISCOMs even when dangerous conditions are brought to the notice by public and media.

6.12 There is need to improve compensation payment to victims families. In the case of SPDCL during FY 2016-17 out of 349 fatal accidents compensation was paid in 180 cases and during FY 2017-18 H1 out of 130 fatal accidents only 23 victims families received compensation. In the case of NPDCL during FY 2016-17 out of 329 fatal accidents compensation was paid in 222 cases and during FY 2017-18 H1 out of 173 fatal accidents 144 victims families received compensation. During FY 2016-17 exgratia has been paid to 59% cases in TS, 52% in SPDCL and 67% in NPDCL.

DTR Failures:

Year	DTR Particulars	SPDCL	Mahabubnagar Circle	NPDCL	Warangal Circle
2013-14	Total DTRs	2,54,603	54,807	2,09,195	48,350
	DTRs failed and replaced	42,278	13,074	30,666	8,648
	% of DTRs failed and replaced	16.01	23.85	14.66	17.89
2014-15	Total DTRs	2,55,489	54,807	2,26,885	55,078
	DTRs failed and replaced	35,045	12,419	28,604	7,407
	% of DTRs failed and replaced	13.72	22.66	12.61	13.45

2015-16	Total DTRs	2,92,654	63,740	2,42,539	59,343
	DTRs failed and replaced	31,267	10,049	28,031	8,108
	% of DTRs failed and replaced	10.68	15.77	11.56	13.66
2016-17	Total DTRs	3,18,765	67,412	2,55,087	59,528
	DTRs failed and replaced	40,199	11,522	32,360	8,644
	% of DTRs failed and replaced	12.61	17.09	12.67	14.52

7.1 Every year more than 10% of the DTRs in the state are failing and need to be attended to. Though over the period there is decline in percentage of DTRs failing still the existing levels of failure is unacceptable. Special attention needs to be paid to circles with high failure rate. Mahabubnagar circle's (under SPDCL) performance needs to be thoroughly scrutinized. In 2016-17 more than 17% of the DTRs in this circle need to be repaired. This also indicates the quality of service the consumers in that circles are receiving. Incidentally, Mahabubnagar circle is regularly recording high rate of fatal accidents in the state. Procurement, operation and maintenance, and repair of these DTRs need to be examined.

7.2 These tables refer to DTs replaced. Consumer supply is affected also due to DT failure, 11 kV feeder outage, 33 kV feeder outage etc.,. From the information provided, it is not possible to get an idea of the total duration of outage by the consumer. Considering the nearly all households have connection and the objective is to provide 24 x 7 power supply to all consumers, the focus of the DISCOMs now should be closely monitor the quality of supply. We request the DISCOMs to provide circle wise information about quality of supply over the past few years. Suggested format is given below:

DISCOM name:

Year:

Circle	Number of consumers	Outage hours/consumer due to fuse off	Outage hours/consumer due service wire	Outage hours/consumer due to DT	Outage hours/consumer due 11 kV feeder	Outage hours/consumer due to 33 kV feeder

This data for urban and rural areas and for different categories of consumers will help to arrive at performance benchmarks, which could be tracked for improvement in quality of supply.

Poly-houses/green-houses

8.1 In the last tariff order, based on DISCOM petition and public hearing discussions, poly-houses and green-houses have been included in LT-V category. While this is welcome, it will be good to monitor the consumption by this group of consumers. We suggest that these consumers

be metered, and the number, connected load and consumption by them reported separately in the tariff filings.

Prayer before the Commission

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