

BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

4th Floor Singareni Bhavan, Red Hills, Hyderabad – 500 004

OP Nos. 122, 123, and 124 of 2021

IN THE MATTER OF

Petition requesting the Commission

1. To review power consumption estimates.
2. To review power purchase costs.
3. To review transmission and distribution costs.
4. To advise the Government of Andhra Pradesh to take measures to address financial crisis of APDISCOMs.
5. To direct DISCOMs to improve safety and avoid deaths due to shocks.
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:

People's Monitoring Group on Electricity Regulation
3rd Floor, House No. 3-4-107/1, (Plot No. 39),
Radha Krishna Nagar,
Hyderguda Village, Attapur,
Hyderabad – 500048

Represented by

M. Thimma Reddy
Convenor
People's Monitoring Group on Electricity Regulation,
3rd Floor, House No. 3-4-107/1, (Plot No. 39),
Radha Krishna Nagar, Hyderguda Village, Attapur,
Hyderabad – 500048

And

Name and address of the Respondents:

Chairman and Managing Director
Eastern Power Distribution Company of Andhra Pradesh Ltd,
Southern Power Distribution Company of Andhra Pradesh Ltd,
Central Power Distribution Corporation of A. P. Ltd,

BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

4th Floor Singareni Bhavan, Lakdi-ka-pool, Red Hills, Hyderabad – 500 004

1.1 In response to the public notices published in the newspapers on 23-12-2021 inviting objections/suggestions on ARR and tariff proposals for FY 202-23 filed by APDISCOMs before the Andhra Pradesh Electricity Regulatory Commission (APERC) we are submitting the following objections and suggestions on the ARR and tariff proposals of APDISCOMs for the year 2022-23 for consideration of the Commission.

Over estimation of power consumption:

2.1 For the ensuing year 2022-23 the three DISCOMs in the state estimated total power requirement to be 74,815.24 MU. The past experience with APDISCOMs' filings on ARR shows that they tend to overestimate power requirement. For example, in their ARR and tariff proposals for the FY 2019-20 the DISCOMs estimated power requirement to be 67,713 MU. While the Commission allowed the DISCOMs to procure 63,674 MU the DISCOMs procured 60,528 MU only. This shows that DISCOMs' estimation of power requirement in their ARR is much higher than the actual power procurement. This appears to be the case with the estimation for the ensuing year also. Given this experience APDISCOMs' estimation of power requirement for the ensuing year has to be subjected to critical examination.

2.2 APDISCOMs projected consumption growth rate to be in the range of 6 to 8% during the FY 2022-23. With the uncertainties thrown up by the prevailing COVID-19 virus situation in the state and its impact on different sectors of the state's economy it will be worthwhile to be cautious while estimating power consumption in the state during the ensuing year.

2.3 APDISCOMs propose to continue with the ongoing energy efficiency and energy saving measures and also take up new measures to promote these interventions across all consumer categories. These measures help to bring down electricity consumption. Under the 'Navaratnalu-Pedalandariki Illu' scheme the state government envisages providing energy-efficient appliances to houses as part of measures to achieve energy and economic savings. The annual energy savings by installing energy-efficient appliances in 15 lakh houses are estimated to be around 1,674 million units. Impact of such interventions on electricity consumption levels shall also be taken in to account while estimating power consumption.

2.4.1 According to APDISCOMs' estimate agriculture pump sets are going to consume 13,088 MU during the ensuing financial year. The DISCOMs in their filings reiterated that they are following ISI methodology of sample DTR metering in estimating power consumption by agriculture pump sets in the state. But they did not provide other critical information. Since measurements from sample DTRs are still being used to estimate this, the details of the DTRs circle wise with installed meters, those with valid readings, actual readings and basis for arriving at the consumption should be provided. In the past this information used to be provided along with ARR filings. Without this basic information it is difficult to assess APDISCOMs' estimate of power consumption by agriculture pump sets.

2.4.2 APDISCOMs projected power consumption by agriculture pump sets to grow by 8.91% during the ensuing year. Number of agriculture pump sets in the state during FY 2023 are expected to grow by 4.57% to 18,21,641. As DISCOMs stated that they would stick to 9hour power supply to agriculture as is being done at present projected growth in power consumption by agriculture pump sets is nearly twice to that of growth in number of agriculture pump sets. This raises doubts on APDISCOMs' estimation of power consumption by agriculture pump sets.

2.4.3 Past experience also shows that APDISCOMs projected higher power consumption by agriculture pump sets. During FY 2021 and FY 2022 agriculture consumption is less than that allowed by the Commission. In FY 2021 the Commission allowed 14,439.51 MU but actual consumption was 12,850.32 MU. In FY 2022 the Commission allowed 12,730.59 MU and the revised estimate is 12,016.99 MU. This experience also demands a re-examination of APDISCOMs' claims on power consumption by agriculture pump sets.

2.4.4 APEPDCL in its filings submitted as follows, "In compliance to the directive of the honourable APERC and G.O. Ms No 22 of Govt of Andhra Pradesh, with regard to estimation of agricultural consumption, APEPDCL has provided IrDA meters to all agricultural services in Srikakulam circle. Monthly agricultural consumption is being arrived based on actual recorded meter consumption through IrDA Scanners (electronically obtained data). "(para 6.1.4 a) APEPDCL has taken up metering of all agriculture services as a part of pilot on DBT for agriculture services in Srikakulam district. This exercise is expected to provide accurate or correct picture of power consumption by agriculture services. We request the Commission to direct APEPDCL to share the results of the above pilot with public including number of agriculture services in operation in the circle, number of hours of power supply and monthly power consumption by these services.

2.4.5 In the case of implementation of DBT scheme in AP the APDISCOMs have submitted as follows, "In so far as LT Agriculture Consumption is concerned, the GoAP has taken a major decision to implement Direct Beneficiary Transfer (DBT) scheme in Agriculture power supply which is expected to make a paradigm shift in the way the Agriculture Consumption is estimated and the subsidy gets administered. As enshrined in the Agriculture DBT scheme, all the LT Agriculture consumers who are not installed with meters for measurement of their consumption, will be provided with proper meter for measurement of consumption which is a pre-requisite for facilitating DBT. The agriculture consumption which was hitherto being estimated based on metering at sampled Distribution Transformers (DTRs) will be measured with Meters in similar lines of other consumers after installation of meters. Thus, for the ensuing financial year FY 2022-23, even though Agriculture consumption is projected based on sampled DTR meter data, at this juncture, the actual measured consumption will be made available once the meters are installed and made operational." (para 6. 7, APSPDCL filing) In the wake of sustained farmers' agitation the GoI has withdrawn 3 central laws related to agriculture and along with them also decided against proceeding further on DBT of agriculture subsidy. New Guidelines issued by the Ministry of Power – GoI under Revamped Distribution Sector Scheme (Version 3, December 2021) provided as follows: "Looking at the scattered nature of agriculture connections and their remoteness from the habitations, as well as their proposed solarisation under Kusum; the smart meters need not be installed in Agriculture connections."(Para 4.7) On the other hand, AP Judicial Preview has approved procurement of 18 lakh smart meters for agriculture services and APDISCOMs have also floated tenders to

procure them. In the background of changed policy at the national level we would like to know whether GoAP and APDISCOMs plan to proceed further on DBT of subsidy to agriculture consumers.

T&D Losses:

Table 1: T&D losses during FY 2022-23

DISCOM	Power requirement (MU)	Total sales (MU)	Losses (MU)	% of losses
APEPDCL	27,733.72	24,887.73	2,845.99	10.26
APCPDCL	17,344.76	15,306.72	2,038.04	11.75
APSPDCL	29,736.76	26,335.41	3,401.35	11.44
Total	74,815.24	66,529.86	8,285.38	11.07

2.5.1 During FY 2022-23 APDISCOMs projected T&D losses of 11.07%. It is higher than previous year (FY 2021-22) T&D losses of 10.30%. During the FY 2011-12 APEPDCL registered T&D losses of 6.90%. Compared to this during the ensuing year (after a decade) these losses will be 10.26%. In the case of APSPDCL while during FY 2019-20 T&D losses stood at 8.19% of the total power procured, during the ensuing year these losses will be 11.44%. These show that during the ensuing year T&D losses are estimated to be higher than that achieved in the past. Under UDAY Agreement APEPDCL has a commitment to bring down AT&C losses to 5.44% by 2018-19 and APSPDCL to 10.89%. The estimated T&D losses, leave alone AT&C losses, during the ensuing year are much higher than this.

Table 2: Transmission losses

Particulars	2019-20	2020-21	2021-22	2022-23
Transmission losses (%)	3.17	3.48	3.54	4.00
Network cost (Rs. In Cr)	11,964	14,620	11,476	13,096

2.5.2 APDISCOMs' filings also show that transmission losses which stood at 3.17% in FY 2019-20 are projected to increase to 4% during the ensuing year. The above table shows that transmission losses are increasing every year in spite of heavy investment on network strengthening. In the background of huge investments made in T&D network in the past and proposed to be made during the ensuing year and also improving human resources these losses shall come down. Instead, the ARR for the ensuing year present an opposite trend. When lower T&D losses are adopted total power requirement in the state will also come down, leading to lower ARR. Under UDAY Agreement the commitment was to bring down transmission losses to 3.5% by 2018-19. We request the Commission to adopt 3.17% as transmission losses during the FY 2022-23 and any higher losses above this level shall be borne by utilities.

2.6 When the estimated electricity consumption growth rates are moderated to reflect reality and estimated T&D losses are brought down to the previous or even to lower levels the quantum of power to be procured in the state will also come down.

Power purchase costs:

3.1 APDISCOMs projected power purchase cost during the ensuing year to be Rs. 30,878.72 crore. It accounts for 68% of the aggregate revenue requirement (ARR). Avenues shall be explored to bring down power purchase cost to lower tariff burden on the consumers as well as budgetary support from the state government.

Table 3: Fixed costs

Generation Station	Fixed cost (Per unit) (Rs)	Fixed cost (Per MW) (Rs. In Cr)
Dr. NTTPS – IV	0.76	0.57
RTPP – III	1.14	0.81
RTPP – IV	1.63	1.25
SDSTPS	1.60	1.24

3.2 Fixed costs of APGENCO thermal units, particularly of RTPP Stage III and IV and SDSTPS are very high. Per MW fixed cost of RTPP Stage IV is Rs. 1.25 Crore and that of Stage III is Rs. 0.81 Crore. Per MW fixed cost of SDSTPS is Rs. 1.24 crore. Fixed costs of these plants are high due to inordinate delay as well as inefficiency in their execution. CAG in its report for the FY 2010 pointed out excess expenditure of Rs. 350 crores in the case of Dr. NTTPS IV unit and excess expenditure of Rs. 308 crores in the case of RTPP II unit. Similar excess expenditure had taken place in the case of RTPP III and IV and SDSTPS units due to their inefficient execution. We request the Commission to review fixed costs of these plants and help to reduce power purchase cost.

Table 4: Variable costs

Generation Station	Variable cost (Per unit) (Rs)
Dr. NTTPS – I, II, III	3.62
Dr. NTTPS – IV	3.31
RTPP – I, II, III	4.04
RTPP – IV	3.93
SDSTPS	3.30
Sembicorp	2.31

3.3 Per unit variable cost of coal based thermal power plants supplying power to APDISCOMs differ widely. Also, there is scope to bring down these variable costs. While per unit variable cost of first three units of Dr. NTTPS is Rs. 3.62 that of IVth unit is Rs. 3.31. In

other words, variable cost of new unit is 31 paise lower than that of older units. As all the units are located at the same place they should have common variable cost. This indicates that it should be possible to bring down variable costs of first three units to the level of the new unit. While variable cost of RTPP units is Rs. 4 per unit that of SDSTPS is Rs. 3.30 per unit. By diverting coal supplies from RTPP to SDSTPS some more units can be generated at lower variable cost. SDSTPS's threshold PLF is 85% and still 860 MU more can be generated at this plant to reach 85% PLF. This plant can also operate at above 85% PLF. In the past the Commission had advised APGENCO to divert coal supplies from RTPP units to SDSTPS to bring down variable cost. Per unit variable cost of Sembicorp power plant is Rs. 2.31. Sembicorp and SDSTPS plants are located in the same geographical area – Krishnapatnam. Per unit variable cost of Sembicorp plant is one rupee less than that of SDSTPS. By following practices of Sembicorp in procurement as well as utilisation of coal APGENCO thermal plants as well as SDSTPS shall be able to bring down variable costs and along with it total power procurement cost for APDISCOMs.

Market purchases:

3.4.1 APDISCOMs propose to procure 5,264.31 MU of power from market sources. They in their filings submitted, “The APDISCOMs are constrained to purchase power at the prevailing market rates, to mitigate the shortfall of availability from committed sources and to meet the additional demand than the forecast, for ensuring due compliance with the „Power for All“ 24X7 policy of the Ministry of Power, in which all state governments including Andhra Pradesh continue to participate.” APDISCOMs’ estimations on power availability show that most of the thermal power plants supplying power to APDISCOMs would be operating below their threshold PLFs. By operating these power plants at threshold level PLFs or even above this level they should be able to bring down deficit on availability and as a result reduce dependence on market sources.

3.4.2 APDISCOMs also propose to procure power from market sources above ceiling price fixed by the Commission depending on the market conditions. According to them, “Adoption of block wise ceiling price will hinder the DISCOMs in supplying 24x7 power to all the categories of the consumers (except the agricultural consumers).” (APEPDCL, para 3.4.6.1, p.28) While the intention to provide uninterrupted power is welcome some kind of loadshedding linked to AT&C losses may be better than procuring power at high cost.

Review transmission and distribution costs

4.1 During the ensuing year network costs account for 26% of the ARR. Out of Rs. 6.97 per unit of cost of service Rs. 2.09 per unit will be spent on transmission and distribution works. For the last few years more than Rs. 11,000 crores were spent every year on strengthening and augmentation of transmission and distribution network. But on the ground not much improve is found in the quality of power received by the consumers in the state. In spite of such huge investments on transmission and distribution network T&D losses are increasing every year. In this background expenditure on transmission and distribution works shall be reviewed.

Deaths due to shocks:

Table 5: Fatal electrical accidents involving non-departmental persons

Year	Particulars	EPDCL	SPDCL	CPDCL	Total
2020-21	Deaths due to Dept faults	83			
	Deaths not due to Dept faults	96			
	Total	179	134	102	415
	No. of cases ex-gratia paid	62	37	21	120
2021-22 (1st Half)	Deaths due to Dept faults	73			
	Deaths not due to Dept faults	14			
	Total	87	89	42	218
	No. of cases ex-gratia paid	20	51	1	72

5.1 It appears the APDISCOMs have become insensitive to the tragedy of deaths due to electrocution. In the year 2019-20 the number of deaths due to electrical accidents were 446. During the year 2020-21 the number of deaths due to electrical accidents were 415. During the first half of 2021-22 already 218 persons died due to electrical accidents. APEPDCL in its filing provided information on deaths due to department faults. In the year 2020-21 out of 179 deaths due to electrical accidents 83 deaths were due to department faults. In the first half of 2021--22 out of 87 deaths due to electrical accidents 73 deaths were due to department faults. Situation should have been similar in the other two DISCOMs. The Commission in the Tariff Order for the FY 2021-22 has given detailed directions to the DISCOMs to take proper steps to reduce or eliminate such accidents. (Para 218 vi , page 261 of RST Order for FY 2021-22) APDISCOMs in their compliance submissions have claimed that they have been following the Commission's directives. But the results on the ground do not show any improvement.

5.2 The APDISCOMs are also lacking in providing timely compensation to the victims' families as shown in the above table. Compensation is not reaching even to one-fourth of the victims' families.

Financial crisis:

6.1 APDISCOMs in their ARR and Tariff filings for the FY 2022-23 also presented a picture of financial crisis they are facing. They are facing accumulated losses of Rs. 28,599.28 crore as on 31-03-2021. This is 63% of the ARR for the ensuing year. Their outstanding loans as on 30-11-2021 are Rs. 37,365 crores. Out of this Rs. 29,536 crores are towards working capital loans. This working capital loan is equivalent to 65% of the ARR. The three DISCOMs together have to receive Rs. 13,560 crores from the State Government – Rs. 3,397 crores towards subsidy and Rs. 9,210 crores towards electricity consumption by government departments. The pending payments from the State Government accounts for nearly 50% of the working capital loans.

6.2 In the case of Power purchase true up for the period 2014-15 to 2018-19 (3rd control period) while APDISCOMs filed true up claims to the extent of Rs. 20,572 Crore the Commission allowed Rs. 3,121 Crore only leaving a gap of Rs. 17,451 Crore. This gap accounts for major portion of accumulated losses of APDISCOMs.

6.3 Though the APDISCOMs presented a picture of financial crisis facing them they did not suggest any way out.

6.4 One of the important reasons for huge working capital loans of APDISCOMs is the pending payments from the State Government both towards subsidy and electricity consumption by the Government departments. Under UDAY Agreement the GoAP had committed to pay all outstanding dues from the State Government Departments to DISCOMs for supply of electricity by 30-09-2016. Instead of arrears from government departments coming down have gone up. What is more, the government departments have ended up as the biggest contributors to arrears. For example, as on 30-09-2021 out of Rs. 503.99 crore arrears that APEPDCL has to receive from LT consumers government departments owed Rs. 492.27 crore. Similarly, in the case of APCPDCL out of Rs. 1,734.23 crore arrears from LT consumers government departments have to pay Rs. 1,710.92 crore. In the absence of timely payments from the State Government the DISCOMs are forced to contract working capital loans the interest on which is a highly avoidable burden, and also DISCOMs have no way of recovering it as it is beyond the permissible limits.

6.5 One of the reasons APDISCOMs have to forego Rs. 17,451 Crore which they claimed as part of power purchase true up for the period 2014-15 to 2018-19 was the delay in filings the claims before the Commission. Under UDAY Agreement DISCOMs shall undertake “quarterly tariff revision particularly to offset fuel price increase” (Para 1.3 j). Incidentally then Regulation related to quarterly FSA was not in vogue and the existing Regulation allowed only annual true up. During the 3rd control period APDISCOMs did not file for annual true ups also as they did not have the permission to do so from the State Government.

6.6 The delayed payments from the State Government to DISCOMs and DISCOMs’ failure to file for true ups in time, again due to the State Government, are the main causes behind huge working capital loans of DISCOMs as well as the accumulated losses. Due to lack of funds with them DISCOMs are forced to delay payments to GENCO and GENCO in turn has to delay payments for coal supply. Because of irregular payments GENCO has to face adverse terms in coal supply which resulted in higher variable cost. This in turn led to higher power purchase cost. This has become a vicious circle. The issue is how to break this vicious circle.

6.7 In this whole scenario of financial crisis facing APDISCOMs the State Government appears to be the main contributor. Had it disbursed the subsidy as promised and allowed the Government Departments to pay for electricity consumption in time, and also allowed the APDISCOMs as their owner to file for true ups in time this financial crisis would not have unfolded. As such, solution for the present financial crisis of APDISCOMs lies with the State Government only. But who will bell the cat?

6.8 In this context we would like to draw attention of APERC to the advice given by the Maharashtra Electricity Regulatory Commission dated 5th January, 2022 to the Government of Maharashtra under Section 86 (2) of the Electricity Act, 2003 as DISCOMs in Maharashtra are also facing similar financial crisis. The advice includes short-term measures and long-term measures. We request the APERC to advice the State Government of AP to take relevant measures to improve financial health of APDISCOMs.

Tariff Proposals:

7.1 In the case of tariff proposals for the ensuing year APDISCOMs have submitted as follows, “In compliance with G, O, Rt. No. 161 dt. 15-11-2021 the DISCOMs propose to show the per unit energy charges without taking in to account any Government subsidy” This implies cost of service based tariff. APDISCOMs in their filings have not shown any deficit implying that tariff will be hiked to fill the deficit gap. While total ARR is Rs. 45,398.67 crore, revenue at current tariffs is projected as Rs. 34,317.65 crore. This implies a revenue gap of Rs. 11,081.02 crore. To fill this revenue gap, tariffs need to be hiked by 32.29%.

7.2 APSPDCL in its filings has shown impact of new tariffs to be Rs. 5,663.59 crore – Rs. 5,344.81 crore in the case of agriculture and the remaining amount to come from domestic consumers. APEPDCL has shown impact of new tariffs to be Rs. 329.4 crore and APCPDCL Rs. 239.2 crore. APEPDCL and APCPDCL did not mention the remaining gap of more than Rs. 2,000 crore each though they have not shown any revenue deficit. All the three DISCOMs have shown revenue impact of new tariff to be neutral in the case of all consumer groups except agriculture and domestic consumers. These DISCOMs have mentioned DBT in the case of agriculture consumers. In the background of changes in the national policies regarding DBT for agriculture consumers and metering of agriculture services the present tariff proposals of APDISCOMs lacks a basis.

7.3 It can also be said that APDISCOMs did not make any meaningful tariff proposals for the ensuing year that will become a basis for the Commission to come to a decision on tariffs. We request the Commission to direct APDISCOMs to file proper tariff proposals for the ensuing year.

7.4 APDISCOMs also proposed that new tariffs to come in to effect from 01-08-2022. But they did not provide any rationale for this.

8.1 We request the Commission to take or above submission on record.

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Hyderabad

Deponent

12-01-2021

M. Thimma Reddy